



# Fast Models

Version 11.16

## Fixed Virtual Platforms (FVP) Reference Guide

**Non-Confidential**

Copyright © 2014–2021 Arm Limited (or its affiliates).  
All rights reserved.

**Issue 00**

100966\_1116\_00\_en



## Fast Models

**Fixed Virtual Platforms (FVP) Reference Guide**

Copyright © 2014–2021 Arm Limited (or its affiliates). All rights reserved.

**Release Information****Document history**

Issue	Date	Confidentiality	Change
A	31 May 2014	Non-Confidential	New document for Fast Models v9.0, from DUI0575H for v8.3.
B	30 November 2014	Non-Confidential	Update for v9.1.
C	28 February 2015	Non-Confidential	Update for v9.2.
D	31 May 2015	Non-Confidential	Update for v9.3.
E	31 August 2015	Non-Confidential	Update for v9.4.
F	30 November 2015	Non-Confidential	Update for v9.5.
G	29 February 2016	Non-Confidential	Update for v9.6.
H	31 May 2016	Non-Confidential	Update for v10.0.
I	31 August 2016	Non-Confidential	Update for v10.1.
J	11 November 2016	Non-Confidential	Update for v10.2.
K	17 February 2017	Non-Confidential	Update for v10.3.
1100-00	31 May 2017	Non-Confidential	Update for v11.0. Document numbering scheme has changed.
1101-00	31 August 2017	Non-Confidential	Update for v11.1.
1102-00	17 November 2017	Non-Confidential	Update for v11.2.
1103-00	23 February 2018	Non-Confidential	Update for v11.3.
1104-00	22 June 2018	Non-Confidential	Update for v11.4.
1104-01	17 August 2018	Non-Confidential	Update for v11.4.2.
1105-00	23 November 2018	Non-Confidential	Update for v11.5.
1106-00	26 February 2019	Non-Confidential	Update for v11.6.
1107-00	17 May 2019	Non-Confidential	Update for v11.7.
1108-00	5 September 2019	Non-Confidential	Update for v11.8.
1108-01	3 October 2019	Non-Confidential	Update for v11.8.1.
1109-00	28 November 2019	Non-Confidential	Update for v11.9.
1110-00	12 March 2020	Non-Confidential	Update for v11.10.
1111-00	9 June 2020	Non-Confidential	Update for v11.11.
1112-00	22 September 2020	Non-Confidential	Update for v11.12.

Issue	Date	Confidentiality	Change
1113-00	9 December 2020	Non-Confidential	Update for v11.13.
1114-00	17 March 2021	Non-Confidential	Update for v11.14.
1114-01	14 April 2021	Non-Confidential	Update for FVP_Base_AEMv8R.
1115-00	29 June 2021	Non-Confidential	Update for v11.15.
1116-00	6 October 2021	Non-Confidential	Update for v11.16.

## Proprietary Notice

This document is protected by copyright and other related rights and the practice or implementation of the information contained in this document may be protected by one or more patents or pending patent applications. No part of this document may be reproduced in any form by any means without the express prior written permission of Arm. No license, express or implied, by estoppel or otherwise to any intellectual property rights is granted by this document unless specifically stated.

Your access to the information in this document is conditional upon your acceptance that you will not use or permit others to use the information for the purposes of determining whether implementations infringe any third party patents.

THIS DOCUMENT IS PROVIDED "AS IS". ARM PROVIDES NO REPRESENTATIONS AND NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTORY QUALITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE DOCUMENT. For the avoidance of doubt, Arm makes no representation with respect to, and has undertaken no analysis to identify or understand the scope and content of, third party patents, copyrights, trade secrets, or other rights.

This document may include technical inaccuracies or typographical errors.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL ARM BE LIABLE FOR ANY DAMAGES, INCLUDING WITHOUT LIMITATION ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF ANY USE OF THIS DOCUMENT, EVEN IF ARM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This document consists solely of commercial items. You shall be responsible for ensuring that any use, duplication or disclosure of this document complies fully with any relevant export laws and regulations to assure that this document or any portion thereof is not exported, directly or indirectly, in violation of such export laws. Use of the word "partner" in reference to Arm's customers is not intended to create or refer to any partnership relationship with any other company. Arm may make changes to this document at any time and without notice.

If any of the provisions contained in these terms conflict with any of the provisions of any click through or signed written agreement covering this document with Arm, then the click through or

signed written agreement prevails over and supersedes the conflicting provisions of these terms. This document may be translated into other languages for convenience, and you agree that if there is any conflict between the English version of this document and any translation, the terms of the English version of the Agreement shall prevail.

The Arm corporate logo and words marked with ® or ™ are registered trademarks or trademarks of Arm Limited (or its subsidiaries) in the US and/or elsewhere. All rights reserved. Other brands and names mentioned in this document may be the trademarks of their respective owners. Please follow Arm's trademark usage guidelines at <https://www.arm.com/company/policies/trademarks>.

Copyright © 2014–2021 Arm Limited (or its affiliates). All rights reserved.

Arm Limited. Company 02557590 registered in England.

110 Fulbourn Road, Cambridge, England CB1 9NJ.

(LES-PRE-20349)

## Confidentiality Status

This document is Non-Confidential. The right to use, copy and disclose this document may be subject to license restrictions in accordance with the terms of the agreement entered into by Arm and the party that Arm delivered this document to.

Unrestricted Access is an Arm internal classification.

## Product Status

The information in this document is Final, that is for a developed product.

## Web Address

[developer.arm.com](https://developer.arm.com)

## Inclusive language commitment

Arm values inclusive communities. Arm recognizes that we and our industry have used language that can be offensive. Arm strives to lead the industry and create change.

This document includes language that can be offensive. We will replace this language in a future issue of this document.



To report offensive language in this document, email [terms@arm.com](mailto:terms@arm.com).

# Contents

<b>1 Introduction.....</b>	<b>12</b>
1.1 Conventions.....	12
1.2 Feedback.....	13
1.3 Other information.....	13
<b>2 Introduction to FVPs.....</b>	<b>14</b>
2.1 Types of FVP.....	14
<b>3 Getting Started with Fixed Virtual Platforms.....</b>	<b>16</b>
3.1 Contents of the FVP Standard Library package.....	16
3.2 FVP command-line options.....	17
3.3 Loading and running an application on an FVP.....	21
3.4 Configuring the model.....	22
3.5 FVP debug.....	23
3.6 Using the CLCD window.....	24
3.7 Ethernet with VE FVPs.....	27
3.8 Using a terminal with a system model.....	29
3.9 Virtio P9 device component.....	32
<b>4 Arm® Neoverse™ N1 edge and Neoverse™ E1 edge reference design FVPs.....</b>	<b>34</b>
4.1 About the RD-N1-E1 FVPs.....	34
4.2 Block diagrams for RD-N1-E1-edge.....	35
4.3 RD-N1-E1 FVP peripherals.....	36
4.3.1 Memory map for RD-N1-E1-edge FVP SoC peripherals.....	37
4.3.2 Memory map for RD-N1-E1-edge FVP board peripherals.....	38
4.3.3 Interrupt maps for RD-N1-E1-edge FVP.....	39
<b>5 Arm® Neoverse™ N2 reference design FVP.....</b>	<b>40</b>
5.1 About the RD-N2 FVP.....	40
5.2 RD-N2 FVP peripherals.....	40
5.2.1 Memory map for RD-N2 FVP SoC peripherals.....	41
5.2.2 Memory map for RD-N2 FVP board peripherals.....	42
5.2.3 Interrupt maps for RD-N2 FVP.....	43

<b>6 Arm® Neoverse™ V1 reference design FVP.....</b>	<b>45</b>
6.1 About the RD-V1 FVP.....	45
6.2 RD-V1 FVP peripherals.....	45
6.2.1 Memory map for RD-V1 FVP SoC peripherals.....	46
6.2.2 Memory map for RD-V1 FVP board peripherals.....	47
6.2.3 Interrupt maps for RD-V1 FVP.....	48
<b>7 Base Platform FVPs.....</b>	<b>50</b>
7.1 FVP_Base_AEMv8R.....	50
7.2 FVP_Base_AEMvA.....	62
7.3 FVP_Base_AEMvA-AEMvA.....	74
7.4 FVP_Base_Cortex-A32x1.....	88
7.5 FVP_Base_Cortex-A32x2.....	99
7.6 FVP_Base_Cortex-A32x4.....	111
7.7 FVP_Base_Cortex-A35x1.....	123
7.8 FVP_Base_Cortex-A35x2.....	134
7.9 FVP_Base_Cortex-A35x4.....	146
7.10 FVP_Base_Cortex-A510x1.....	158
7.11 FVP_Base_Cortex-A510x2.....	169
7.12 FVP_Base_Cortex-A510x4.....	181
7.13 FVP_Base_Cortex-A510x4+Cortex-A710x4.....	193
7.14 FVP_Base_Cortex-A510x8.....	205
7.15 FVP_Base_Cortex-A53x1.....	219
7.16 FVP_Base_Cortex-A53x2.....	230
7.17 FVP_Base_Cortex-A53x4.....	242
7.18 FVP_Base_Cortex-A55.....	254
7.19 FVP_Base_Cortex-A55+Cortex-A76.....	268
7.20 FVP_Base_Cortex-A55x1.....	279
7.21 FVP_Base_Cortex-A55x1+Cortex-A75x1.....	290
7.22 FVP_Base_Cortex-A55x2.....	301
7.23 FVP_Base_Cortex-A55x2+Cortex-A75x2.....	313
7.24 FVP_Base_Cortex-A55x4.....	324
7.25 FVP_Base_Cortex-A55x4+Cortex-A75x1.....	336
7.26 FVP_Base_Cortex-A55x4+Cortex-A75x2.....	348
7.27 FVP_Base_Cortex-A55x4+Cortex-A75x4.....	359
7.28 FVP_Base_Cortex-A55x4+Cortex-A76x2.....	371

7.29 FVP_Base_Cortex-A55x4+Cortex-A78x4.....	382
7.30 FVP_Base_Cortex-A57x1.....	394
7.31 FVP_Base_Cortex-A57x1-A35x1.....	405
7.32 FVP_Base_Cortex-A57x1-A53x1.....	417
7.33 FVP_Base_Cortex-A57x2.....	429
7.34 FVP_Base_Cortex-A57x2-A35x4.....	441
7.35 FVP_Base_Cortex-A57x2-A53x4.....	454
7.36 FVP_Base_Cortex-A57x4.....	467
7.37 FVP_Base_Cortex-A57x4-A35x4.....	479
7.38 FVP_Base_Cortex-A57x4-A53x4.....	493
7.39 FVP_Base_Cortex-A65AEx2.....	507
7.40 FVP_Base_Cortex-A65AEx2+Cortex-A76AEx2.....	518
7.41 FVP_Base_Cortex-A65AEx4.....	530
7.42 FVP_Base_Cortex-A65AEx4+Cortex-A76AEx4.....	542
7.43 FVP_Base_Cortex-A65AEx8.....	554
7.44 FVP_Base_Cortex-A65x1.....	569
7.45 FVP_Base_Cortex-A65x2.....	580
7.46 FVP_Base_Cortex-A65x4.....	592
7.47 FVP_Base_Cortex-A710.....	604
7.48 FVP_Base_Cortex-A710x1.....	618
7.49 FVP_Base_Cortex-A710x2.....	629
7.50 FVP_Base_Cortex-A710x4.....	641
7.51 FVP_Base_Cortex-A72x1.....	653
7.52 FVP_Base_Cortex-A72x1-A53x1.....	665
7.53 FVP_Base_Cortex-A72x2.....	677
7.54 FVP_Base_Cortex-A72x2-A53x4.....	688
7.55 FVP_Base_Cortex-A72x4.....	701
7.56 FVP_Base_Cortex-A72x4-A53x4.....	713
7.57 FVP_Base_Cortex-A73x1.....	727
7.58 FVP_Base_Cortex-A73x1-A53x1.....	738
7.59 FVP_Base_Cortex-A73x2.....	750
7.60 FVP_Base_Cortex-A73x2-A53x4.....	762
7.61 FVP_Base_Cortex-A73x4.....	775
7.62 FVP_Base_Cortex-A73x4-A53x4.....	787
7.63 FVP_Base_Cortex-A75.....	801
7.64 FVP_Base_Cortex-A75x1.....	813

7.65 FVP_Base_Cortex-A75x2.....	824
7.66 FVP_Base_Cortex-A75x4.....	836
7.67 FVP_Base_Cortex-A76.....	848
7.68 FVP_Base_Cortex-A76AEx2.....	860
7.69 FVP_Base_Cortex-A76AEx4.....	872
7.70 FVP_Base_Cortex-A76x1.....	884
7.71 FVP_Base_Cortex-A76x2.....	896
7.72 FVP_Base_Cortex-A76x4.....	907
7.73 FVP_Base_Cortex-A77x1.....	920
7.74 FVP_Base_Cortex-A77x2.....	931
7.75 FVP_Base_Cortex-A77x4.....	943
7.76 FVP_Base_Cortex-A78AEx2.....	955
7.77 FVP_Base_Cortex-A78AEx4.....	967
7.78 FVP_Base_Cortex-A78C.....	979
7.79 FVP_Base_Cortex-A78Cx1.....	991
7.80 FVP_Base_Cortex-A78Cx2.....	1003
7.81 FVP_Base_Cortex-A78Cx4.....	1014
7.82 FVP_Base_Cortex-A78x1.....	1027
7.83 FVP_Base_Cortex-A78x2.....	1038
7.84 FVP_Base_Cortex-A78x4.....	1050
7.85 FVP_Base_Cortex-X1x1.....	1062
7.86 FVP_Base_Cortex-X1x2.....	1073
7.87 FVP_Base_Cortex-X1x4.....	1085
7.88 FVP_Base_Cortex-X2.....	1097
7.89 FVP_Base_Cortex-X2x1.....	1111
7.90 FVP_Base_Cortex-X2x2.....	1122
7.91 FVP_Base_Cortex-X2x4.....	1134
7.92 FVP_Base_Neoverse-E1x1.....	1146
7.93 FVP_Base_Neoverse-E1x2.....	1157
7.94 FVP_Base_Neoverse-E1x4.....	1169
7.95 FVP_Base_Neoverse-N1.....	1182
7.96 FVP_Base_Neoverse-N1x1.....	1194
7.97 FVP_Base_Neoverse-N1x2.....	1205
7.98 FVP_Base_Neoverse-N1x4.....	1217
7.99 FVP_Base_Neoverse-N2.....	1229
7.100 FVP_Base_Neoverse-N2x1.....	1240

7.101 FVP_Base_Neoverse-V1.....	1251
7.102 FVP_Base_Neoverse-V1x1.....	1264
7.103 FVP_Base_Neoverse-V1x2.....	1275
7.104 FVP_Base_Neoverse-V1x4.....	1287
7.105 FVP_Base_RevC-2xAEMvA.....	1299
7.106 FVP_Base_RevC-Cortex-A510.....	1316

## **8 BaseR Platform FVPs.....1334**

8.1 FVP_BaseR_AEMv8R.....	1334
8.2 FVP_BaseR_Cortex-R52x1.....	1346
8.3 FVP_BaseR_Cortex-R52x2.....	1357
8.4 FVP_BaseR_Cortex-R52x4.....	1369

## **9 VE Platform FVPs.....1382**

9.1 FVP_VE_Cortex-A15x1.....	1382
9.2 FVP_VE_Cortex-A15x1-A7x1.....	1392
9.3 FVP_VE_Cortex-A15x2.....	1403
9.4 FVP_VE_Cortex-A15x2-A7x2.....	1413
9.5 FVP_VE_Cortex-A15x4.....	1425
9.6 FVP_VE_Cortex-A15x4-A7x4.....	1436
9.7 FVP_VE_Cortex-A17x1.....	1449
9.8 FVP_VE_Cortex-A17x1-A7x1.....	1459
9.9 FVP_VE_Cortex-A17x2.....	1470
9.10 FVP_VE_Cortex-A17x4.....	1480
9.11 FVP_VE_Cortex-A17x4-A7x4.....	1491
9.12 FVP_VE_Cortex-A5x1.....	1505
9.13 FVP_VE_Cortex-A5x2.....	1515
9.14 FVP_VE_Cortex-A5x4.....	1525
9.15 FVP_VE_Cortex-A7x1.....	1535
9.16 FVP_VE_Cortex-A7x2.....	1545
9.17 FVP_VE_Cortex-A7x4.....	1556
9.18 FVP_VE_Cortex-A9x1.....	1567
9.19 FVP_VE_Cortex-A9x2.....	1577
9.20 FVP_VE_Cortex-A9x4.....	1587
9.21 FVP_VE_Cortex-R4.....	1597
9.22 FVP_VE_Cortex-R5x1.....	1606
9.23 FVP_VE_Cortex-R5x2.....	1615

9.24 FVP_VE_Cortex-R7x1.....	1624
9.25 FVP_VE_Cortex-R7x2.....	1632
9.26 FVP_VE_Cortex-R8x1.....	1640
9.27 FVP_VE_Cortex-R8x2.....	1649
9.28 FVP_VE_Cortex-R8x4.....	1657
<b>10 MPS2 Platform FVPs.....</b>	<b>1667</b>
10.1 FVP_MPS2_AEMv8M.....	1667
10.2 FVP_MPS2_Cortex-M0.....	1686
10.3 FVP_MPS2_Cortex-M0plus.....	1705
10.4 FVP_MPS2_Cortex-M23.....	1725
10.5 FVP_MPS2_Cortex-M3.....	1744
10.6 FVP_MPS2_Cortex-M33.....	1763
10.7 FVP_MPS2_Cortex-M35P.....	1782
10.8 FVP_MPS2_Cortex-M4.....	1802
10.9 FVP_MPS2_Cortex-M55.....	1821
10.10 FVP_MPS2_Cortex-M7.....	1840
10.11 FVP_MPS2_SSE-200_AEMv8M_pipeline.....	1860
10.12 FVP_MPS2_SSE-200_Cortex-M33.....	1879
10.13 FVP_MPS2_SSE-200_Cortex-M55.....	1898
10.14 FVP_MPS2_SecurCore-SC000.....	1918
10.15 FVP_MPS2_SecurCore-SC300.....	1937

# 1 Introduction

## 1.1 Conventions






The following subsections describe conventions used in Arm documents.

### Glossary


The Arm Glossary is a list of terms used in Arm documentation, together with definitions for those terms. The Arm Glossary does not contain terms that are industry standard unless the Arm meaning differs from the generally accepted meaning.

See the Arm® Glossary for more information: [developer.arm.com/glossary](https://developer.arm.com/glossary).

### Typographic conventions

Convention	Use
<i>italic</i>	Introduces citations.
<b>bold</b>	Highlights interface elements, such as menu names. Denotes signal names. Also used for terms in descriptive lists, where appropriate.
monospace	Denotes text that you can enter at the keyboard, such as commands, file and program names, and source code.
<b>monospace bold</b>	Denotes language keywords when used outside example code.
monospace <u>underline</u>	Denotes a permitted abbreviation for a command or option. You can enter the underlined text instead of the full command or option name.
<and>	Encloses replaceable terms for assembler syntax where they appear in code or code fragments. For example: <pre>MRC p15, 0, &lt;Rd&gt;, &lt;CRn&gt;, &lt;CRm&gt;, &lt;Opcode_2&gt;</pre>
SMALL CAPITALS	Used in body text for a few terms that have specific technical meanings, that are defined in the <i>Arm® Glossary</i> . For example, <b>IMPLEMENTATION DEFINED</b> , <b>IMPLEMENTATION SPECIFIC</b> , <b>UNKNOWN</b> , and <b>UNPREDICTABLE</b> .
 Caution	This represents a recommendation which, if not followed, might lead to system failure or damage.
 Warning	This represents a requirement for the system that, if not followed, might result in system failure or damage.
 Danger	This represents a requirement for the system that, if not followed, will result in system failure or damage.
 Note	This represents an important piece of information that needs your attention.
 Tip	This represents a useful tip that might make it easier, better or faster to perform a task.



Convention	Use
 Remember	This is a reminder of something important that relates to the information you are reading.

## 1.2 Feedback

Arm welcomes feedback on this product and its documentation.

### Feedback on this product

If you have any comments or suggestions about this product, contact your supplier and give:

- The product name.
- The product revision or version.
- An explanation with as much information as you can provide. Include symptoms and diagnostic procedures if appropriate.

### Feedback on content

Information about how to give feedback on the content.

If you have comments on content then send an e-mail to [errata@arm.com](mailto:errata@arm.com). Give:

- The title Fast Models Fixed Virtual Platforms (FVP) Reference Guide.
- The number 100966\_1116\_00\_en.
- If applicable, the page number(s) to which your comments refer.
- A concise explanation of your comments.

Arm also welcomes general suggestions for additions and improvements.



Arm tests the PDF only in Adobe Acrobat and Acrobat Reader, and cannot guarantee the quality of the represented document when used with any other PDF reader.

## 1.3 Other information

See the Arm® website for other relevant information.

- [Arm® Developer](#).
- [Arm® Documentation](#).
- [Technical Support](#).
- [Arm® Glossary](#).

## 2 Introduction to FVPs

*Fixed Virtual Platforms* (FVPs) enable software development without the need for real hardware.

They are available for Linux and Windows hosts, either:

- As pre-built executables. Their composition is fixed, but you can configure their behavior using parameters.
- As source code examples in the Fast Models product, with the tools required to customize and build them.

FVPs are available for all Cortex®-A, Cortex®-R, and Cortex®-M processors, and most of them support the CADI, MTI, and Iris interfaces, so can be used for debugging and for trace output.

Arm provides validated Linux and Android deliverables for various platforms, including FVPs. For details, see the [Arm Development Platforms wiki](#) on Arm Community. To get started with Linux on FVPs, see [FVPs](#) on Arm Community.

### 2.1 Types of FVP

Most Fast Models FVPs are provided in a single license-managed library. In addition, some Architecture Envelope Model (AEM) FVPs are available for download without requiring a license.

Fast Models FVPs are based on the following platforms:

- Base Platform.
- BaseR Platform.
- Arm® Versatile™ Express development boards.
- Arm® MPS2 or Arm® MPS2+ platforms, for Cortex®-M series processors.

FVPs can be obtained in the following ways:

- License-managed FVPs, including some plug-ins and utilities, are provided in the FVP Standard Library. It is available for Windows or Linux hosts. For information on how to download it, see [Fixed Virtual Platforms](#) on Arm Developer.
- Free-of-charge AEM FVPs can be downloaded from [Arm Architecture Models](#) on Arm Developer without a license. They are available for Linux hosts only. The following FVPs are available:
  - Foundation Platform. This is a basic FVP with a minimal peripheral set. It includes a single cluster which can be configured with 1-4 AEMvA cores. It is suitable for running bare-metal applications and for booting Linux. It supports the CADI debug interface, but does not support MTI or Iris interfaces. It is documented in the [Foundation Platform User Guide](#).
  - Armv-A Base Platform RevC FVP. This is a platform model with a more extended peripheral set than the Foundation Platform. It has two clusters, each of which can be configured with

1-4 AEMvA cores. It supports Arm®v8-A architecture versions up to v8.7 and Armv9-A. It also supports CADI, MTI, and Iris debug and trace interfaces.

- Arm®v8-R AEM FVP. This FVP includes a single cluster of 1-4 AEMv8-R cores. It allows you to target AArch32 or AArch64, RAS, VFP, EL2, and other Arm®v8-R features.
- Armv-A Compliance FVP. This FVP is optimized for validating CPU implementations and can be used with the A-profile Architecture Compliance Kit (ACK) to demonstrate compliance with the Arm® architecture specification.
- Free-of-charge Arm Ecosystem FVPs, including Reference Design FVPs and the Morello Platform FVP can be downloaded from [Arm Ecosystem FVPs](#) on Arm Developer.

## Related information

[Contents of the FVP Standard Library package](#) on page 16

[Base Platform](#)

[Microcontroller Prototyping System 2](#)

[Versatile Express Model](#)

## 3 Getting Started with Fixed Virtual Platforms

This chapter describes how to use FVPs.

### 3.1 Contents of the FVP Standard Library package

The FVP Standard Library consolidates commonly used FVPs into a single package which also contains some useful plug-ins and utilities.



The package does not include unlicensed FVPs. These are available for download separately, from [Arm Architecture Models](#) on Arm Developer.

---

The package installs the FVPs under the `models` directory. It also installs:

#### Plug-ins

Plug-ins are DLLs or shared objects that provide extra functionality to FVPs, for instance different types of trace output. To load a plug-in, pass the name of the plug-in to the FVP at startup using the `--plugin` command-line option or using the `FM_TRACE_PLUGINS` environment variable. For more information about plug-ins, see [Plug-ins for Fast Models](#) in the Fast Models Reference Manual.

#### Model Shell and Model Debugger

Model Shell is a command-line tool for launching FVPs. For more information about Model Shell, see [Model Shell for Fast Models Reference Manual](#). Model Debugger is an easy to use symbolic debugger with a GUI that allows you to debug software running on the FVP. For more information about Model Debugger, see [Model Debugger for Fast Models User Guide](#). They are installed in the `bin` directory.

#### iris.debug Python module

iris.debug is a Python scripting interface to Fast Models. It allows you to interact with FVPs, including connecting to and configuring them, performing execution control, and accessing registers and memory. It is installed under the `iris` directory. For more information about iris.debug, see [Iris Python Debug Scripting User Guide](#).

## 3.2 FVP command-line options

Specify these options when you launch an FVP from the command line. You can specify these options in any order.

**Table 3-1: CADI or Iris-related options**

Short form	Long form	Description
-S	--cadi-server	Start a CADI server. This option allows a CADI-enabled debugger to connect to targets in the simulation. To shut down the server, return to the command window that you used to start the model and press <b>Ctrl+C</b> .
-I	--iris-server	Start an Iris server. This option allows an Iris-enabled debugger to connect to targets in the simulation.
-R	--run	Run the simulation immediately after the CADI or Iris server is started.  Use this option with <code>--cadi-server</code> or <code>--iris-server</code> .  The default is to wait until the debugger has connected before running.
-L	--cadi-log	Log all CADI function calls made during the simulation into XML files.  One log file is created for each CADI target. The log files are created in the current working directory.  The filename format is:  <code>CADIlog-&lt;TargetInstanceName&gt;-&lt;ProcessID&gt;.xml</code>
-i	--iris-log	Log to stdout all Iris function calls that were made during the simulation.  There are 5 possible log levels. To set a level greater than 1, specify the option multiple times, for example <code>-ii</code> for level 2.  The log levels have the following meanings:  <b>0</b> Logging is disabled. This value is the default.  <b>1</b> Log messages use a compact single-line format.  <b>2</b> Log messages use a single-line pseudo-JSON format.  <b>3</b> Log messages use a more readable, multi-line pseudo-JSON format.  <b>4</b> As 3 but also prints the U64JSON hex value of the message.  <b>Note:</b> To set the Iris log level for all FVP invocations, use the <code>IRIS_GLOBAL_INSTANCE_LOG_MESSAGES</code> environment variable.
-A	--iris-allow-remote	Start an Iris server and allow connections to it from a remote workstation.  The default is disallowed.

Short form	Long form	Description
<code>-p</code>	<code>--print-port-number</code>	<p>Print the port number on which the Iris or CADI server is listening.</p> <p>Use this option with <code>--cadi-server</code> or <code>--iris-server</code>.</p> <p><b>Tip:</b> This option can be useful if you need to specify the port number when you connect a client to the debug server.</p>
	<code>--iris-port n</code>	<p>Set a port to use for the Iris server.</p> <p>Use this option with <code>--iris-server</code>.</p> <p>The default is 7100.</p>
	<code>--iris-port-range min:max</code>	<p>Set the range of ports to scan when starting an Iris server. The server uses the first available port in the range.</p> <p>Use this option with <code>--iris-server</code>.</p>

**Table 3-2: Output-related options**

Short form	Long form	Description
	<code>--list-instances</code>	<p>Print a list of model instances to standard output, then exit the simulation.</p> <p>Use this option to help identify the correct syntax for configuration files, and to find out what instances the target supplies.</p>
<code>-l</code>	<code>--list-params</code>	<p>Print a list of model parameters to standard output, then exit the simulation.</p> <p><b>Tip:</b> If you are loading a plug-in, this option also lists the plug-in parameters.</p>
	<code>--dump-params</code>	Dump the list of model parameters into a JSON file called <code>parameter_list.json</code> , then exit the simulation. The file is created in the current working directory.
	<code>--list-regs</code>	Print model register information to standard output, then exit the simulation.
	<code>--check-regs</code>	Same as <code>--list-regs</code> but with extra consistency checks on the CADI register API.
<code>-o</code>	<code>--output file\name</code>	<p>Redirect output from the <code>--list-instances</code>, <code>--list-memory</code>, <code>--list-params</code>, and <code>--list-regs</code> commands to a file.</p> <p>If this option is used with <code>--list-params</code>, the contents of the output file are formatted correctly for use as input by the <code>--config-file</code> option.</p>
	<code>--log filename</code>	Log all SystemC reports into <code>filename</code> .

Short form	Long form	Description
	<code>--stat</code>	<p>Print the following performance statistics on simulation exit:</p> <p><b>Simulated time</b> An estimate of the time that the workload would have taken on the modeled hardware.</p> <p><b>User time</b> Time in wall clock seconds that the host CPU spent running in user mode.</p> <p><b>System time</b> Time in wall clock seconds that the host CPU spent running in system mode.</p> <p><b>Wall time</b> Time in wall clock seconds between the simulation starting and stopping.</p> <p><b>Performance index</b> An estimate of the accuracy of the simulation performance. This value is Simulated time divided by Wall time.</p>
<code>-P</code>	<code>--prefix</code>	Prefix each line of semihosting output with the name of the target instance.
<code>-h</code>	<code>--help</code>	Print the help message and exit.
	<code>--version</code>	Print version information for the FVP.
<code>-q</code>	<code>--quiet</code>	Suppress informational output.
<code>-K</code>	<code>--keep-console</code>	Keep the console window open after completion. This option applies to Windows only.
	<code>--disable-model-exitcode</code>	Disable the simulation from retrieving the exit code returned by a model or a plug-in. By default, it is enabled.

**Table 3-3: Run control options**

Short form	Long form	Description
	<code>--cpulimit n</code>	<p>Maximum number of wall-clock seconds for the simulation process to be active. This value excludes simulation startup and shutdown.</p> <p>This option is ignored if a debug server is started.</p> <p>The default is unlimited.</p>
	<code>--cyclelimit n</code>	<p>Maximum number of cycles to run.</p> <p>This option is ignored if a debug server is started.</p> <p>The default is unlimited.</p>
<code>-T</code>	<code>--timelimit n</code>	Maximum number of wall-clock seconds for the simulation to run, excluding startup and shutdown. To terminate the model immediately after initialization, specify <code>--timelimit 0</code> .
	<code>--simlimit n</code>	<p>Maximum number of seconds to simulate.</p> <p>This option is ignored if a debug server is started.</p> <p>The default is unlimited.</p> <p>Like the <code>Simulated time</code> value output by <code>--stat</code>, this value is measured in simulation seconds, not wall-clock seconds.</p>

Short form	Long form	Description
<code>-b</code>	<code>--break [instance=] address</code>	<p>Set a program breakpoint on the address of an instruction.</p> <p>This option can be specified multiple times.</p> <p>If the FVP has multiple cores you must specify an instance, for example:</p> <pre>-b FVP_Base_AEMvA.cluster0.cpu0=0x800010eC</pre>

**Table 3-4: Timing and performance options**

Short form	Long form	Description
	<code>--cpi-file filename</code>	<p>Use <i>filename</i> to set the Cycles Per Instruction (CPI) class.</p> <p>For information about CPI files, see <a href="#">Timing Annotation</a>.</p>
<code>-Q</code>	<code>--quantum n</code>	Number of ticks to simulate for each quantum. The default is 10000.
<code>-M</code>	<code>--min-sync-lateness n</code>	Number of ticks to simulate before synchronizing. Events that occur at a higher frequency than this value are missed. The default is 100.
	<code>--fast-ram filename</code>	Enable FastRAM and load the configuration from <i>filename</i> . For more information about FastRAM, see <a href="#">FastRAM</a> .

**Table 3-5: Memory-related options**

Short form	Long form	Description
	<code>--dump file@address, size</code>	<p>Dump a section of memory to a file at model shutdown. This option can be specified multiple times. The full syntax is:</p> <pre>.-dump [instance=] file@[memspace:]address, size</pre> <p><b>Tip:</b> To see the list of instances and memory spaces, use the <code>--list-memory</code> option.</p>
	<code>--data file@address</code>	<p>Write raw data contained in <i>file</i> to the specified address. This option can be specified multiple times. The full syntax is:</p> <pre>--data [instance=] file@[memspace:]address</pre>
	<code>--list-memory</code>	Print model memory information to standard output, then exit the simulation.
	<code>--start [instance=] address</code>	<p>Set the initial PC value to this address, overriding the <code>.axf</code> start address.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Use this option if you do not want the CPU to start executing at the default reset address. You do not normally need to do this if you are loading an ELF file using <code>--application</code>.</li> <li>This option can be used with <code>--data</code> to load binary data that is not in an ELF file.</li> </ul>



**Table 3-6: Configuration options**

Short form	Long form	Description
-C	<code>--parameter instance.parameter=value</code>	Set a parameter. This option can be specified multiple times. Specify the full hierarchical name of the parameter.  This option is also used to set plug-in parameters.
-f	<code>--config-file filename</code>	Load the parameters from a configuration file.

**Table 3-7: Options for loading a plug-in or application**

Short form	Long form	Description
-a	<code>--application [instance=] file\name</code>	Load an application.  On a multi-core system, specify the instance, or use * to load the application image into all the cores in a cluster:  <code>-a cluster0.cpu*=file</code>
	<code>--plugin file\name</code>	Load the plug-in <i>filename</i> . This option can be specified multiple times. You can also load plug-ins using the FM_TRACE_PLUGINS environment variable. For information about plug-ins, see <a href="#">Plug-ins for Fast Models</a> .
	<code>--trace-plugin filename</code>	Load a trace plug-in.  <b>Note:</b> This option is deprecated. Use <code>--plugin</code> instead.

## 3.3 Loading and running an application on an FVP

There are different ways to launch an FVP, for example from the command prompt, or from Model Debugger or Arm® Development Studio.

To run an FVP from the command prompt, enter the model name followed by the model options. To see all available options, use the `--help` option. This is a list of some of the commonly used options for FVPs:

### **-a [instance=]filename.axf**

Specifies an application to load, and optionally, the instance or instances to load it on. The file can be in one of the following formats, or in a gzip-compressed version:

- ELF.
- Motorola S-Record.

If the FVP contains multiple core instances, you can specify the instance to load the image on. The instance name can include a wildcard (\*) to load the same application image into multiple cores, for example:

```
./FVP_Base_AEMvA -a cluster0.cpu*=__image.axf
```

Omitting the instance name loads the application on all cores in the first cluster. If the FVP has multiple cores but no clusters, you must specify the instance name.

**--data *filename.bin@address***

Loads binary data into memory at the address specified.

**-C *instance.parameter=value***

Sets a single model parameter. Parameters are specified using a path that separates the instance names and the parameter using dots. For example, `-c bp.flashloader0.fname=fip.bin`. Here, `bp` and `flashloader0` are instance names and `fname` is the parameter. To set multiple parameters using a configuration file, use the `-f` option instead. To list all the available parameters, with their type, default value, and description, run the model with the `--list-params`, or `-l` option.

**-f *config\_file.txt***

Specifies the name of a plain text configuration file. Configuration files simplify managing multiple model parameters. You can set the same parameters using this option as with the `-c` option.

**-S**

Starts a CADI debug server. This option allows a CADI-enabled debugger, such as Model Debugger or Arm® Development Studio Debugger, to connect to the running model. By default, the model waits for the debugger to connect before starting.

## Related information

[Arm Development Studio Getting Started Guide](#)  
[Using Model Debugger](#)

## 3.4 Configuring the model

When you start the model from the command line, you can configure it using either:

- One or more `-c` command-line arguments.
- A configuration file and the `-f` command-line argument.

Each `-c` command-line argument or line in the configuration file must contain:

- The name of the component instance.
- The parameter to modify.
- Its value.

Use the following format:

```
instance.parameter=value
```

The *instance* can be a hierarchical path, with each level separated by a dot `.` character.



Note

- Comment lines in the configuration file begin with a # character.
- You can set Boolean values using either `true` or `false`, or 1 or 0.

You can generate a configuration file with all parameters set to default values by using the `-o` option to redirect the output from the `--list-params` option, for example:

```
FVP_Base_AEMvA.exe --list-params -o params.txt
```

## 3.5 FVP debug

This section describes how to debug an FVP.

### FVP debug options

To debug an FVP, you can either:

- Run the FVP from within a CADI-enabled debugger.
- Start the FVP with the `-s` command-line argument and then connect a CADI-enabled debugger to it.

For information about using your debugger in these ways, see your debugger documentation.

### Semihosting support

Semihosting enables code running on a platform model to directly access the I/O facilities on a host computer. Examples of these facilities include console I/O and file I/O.

The simulator handles semihosting by intercepting `HLT 0xF000`, `svc 0x123456`, or `svc 0xAB`, depending on whether the processor is in A64, A32 or T32 state. It handles all other `HLTs` and `svcs` as normal.

If the operating system does not use `HLT 0xF000`, `svc 0x123456`, or `svc 0xAB` for its own purposes, it is not necessary to disable semihosting support to boot an operating system.

To temporarily or permanently disable semihosting support for a current debug connection, see your debugger documentation.

### Related information

[Semihosting for AArch32 and AArch64](#)

[Using semihosting to access resources on the host computer](#)

## 3.6 Using the CLCD window

When an FVP starts, the CLCD window opens, representing the contents of the simulated color LCD frame buffer. It automatically resizes to match the horizontal and vertical resolution that is set in the CLCD peripheral registers.

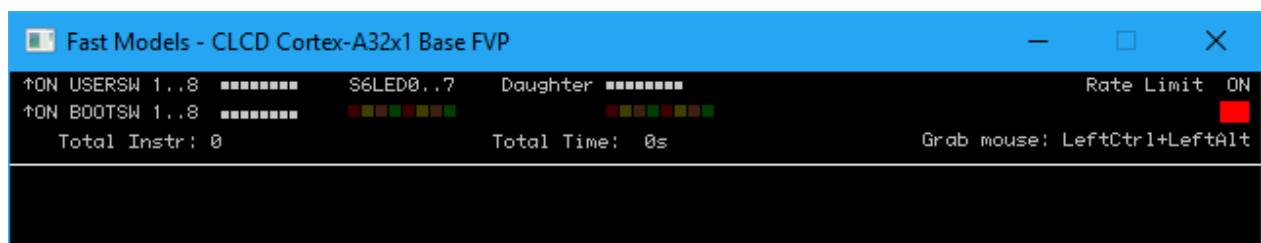
### MPS2 FVPs

The LEDs and MCC switches in the CLCD window for MPS2-based FVPs correspond to the LEDs and switches on the physical board. They are controlled by the software that you load onto the FVP. For information on how to use them, see [User switches and user LEDs](#) in the Arm® MPS2 and MPS2+ FPGA Prototyping Boards TRM on Arm Developer.

### Base Platform and VE FVPs

The top section of the CLCD window for Base Platform and VE FVPs displays the status information:

**Figure 3-1: Base Platform CLCD window in its default state at startup**



#### USERSW

Eight white boxes show the state of the User DIP switches.

These represent switch S6 on the VE hardware, USERSW[8:1], which is mapped to bits [7:0] of the SYS\_SW register at address 0x1C010004.

The switches are in the off position by default. To change its state, click in the area above or below a white box.

#### BOOTSW

Eight white boxes show the state of the VE Boot DIP switches.

These represent switch S8 on the VE hardware, BOOTSEL[8:1], which is mapped to bits [15:8] of the SYS\_SW register at address 0x1C010004.

The switches are in the off position by default.



Note

Changing Boot DIP switch positions while the model is running can result in unpredictable behavior.

## S6LED

Eight colored boxes indicate the state of the VE User LEDs.

These represent the red/yellow/green LEDs on the VE hardware, which are mapped to bits [7:0] of the SYS\_LED register at address 0x1C010008.

## Daughter

Eight white boxes show the state of the daughterboard DIP switches and eight colored boxes show the state of the daughterboard LEDs.

## Total Instr

A counter showing the total number of instructions executed.

Because the FVP models provide a *Programmer's View* (PV) of the system, the CLCD displays total instructions rather than total processor cycles. Timing might differ substantially from the hardware because:

- Bus fabric is simplified.
- Memory latencies are minimized.
- Cycle approximate processor and peripheral models are used.

In general, bus transaction timing is consistent with the hardware, but the timing of operations within the model is not accurate.

## Total Time

A counter showing the total elapsed time, in seconds.

This time is wall clock time, not simulated time.

## Rate Limit

A feature that disables or enables fast simulation.

Because the system model is highly optimized, your code might run faster than it would on real hardware. This effect might cause timing issues.

Rate Limit is enabled by default. Simulation time is restricted so that it more closely matches real time.

To disable or enable Rate Limit, click the square button. You can configure this option when instantiating the model with the `rate_limit-enable` visualization component parameter.

When you click the **Total Instr** item in the CLCD, the display toggles to show the following:

## Instr/sec

The number of instructions that execute per second of wall clock time.

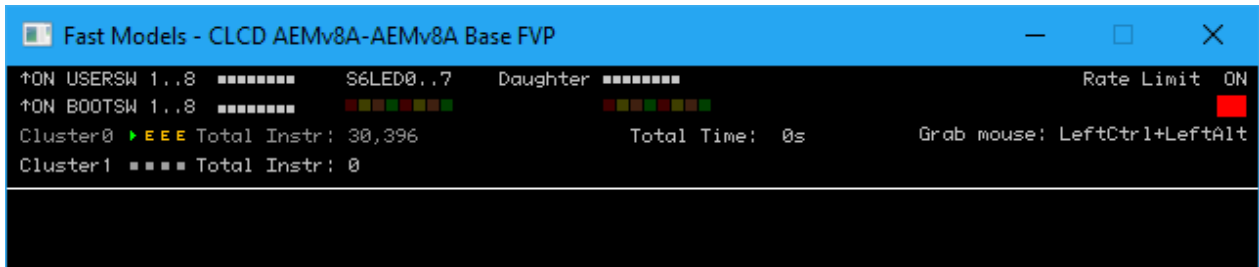
## Perf Index

The ratio of real time to simulation time. The larger the ratio, the faster the simulation runs. If you enable the Rate Limit feature, the Perf Index approaches unity.









You can reset the simulation counters by resetting the model.

The FVP CLCD displays the core run state for each core on each cluster using a colored icon. The icons are to the left of the **Total Instr** (or **Inst/sec**) item.

**Figure 3-2: Core run state icons for a dual-cluster, quad-core model**



**Table 3-8: Core run state icon descriptions**

Icon	State label	Description
	UNKNOWN	Run status unknown, that is, simulation has not started.
	RUNNING	Core running, is not idle, and is executing instructions.
	HALTED	External halt signal asserted.
	STANDBY_WFE	Last instruction executed was WFE and standby mode has been entered.
	STANDBY_WFI	Last instruction executed was WFI and standby mode has been entered.
	IN_RESET	External reset signal asserted.
	DORMANT	Partial core power down.
	SHUTDOWN	Complete core power down.

If the CLCD window has focus:

- Any keyboard input is translated to PS/2 keyboard data.
- Any mouse activity over the window is translated into PS/2 relative mouse motion data. The data is then streamed to the KMI peripheral model FIFOs.



Note

The simulator only sends relative mouse motion events to the model. As a result, the host mouse pointer does not necessarily align with the target OS mouse pointer.

You can hide the host mouse pointer by pressing the **left Ctrl+left Alt** keys. Press the keys again to redisplay the host mouse pointer. Only the **left Ctrl** key is operational. The **right Ctrl** key does not have the same effect.

If you prefer to use a different key, configure it with the `trap_key` visualization component parameter.

## Related information

[VEVisualisation component](#)

## 3.7 Ethernet with VE FVPs

This section describes how to use Ethernet with VE FVPs.

### Using Ethernet with VE FVPs

The VE FVPs have a virtual Ethernet component. This component is a model of the SMSC 91C111 Ethernet controller, and uses a TAP device to communicate with the network. By default, the Ethernet component is disabled.

### Host requirements

Before you can use the Ethernet capability of VE FVPs, set up your host computer.

### Target requirements

This section describes the target requirements.

#### Target requirements - about

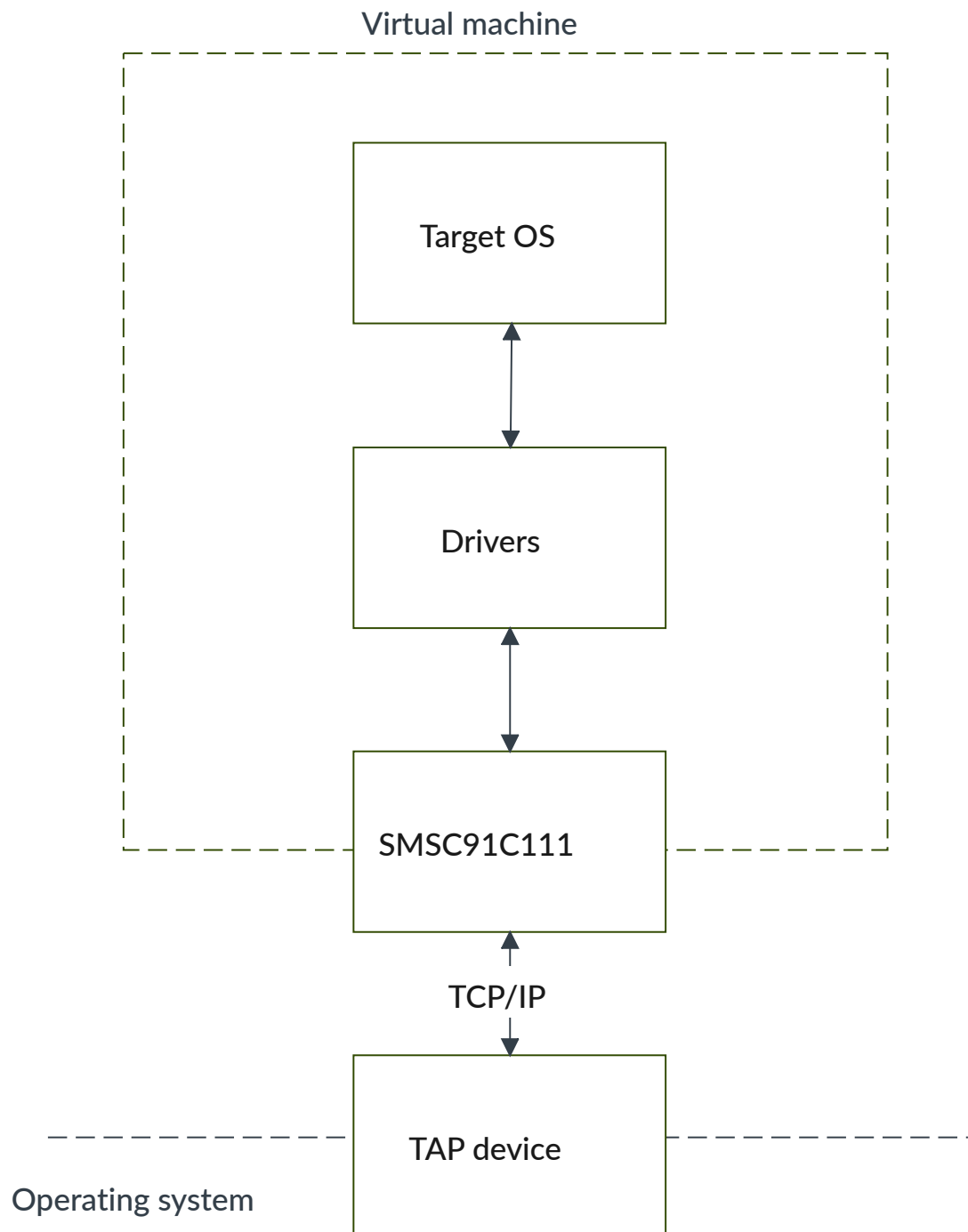
The VE FVPs include a software implementation of the SMSC 91C111 Ethernet controller. Your target OS must therefore include a driver for this specific device. To use the SMSC chip, configure the kernel. Linux supports the SMSC 91C111.

The configurable SMSC 91C111 component parameters are:

- `enabled`.
- `mac_address`.
- `promiscuous`.

#### **enabled**

When the device is disabled, the kernel cannot detect the device.

**Figure 3-3: Model networking structure block diagram**

To perform read and write operations on the TAP device, configure a HostBridge component. The HostBridge component is a virtual *Programmer's View* (PV) model. It acts as a networking



gateway to exchange Ethernet packets with the TAP device on the host, and to forward packets to NIC models.

**mac\_address**

There are two options for the `mac_address` parameter.

If a MAC address is not specified, when the simulator is run it takes the default MAC address, which is randomly generated. This random generation provides some degree of MAC address uniqueness when running models on multiple hosts on a local network.

**promiscuous**

The Ethernet component starts in promiscuous mode by default. In this mode, it receives all network traffic, even any not addressed to the device. Use this mode if you are using a single network device for multiple MAC addresses. Use this mode if, for example, you share the network card between your host OS and the VE FVP Ethernet component.

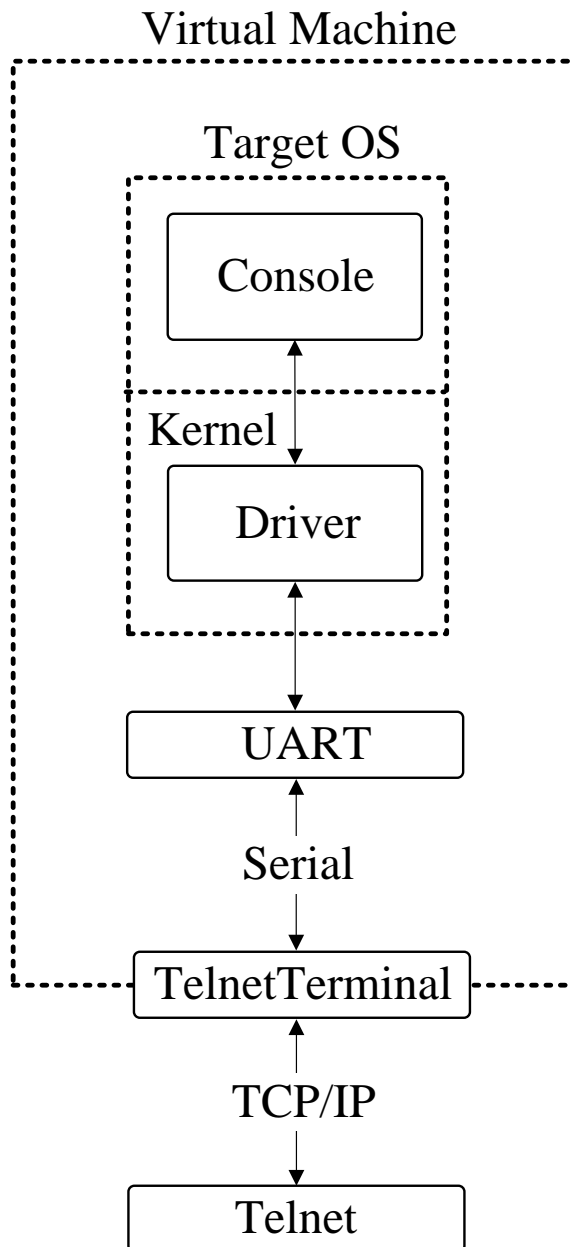
By default, the Ethernet device on the VE FVP has a randomly generated MAC address and starts in promiscuous mode.

## 3.8 Using a terminal with a system model

The `TelnetTerminal` component is a virtual component that enables UART data to be transferred between a TCP/IP socket on the host and a serial port on the target.

**Using TelnetTerminal**

The following figure shows a block diagram of one possible relationship between the target and host through the `TelnetTerminal` component. The `TelnetTerminal` block is what you configure when you define Terminal component parameters. The Virtual Machine is an FVP.

**Figure 3-4: Terminal block diagram**

On the target side, the console process that is invoked by your target OS relies on a suitable driver being present. Such drivers are normally part of the OS kernel. The driver passes serial data through a UART. The data is forwarded to the TelnetTerminal component. When the simulation is started and the TelnetTerminal component is enabled, the component opens a server (listening) socket on a TCP/IP port. This is port 5000 by default. This port can be connected to by, for example, a Telnet process on the host.

When data becomes available on the network socket, the `TelnetTerminal` component buffers the data, which can then be read from `SerialData`.

If there is no connection to the network socket when the first data access is made, and the `start_telnet` parameter is true, a host Telnet session is started automatically. Prior to this first access, you can connect a client of your choice to the network socket.

If the connection between the `TelnetTerminal` component and the client is broken at any time, for example by closing a client Telnet session, the port is re-opened on the host, permitting you to make another client connection. This could have a different port number if the original one is no longer available.

The port number of a particular `TelnetTerminal` instance can be defined when your model system starts. The actual value of the port used by each `TelnetTerminal` is declared when it starts or restarts, and might not be the value that you specified if the port is already in use. If you are using Model Shell, the port numbers are displayed in the host window in which you started the model.

---

Microsoft Windows 10 disables the Telnet client by default. Follow these steps to enable it:



Note

1. Select **Start > Settings**.
  2. In the search box, type **Turn Windows features on or off**. The Windows Features dialog opens.
  3. Select the **Telnet Client** check box and click **OK**. The installation might take several minutes to complete.
- 

## TelnetTerminal parameters

To set the parameters, the syntax to use in a configuration file or on the command line is:

```
motherboard.terminal_x.parameter=value
```

where *x* is the terminal identifier and can be 0, 1, 2, or 3.

You can start the `TelnetTerminal` component in either of the following modes, depending on the mode parameter:

### **telnet**

In Telnet mode, the terminal component supports a subset of the RFC 854 protocol. This means that the terminal participates in negotiations between the host and client concerning what is and is not supported, but there is no flow control.

### **raw**

In raw mode the byte stream passes unmodified between the host and the target. The terminal does not participate in initial capability negotiations between the host and client. Instead it acts as a TCP/IP port. You can use this feature to directly connect to your target through the `TelnetTerminal` component. This permits a debugger connection, for example, to connect a gdb client to a gdbserver running on the target operating system.

The `terminal_command` parameter specifies the command line used to launch a terminal application and connect to the opened TCP port. The `TelnetTerminal` component replaces the keywords `%port` and `%title`, if specified, with the opened port number and component name, respectively. After replacing `%port` and `%title`, the command line is executed verbatim.

An empty string, which is the default, launches `xterm` on Linux or `telnet.exe` on Windows.



If you specify a non-empty string, it must include `%port`, but `%title` is optional.

For example:

```
motherboard.terminal_0.terminal_command="putty.exe -telnet %port localhost"
```

## 3.9 Virtio P9 device component

The `VirtioP9Device` component is included in Base, BaseR, and A-profile VE platforms. It implements a subset of the Plan 9 file protocol over a virtio transport. It enables accessing a directory on the host's filesystem within Linux, or another operating system that implements the protocol, running on a platform model.

Take the following steps to set up this component:

- Use a version of Linux that supports v9fs over virtio and virtio-mmio devices.
- Update the device tree to include the `VirtioP9Device` component, or specify it on the kernel command-line, as shown below. The address range for both VE and Base platforms is `0x1C140000-0x1C14FFFF`.  
The interrupt number is 43, or IRQ 75, for both VE and Base platforms.
- Set the following parameter to the directory on the host that you want to mount in the model:

**VE:**

```
motherboard.virtiop9device.root_path
```

**Base:**

```
bp.virtiop9device.root_path
```

- On Linux, mount the host directory by using the following command in the model:

```
$ mount -t 9p -o trans=virtio,version=9p2000.L FM <mount point>
```

Example kernel command-line argument:

```
virtio_mmio.device=0x10000@0x1c140000:75
```

Example entry for DTS files, to add next to the corresponding `virtio_block` entry:

```
virtio_p9@0140000 {  
    compatible = "virtio,mmio";  
    reg = <0x0 0x1c140000 0x0 0x1000>;  
    interrupts = <0x0 0x2b 0x4>;  
};
```

## 4 Arm® Neoverse™ N1 edge and Neoverse™ E1 edge reference design FVPs

This chapter describes the Arm® Neoverse™ N1 edge and Arm® Neoverse™ E1 edge reference design FVPs. These FVPs are collectively referred to as RD-N1-E1-edge FVPs.

A reference design is a collection of resources, including documentation, a software stack, and FVPs, that describe and model the design choices and performance for recommended configurations of a typical Arm®-based subsystem.

The RD-N1-E1-edge FVPs drive system architecture and software standardization. They provide software and binaries of proprietary firmware that reduce the amount of work that is required for SoC development.



Arm is working to make more content available for these FVPs. To find out more about reference designs, or to contact Arm about them, see [Reference Design](#).

### 4.1 About the RD-N1-E1 FVPs

The RD-N1-E1-edge FVPs model many of the Arm® IP components in the RD-N1-E1-edge design.

The RD-N1-E1-edge FVPs model the following RD-N1-E1-edge configurations:

#### Config1

N1 2xMP4, 512KB L2 cache per core, 4x2 mesh, 2xDMC.

#### Config2

E1 2xMP8, 256KB L2 cache per core, 4x2 mesh, 2xDMC.

#### Config3

Dual-chip. Two Config1 subsystems linked by CMN-600 CML.

The diagrams in [4.2 Block diagrams for RD-N1-E1-edge](#) on page 35 show the IP components that RD-N1-E1-edge describes. Not all of these components are modeled by these FVPs. The following components are modeled:

- N1 2xMP4 or E1 2xMP8 cores.
- System Control Processor (SCP).
- Management Control Processor (MCP).
- CMN-600.
- Multiple NIC-450 interconnects, although NIC-450 is replaced with a simple bus model.
- Memory access path towards DRAM, including DMC-620 memory controllers.

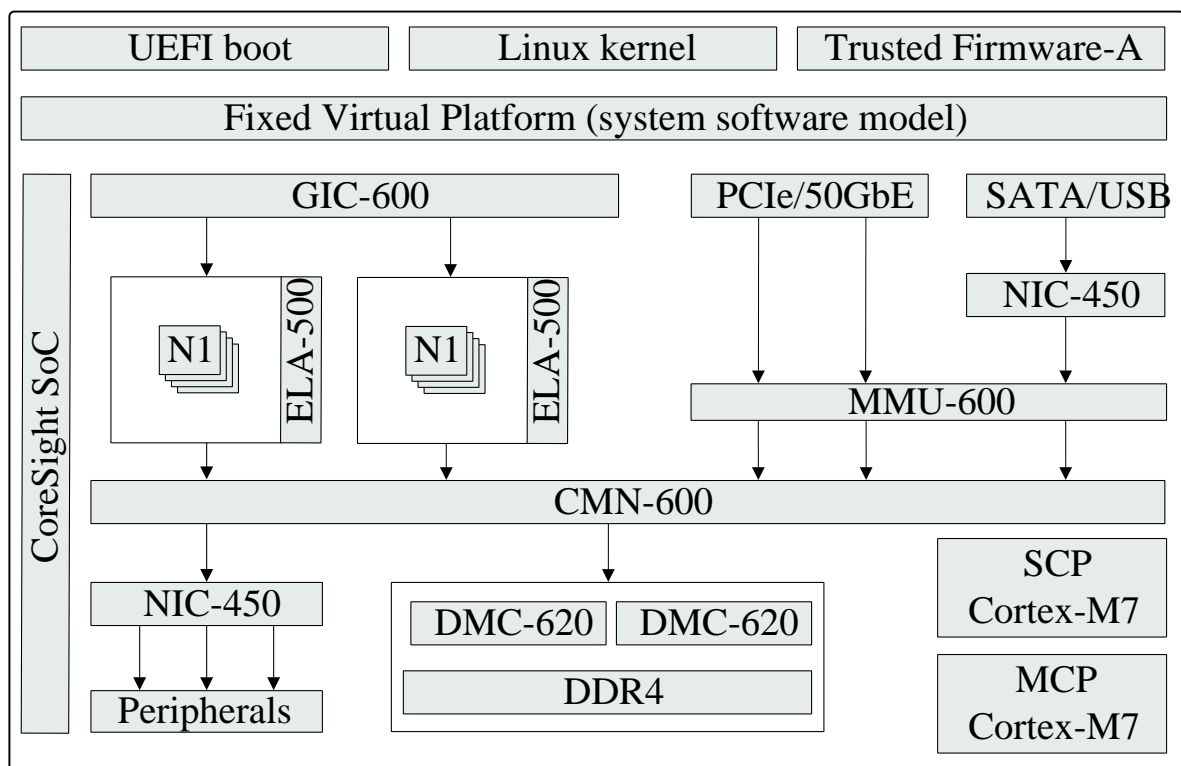
The following components are not modeled:

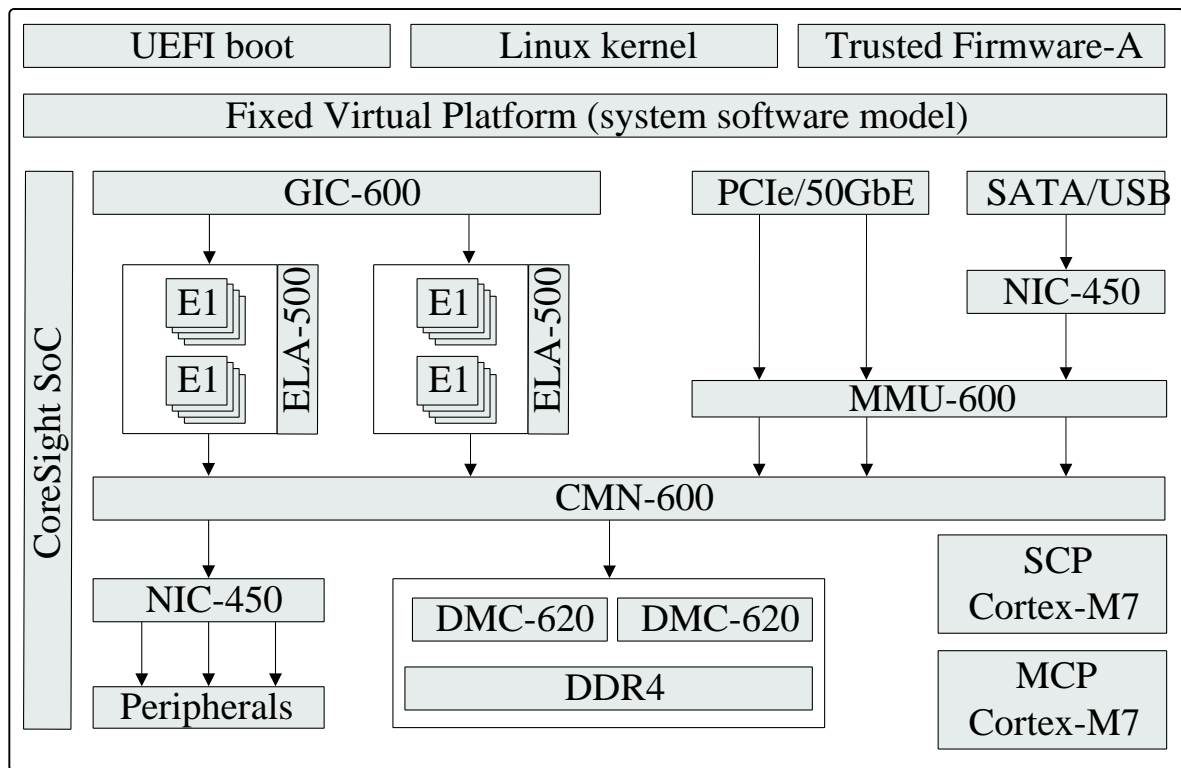
- CoreSight™ SoC.
- ELA-500.
- USB.

## 4.2 Block diagrams for RD-N1-E1-edge

The following diagrams show the composition of RD-N1-E1-edge systems.

**Figure 4-1: Block diagram for Neoverse N1 edge reference design**



**Figure 4-2: Block diagram for Neoverse E1 edge reference design**

### 4.3 RD-N1-E1 FVP peripherals

The RD-N1-E1-edge FVPs include peripherals that the software payload requires to run.

These peripherals are organized in two layers:

#### SoC

The SoC peripherals represent peripherals that may be added to a compute subsystem in a SoC design.

#### Board

The board peripherals represent peripherals that may be present on the board onto which the SoC is mounted.

The RD-N1-E1-edge SoC model and board model are based on the Juno Arm® Development Platform (ADP).

In Config3, each compute subsystem has its own SoC and board layers. In this two-chip configuration, each chip is assigned the following memory regions:



**Chip 0**

0x000\_0000\_0000-0x3FF\_FFFF\_FFFF

**Chip 1**

0x400\_0000\_0000-0x7FF\_FFFF\_FFFF

A sideband communication channel is required to coordinate multi-chiplet software boot over CMN-600. The FVP implements this using the MHU device, but Arm recommends using a solution such as I2C in hardware.

### 4.3.1 Memory map for RD-N1-E1-edge FVP SoC peripherals

This table shows the memory map for the SoC peripherals in the RD-N1-E1-edge FVPs.



The SoC peripherals area in the RD\_N1\_E1\_edge memory map is mapped to an Expansion AXI region. Therefore, these mappings are not defined in the reference design.

**Table 4-1: SoC peripherals memory map**

Name	Base address	Size	Description
SMC interface	0x00_0800_0000	368MB	Routed to board
SMMUv3	0x00_2B40_0000	1MB	-
PCIe config	0x00_6000_0000	16MB	-
PCIe memory	0x00_7000_0000	132MB	-
DMA MMU-400	0x00_7FB0_0000	64KB	-
HDLCD1 MMU-400	0x00_7FB1_0000	64KB	-
HDLCD0 MMU-400	0x00_7FB2_0000	64KB	-
DDR3 PHY 0	0x00_7FB6_0000	64KB	Dummy APB
DDR3 PHY 1	0x00_7FB7_0000	64KB	Dummy APB
DDR3 PHY 2	0x00_7FB8_0000	64KB	Dummy APB
DDR3 PHY 3	0x00_7FB9_0000	64KB	Dummy APB
SoC interconnect NIC-400 GPV	0x00_7FD0_0000	1MB	-
Surge detector	0x00_7FE5_0000	4KB	Dummy APB
TRNG	0x00_7FE6_0000	4KB	-
Trusted non-volatile counters	0x00_7FE7_0000	4KB	-
Trusted Root-Key storage	0x00_7FE8_0000	4KB	-
Secure I2C	0x00_7FE9_0000	256B	A Secure I2C component does not exist in the FVP. Instead, a PL061_GPIO is mapped as a dummy component. It is not functional as a GPIO.
DMA non-secure	0x00_7FF0_0000	4KB	-

Name	Base address	Size	Description
DMA secure	0x00_7FF1_0000	4KB	-
HDLCD1	0x00_7FF5_0000	4KB	-
HDLCD0	0x00_7FF6_0000	4KB	-
UART 1	0x00_7FF7_0000	4KB	-
UART 0	0x00_7FF8_0000	4KB	-
I2S	0x00_7FF9_0000	1KB	An I2S component does not exist in the FVP. Instead, a PL061_GPIO is mapped as a dummy component. It is not functional as a GPIO.
I2C	0x00_7FFA_0000	0x256B	An I2C component does not exist in the FVP. Instead, a PL061_GPIO is mapped as a dummy component. It is not functional as a GPIO.
PL352	0x00_7FFD_0000	4KB	PL354
AP configuration	0x00_7FFE_0000	4KB	GPR
System override registers	0x00_7FFF_0000	4KB	-
PCIe memory	0x05_0000_0000	12GB	-



The following devices are discoverable on the PCIe bus:

- Virtio block device x 2.
- AHCI controller with attached SATA disk.

### 4.3.2 Memory map for RD-N1-E1-edge FVP board peripherals

This table shows the memory map for the board peripherals in the RD-N1-E1-edge FVPs.



The board peripherals area in the RD\_N1\_E1\_edge memory map is mapped to an Expansion AXI region. Therefore, these mappings are not defined in the reference design.

**Table 4-2: Board peripherals memory map**

Name	Base address	Size	Description
NOR Flash 0	0x00_0800_0000	64MB	-
NOR Flash 1	0x00_0C00_0000	64MB	-
NOR Flash 2	0x00_1000_0000	64MB	-
Ethernet	0x00_1800_0000	64MB	SMSC 91C111
System registers	0x00_1C01_0000	64KB	-
MCI	0x00_1C05_0000	64KB	PL180
KMI 0	0x00_1C06_0000	64KB	PL050
KMI 1	0x00_1C07_0000	64KB	PL050
UART 0	0x00_1C09_0000	64KB	PL011
UART 1	0x00_1C0A_0000	64KB	PL011

Name	Base address	Size	Description
Watchdog	0x00_1C0F_0000	64KB	SP805
Dual timer	0x00_1C11_0000	64KB	SP804
Virtio block device	0x00_1C13_0000	64KB	-
Virtio net device	0x00_1C15_0000	64KB	-
RTC	0x00_1C17_0000	64KB	PL031
GPIO 0	0x00_1C1D_0000	64KB	PL061_GPIO is mapped as a dummy component in the FVP. It is not functional as a GPIO.
GPIO 1	0x00_1C1E_0000	64KB	PL061_GPIO is mapped as a dummy component in the FVP. It is not functional as a GPIO.
DRAM	0x00_8000_0000	2GB	-
DRAM	0x80_8000_0000	6GB	-

### 4.3.3 Interrupt maps for RD-N1-E1-edge FVP

These tables show the interrupt IDs and sources for the FVP peripherals.

**Table 4-3: Interrupt map at the SoC layer**

Interrupt ID	Source	Description
147	UART 0	-
148	UART 1	-
171	TRNG	-

**Table 4-4: Interrupt map at the board layer**

Interrupt ID	Source	Description
111	Ethernet	-
132	RTC	-
133	UART 0	-
134	UART 1	-
140	VFS2	-
202	Virtio	-
204	Virtio net device	-
228	Watchdog	-
229	KMI 0	-
230	Dual timer	Interrupts 0 and 1
231	System registers ethernet IRQ	-

## 5 Arm® Neoverse™ N2 reference design FVP

The Arm® Neoverse™ N2 reference design (RD-N2) Fixed Virtual Platform (FVP) models much of the Arm® IP in RD-N2. The FVP enables partners to develop ahead of hardware availability and to explore the design from a software perspective.

The FVP is used with the RD-N2 software package. For instructions on setting up and running the FVP, see the RD-N2 Software Bundle Readme.

### 5.1 About the RD-N2 FVP

The RD-N2 FVP models CFG32C4M, which is a single-chiplet system with the number of Arm® Neoverse™ N2 cores reduced to 16.

The FVP models the following IP components:

- Arm® Neoverse™ N2 MP1 cores.
- CMN-700.
- Multiple NIC-450 interconnects.
- GIC-700.
- MMU-700.
- Arm® Cortex®-M7 SCP and MCP cores.



The FVP does not model every component that RD-N2 describes. For example, the FVP does not model the CoreSight™ technology components.

---

The RD-N2 FVP drives system architecture and software standardization. The models provide software and binaries of proprietary firmware that reduce the amount of work that is required for SoC development.

### 5.2 RD-N2 FVP peripherals

The RD-N2 FVP includes peripherals that the software payload requires to run.

The SoC peripherals area and board peripherals area in the RD-N2 memory map are mapped to an expansion AMBA® AXI region. Therefore, these mappings are not defined in the reference design.

The peripherals are organized into two layers:

## SoC

The SoC peripherals represent peripherals that might be added to a compute subsystem in an SoC design. The RD-N2 SoC model is based on the Juno Arm® Development Platform (ADP).

## Board

The board peripherals represent peripherals that might be present on the board onto which the SoC is mounted. The RD-N2 board model is based on the Juno ADP.

### 5.2.1 Memory map for RD-N2 FVP SoC peripherals

This table shows the memory map for the SoC peripherals in the RD-N2 FVP.

**Table 5-1: RD-N2 FVP SoC peripherals**

Name	Base address	Size	Description
SMC0 interface	0x00_0800_0000	64MB	Routed to the board.
SMC1 interface	0x10_5000_0000	256MB	Routed to the board.
PCIe config	0x10_1000_0000	256MB	-
PCIe memory	0x00_6000_0000	512MB	-
DMA MMU-400	0x00_E00_0000	64KB	-
HDLCD1 MMU-400	0x00_E01_0000	64KB	-
HDLCD0 MMU-400	0x00_E02_0000	64KB	-
SoC interconnect NIC-400 GPV	0x00_ED0_0000	1MB	-
Surge detector	0x00_EE5_0000	4KB	Dummy APB.
TRNG	0x00_EE6_0000	4KB	-
Trusted non-volatile counters	0x00_EE7_0000	4KB	-
Trusted root-key storage	0x00_EE8_0000	4KB	-
Secure I2C	0x00_EE9_0000	512 bytes	There is no Secure I2C component in the FVP. Instead, a PL061 GPIO is mapped as a dummy component.
DDR PHY 0-31	0x00_EB0_0000	2MB	Dummy APB.
DMA secure	0x00_EF0_0000	64KB	-
DMA non-secure	0x00_EF1_0000	64KB	-
PCIE macro	0x00_EF2_0000	64KB	-
PCIE root port	0x00_EF3_0000	64KB	-
HDLCD1	0x00_EF5_0000	4KB	-
HDLCD0	0x00_EF6_0000	4KB	-
UART 0	0x00_EF7_0000	4KB	-
UART 1	0x00_EF8_0000	4KB	-
I2S	0x00_EF9_0000	1KB	There is no I2S component in the FVP. Instead, a PL061 GPIO is mapped as a dummy component.
I2C	0x00_EFA_0000	256 bytes	There is no I2C component in the FVP. Instead, a PL061 GPIO is mapped as a dummy component.

Name	Base address	Size	Description
PL354	0x00_EFD_0000	64KB	Arm® PrimeCell SMC dual SRAM memory interface (PL354).
System override registers	0x00_EFF_0000	64KB	-
AP configuration	0x00_EFE_0000	64KB	Granular Power Requester (GPR).

## 5.2.2 Memory map for RD-N2 FVP board peripherals

This table shows the memory map for the board peripherals in the RD-N2 FVP.

**Table 5-2: RD-N2 FVP board peripherals**

Name	Base address	Size	Description
NOR flash 0	0x00_0800_0000	64MB	-
NOR flash 1	0x10_5000_0000	64MB	-
NOR flash 2	0x10_5400_0000	64MB	-
Ethernet	0x10_5C00_0000	64MB	Non-PCI Ethernet controller (SMSC 91C111)
System registers	0x00_0C01_0000	64KB	-
SP810 Sysctrl	0x00_0C02_0000	64KB	-
MCI	0x00_0C05_0000	64KB	Arm® PrimeCell Multimedia Card Interface (PL180)
KMI 0	0x00_0C06_0000	64KB	Arm® PrimeCell PS2 Keyboard/Mouse Interface (PL050)
KMI 1	0x00_0C07_0000	64KB	Arm® PrimeCell PS2 Keyboard/Mouse Interface (PL050)
UART 0	0x00_0C09_0000	64KB	Arm® PrimeCell UART (PL011)
UART 1	0x00_0C0A_0000	64KB	Arm® PrimeCell UART (PL011)
Watchdog	0x00_0C0F_0000	64KB	Arm® Watchdog Module (SP805)
Dual timer	0x00_0C11_0000	64KB	Arm® Dual-Timer Module (SP804)
Virtio block device	0x00_0C13_0000	64KB	-
Virtio net device	0x00_0C15_0000	64KB	-
GPIO 2Wire (DVI)	0x00_0C16_0000	64KB	Arm® PrimeCell General Purpose Input/Output (PL061)
RTC0	0x00_0C17_0000	64KB	Arm® PrimeCell Real Time Clock (PL031)
RTC1	0x00_0C18_0000	64KB	Arm® PrimeCell Real Time Clock (PL031)
GPIO 0	0x00_0C1D_0000	64KB	Arm® PrimeCell General Purpose Input/Output (PL061)
GPIO 1	0x00_0C1E_0000	64KB	Arm® PrimeCell General Purpose Input/Output (PL061)
DRAM	0x00_8000_0000	2GB	-
DRAM	0x80_8000_0000	6GB	-

### 5.2.3 Interrupt maps for RD-N2 FVP

These tables show the interrupt IDs and sources for the FVP peripherals.

**Table 5-3: Interrupt map at the SoC layer**

Interrupt ID	Source
403	UART 0
404	UART 1
427	TRNG

**Table 5-4: Interrupt map at the board layer**

Interrupt ID	Source
387	RTC1
388	RTC0
389	UART0 (board)
390	UART1 (board)
391	KMI1
392	GPIO0
393	GPIO1
394	I2C GPIO
395	MCIINTR0
396	MCIINTR1
397	SMSC 91C111
405	HDLCD controller 0
406	SMC PL354 interface 0
407	SMC PL354 interface 1
413	HDLCD controller 1
414	SMMU combined Secure interrupt
415	SMMU combined Non-secure interrupt
418-425	DMA0 IRQ7-0
426	DMA0 IRQ abort
428-435	DMA1 IRQ7-0
436	DMA1 IRQ abort
458	Virtio block device
460	Virtio net
483	RTCC
484	WDT
485	KMIO
486	Dual timer
487	System registers
488	System register – USB

Interrupt ID	Source
489	System register – Tile
490	System register – Push button
491	System register – Ethernet



## 6 Arm® Neoverse™ V1 reference design FVP

To develop ahead of hardware availability and to explore the design from a software perspective, the Fixed Virtual Platform (FVP) models many of the Arm® IP in the RD-V1 design.

### 6.1 About the RD-V1 FVP

Two configurations of RD-V1 are supported.

- RD-V1 FVP models Config-M, a single-chiplet system with 16 Arm® Neoverse™ V1 cores.
- RD-V1 quad-chiplet FVP models a reduced-size variant of Config-XL, consisting of four compute subsystems linked by CMN-650 CML. It provides a functional model of a quad-chiplet system. Each subsystem contains four Arm® Neoverse™ V1 cores, for a total of 16 cores in the FVP (at full size, Config-XL has 4 x 32 cores).

The FVP models the following IP components:

- Arm® Neoverse™ V1 MP1.
- GIC-700.
- MMU-600.
- SCP.
- MCP.
- CMN-650.
- Multiple NIC-450 interconnects.
- Memory access path towards DRAM which includes a TrustZone® controller.



The FVP does not model every component that RD-V1 describes. For example, it does not model the CoreSight™ technology components.

---

The RD-V1 FVP drives system architecture and software standardization. The models provide software and binaries of proprietary firmware that reduce the amount of work that is required for SoC development.

### 6.2 RD-V1 FVP peripherals

The RD-V1 FVP includes peripherals that the software payload requires to run.

These peripherals are organized in two layers:

## SoC

The SoC peripherals represent peripherals that can be added to a compute subsystem in a SoC design. The Arm® Neoverse™ V1 reference design SoC model is based on the Juno Arm Development Platform (ADP).

## Board

The board peripherals represent peripherals that can be present on the board onto which the SoC is mounted. The RD-V1 board model is based on the Juno Arm Development Platform (ADP).

In the quad-chiplet system, each compute subsystem has SoC and Board layers dedicated to that subsystem. Addressing for each chip is defined in chapter 7.1, AP memory map, in the Arm® Neoverse™ V1 reference design Software Developer Guide.

<b>Chip 0</b>	0x000_0000_0000-0x3FF_FFFF_FFFF
<b>Chip 1</b>	0x400_0000_0000-0x7FF_FFFF_FFFF
<b>Chip 2</b>	0x800_0000_0000-0xBFF_FFFF_FFFF
<b>Chip 3</b>	0xC00_0000_0000-0xFFF_FFFF_FFFF

A sideband communication channel is required to coordinate multi-chiplet software boot over CMN-650. The FVP implements this using the MHU device, but Arm recommends using a solution such as I<sup>2</sup>C in hardware.

## Related information

[Arm Neoverse v1 reference design Software Developer Guide](#)

### 6.2.1 Memory map for RD-V1 FVP SoC peripherals

This table shows the memory map for the SoC peripherals in the RD-V1 FVP.



The following devices are discoverable on the PCIe bus:

- Virtio block device x 2.
- AHCI controller with attached SATA disk.

**Table 6-1: SoC peripherals**

Name	Base address	Size	Description
SMC interface	0x00_0800_0000	368MB	Routed to Board
SMMUv3	0x00_2B40_0000	1MB	-
PCIe Config	0x00_6000_0000	16MB	-
PCIe Memory	0x00_7000_0000	132MB	-
DMA MMU-400	0x00_7FB0_0000	64KB	-

Name	Base address	Size	Description
HDLCD1 MMU-400	0x00_7FB1_0000	64KB	-
HDLCD0 MMU-400	0x00_7FB2_0000	64KB	-
DDR3 PHY 0	0x00_7FB6_0000	64KB	Dummy APB
DDR3 PHY 1	0x00_7FB7_0000	64KB	Dummy APB
DDR3 PHY 2	0x00_7FB8_0000	64KB	Dummy APB
DDR3 PHY 3	0x00_7FB9_0000	64KB	Dummy APB
SoC Interconnect NIC-400 GPV	0x00_7FD0_0000	1MB	-
Surge detector	0x00_7FE5_0000	4KB	Dummy APB
TRNG	0x00_7FE6_0000	4KB	-
Trusted Non-volatile counters	0x00_7FE7_0000	4KB	-
Trusted Root-Key storage	0x00_7FE8_0000	4KB	-
Secure I2C	0x00_7FE9_0000	256B	A Secure I2C component does not exist in the FVP. Instead, a PLO61_GPIO is mapped.
DMA Non-secure	0x00_7FF0_0000	4KB	-
DMA Secure	0x00_7FF1_0000	4KB	-
HDLCD1	0x00_7FF5_0000	4KB	-
HDLCD0	0x00_7FF6_0000	4KB	-
UART 1	0x00_7FF7_0000	4KB	-
UART 0	0x00_7FF8_0000	4KB	-
I2S	0x00_7FF9_0000	1KB	An I2S component does not exist in the FVP. Instead, a PLO61_GPIO is mapped.
I2C	0x00_7FFA_0000	256B	An I2C component does not exist in the FVP. Instead, a PLO61_GPIO is mapped.
PL352	0x00_7FFD_0000	4KB	PL354
AP configuration	0x00_7FFE_0000	4KB	GPR
System override Registers	0x00_7FFF_0000	4KB	-
PCIe Memory	0x05_0000_0000	12GB	-

## 6.2.2 Memory map for RD-V1 FVP board peripherals

This table shows the memory map for the board peripherals in the RD-V1 FVP.



The SoC peripherals area and board peripherals area in the RD-V1 memory map are mapped to an Expansion AXI region. Therefore, these mappings are not defined in the reference design.

**Table 6-2: Board peripherals**

Name	Base address	Size	Description
NOR Flash 0	0x00_0800_0000	64MB	-
NOR Flash 1	0x00_0C00_0000	64MB	-
NOR Flash 2	0x00_1000_0000	64MB	-
Ethernet	0x00_1800_0000	64MB	SMSC 91C111
System registers	0x00_1C01_0000	64KB	-
MCI	0x00_1C05_0000	64KB	PL180
KMI 0	0x00_1C06_0000	64KB	PL050
KMI 1	0x00_1C07_0000	64KB	PL050
UART 0	0x00_1C09_0000	64KB	PL011
UART 1	0x00_1C0A_0000	64KB	PL011
Watchdog	0x00_1C0F_0000	64KB	SP805
Dual Timer	0x00_1C11_0000	64KB	SP804
Virtio Block Device	0x00_1C13_0000	64KB	-
Virtio Net Device	0x00_1C15_0000	64KB	-
RTC	0x00_1C17_0000	64KB	PL031
GPIO 0	0x00_1C1D_0000	64KB	PL061_GPIO
GPIO 1	0x00_1C1E_0000	64KB	PL061_GPIO
DRAM	0x00_8000_0000	2GB	-
DRAM	0x80_8000_0000	6GB	-

### 6.2.3 Interrupt maps for RD-V1 FVP

These tables show the interrupt IDs and sources for the FVP peripherals.

**Table 6-3: Interrupt map at the SoC layer**

Interrupt ID	Source	Description
147	UART 0	-
148	UART 1	-
171	TRNG	-

**Table 6-4: Interrupt map at the board layer**

Interrupt ID	Source	Description
111	Ethernet	-
132	RTC	-
133	UART 0	-
134	UART 1	-
140	VFS2	-
202	Virtio	-

Interrupt ID	Source	Description
204	Virtio net device	-
228	Watchdog	-
229	KMI 0	-
230	Dual Timer	Interrupts 0 and 1
231	System registers Ethernet IRQ	-

## 7 Base Platform FVPs

This chapter lists the Base Platform FVPs and the instances in them.

For the Base Platform memory map, see [Base Platform memory map](#) in the Fast Models Reference Manual.

### 7.1 FVP\_Base\_AEMv8R

FVP\_Base\_AEMv8R contains the following instances:

#### FVP\_Base\_AEMv8R instances

##### **FVP\_Base\_AEMv8R**

Base Platform Compute Subsystem for AEMv8RMPCT.

Type: FVP\_Base\_AEMv8R.

##### **FVP\_Base\_AEMv8R.bp**

Peripherals and address map for the Base Platform.

Type: BasePlatformPeripherals.

##### **FVP\_Base\_AEMv8R.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

##### **FVP\_Base\_AEMv8R.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

##### **FVP\_Base\_AEMv8R.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

##### **FVP\_Base\_AEMv8R.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

##### **FVP\_Base\_AEMv8R.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

##### **FVP\_Base\_AEMv8R.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_AEMv8R.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMv8R.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMv8R.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_AEMv8R.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_AEMv8R.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).



**FVP\_Base\_AEMv8R.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_AEMv8R.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_AEMv8R.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMv8R.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMv8R.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMv8R.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMv8R.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_AEMv8R.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_AEMv8R.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_AEMv8R.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_AEMv8R.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_AEMv8R.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_AEMv8R.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMv8R.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_AEMv8R.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_AEMv8R.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMv8R.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMv8R.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_AEMv8R.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_AEMv8R.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_AEMv8R.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_AEMv8R.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_AEMv8R.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMv8R.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_AEMv8R.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_AEMv8R.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_AEMv8R.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_AEMv8R.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_AEMv8R.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMv8R.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMv8R.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_AEMv8R.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_AEMv8R.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMv8R.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMv8R.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMv8R.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMv8R.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_AEMv8R.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_AEMv8R.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_AEMv8R.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_AEMv8R.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_AEMv8R.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_AEMv8R.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_AEMv8R.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_AEMv8R.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMv8R.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_AEMv8R.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMv8R.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_AEMv8R.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMv8R.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_AEMv8R.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_AEMv8R.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMv8R.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_AEMv8R.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMv8R.cluster0**

ARMAEMv8-R Cluster CT model.

Type: [Cluster\\_ARMAEMv8-R\\_MP](#).

**FVP\_Base\_AEMv8R.cluster0.cpu0**

ARMAEMv8-R MP CT model.

Type: [ARMAEMv8-R\\_MP](#).

**FVP\_Base\_AEMv8R.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_AEMv8R.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMv8R.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMv8R.cluster0.cpu1**

ARMAEMv8-R MP CT model.

Type: [ARMAEMv8-R\\_MP](#).



**FVP\_Base\_AEMv8R.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_AEMv8R.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0.cpu2**

ARMAEMv8-R MP CT model.

Type: ARMAEMv8-R\_MP.

**FVP\_Base\_AEMv8R.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_AEMv8R.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0.cpu3**

ARMAEMv8-R MP CT model.

Type: ARMAEMv8-R\_MP.

**FVP\_Base\_AEMv8R.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_AEMv8R.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMv8R.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_AEMv8R.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_AEMv8R.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_Base\_AEMv8R.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_AEMv8R.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.2 FVP\_Base\_AEMvA

FVP\_Base\_AEMvA contains the following instances:

### FVP\_Base\_AEMvA instances

#### **FVP\_Base\_AEMvA**

Base Platform Compute Subsystem for AEMvACT.

Type: [FVP\\_Base\\_AEMvA](#).

#### **FVP\_Base\_AEMvA.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_AEMvA.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_AEMvA.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_AEMvA.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_AEMvA.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_AEMvA.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_AEMvA.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_AEMvA.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_AEMvA.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_AEMvA.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_AEMvA.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_AEMvA.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_AEMvA.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_AEMvA.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_AEMvA.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_AEMvA.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_AEMvA.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_AEMvA.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_AEMvA.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_AEMvA.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_AEMvA.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_AEMvA.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_AEMvA.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_AEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_AEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).



**FVP\_Base\_AEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_AEMvA.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_AEMvA.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_AEMvA.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_AEMvA.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_AEMvA.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_AEMvA.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_AEMvA.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_AEMvA.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_AEMvA.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_AEMvA.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_AEMvA.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_AEMvA.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_AEMvA.bp.vc\_sysregs**

Type: [vc\\_SysRegs](#).

**FVP\_Base\_AEMvA.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_AEMvA.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_AEMvA.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_AEMvA.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_AEMvA.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_AEMvA.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_AEMvA.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_AEMvA.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA.cluster0**

ARM AEMvA Cluster CT model.

Type: [Cluster\\_ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_AEMvA.cluster0.cpu0**

ARM AEM-A MP CT model.

Type: [ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_AEMvA.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_AEMvA.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.cpu1**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_AEMvA.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.cpu2**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_AEMvA.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.cpu3**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_AEMvA.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_AEMvA.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_AEMvA.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_AEMvA.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_AEMvA.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.3 FVP\_Base\_AEMvA-AEMvA

FVP\_Base\_AEMvA-AEMvA contains the following instances:

### FVP\_Base\_AEMvA-AEMvA instances

**FVP\_Base\_AEMvA\_AEMvA**

Base Platform Compute Subsystem for AEMvACT and AEMvACT.

Type: [FVP\\_Base\\_AEMvA\\_AEMvA](#).**FVP\_Base\_AEMvA\_AEMvA.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_AEMvA\_AEMvA.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_AEMvA\_AEMvA.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_AEMvA\_AEMvA.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_AEMvA\_AEMvA.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_AEMvA\_AEMvA.cluster0**

ARM AEMvA Cluster CT model.

Type: Cluster\_ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu0**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu1**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu2**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu3**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster0.labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1**

ARM AEMvA Cluster CT model.

Type: Cluster\_ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu0**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu1**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu2**

ARM AEM-A MP CT model.

Type: [ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu3**

ARM AEM-A MP CT model.

Type: [ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_AEMvA\_AEMvA.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_AEMvA\_AEMvA.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_AEMvA\_AEMvA.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_AEMvA\_AEMvA.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_AEMvA\_AEMvA.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.4 FVP\_Base\_Cortex-A32x1

FVP\_Base\_Cortex-A32x1 contains the following instances:

### FVP\_Base\_Cortex-A32x1 instances

**FVP\_Base\_Cortex\_A32x1**

Base Platform Compute Subsystem for ARMCortexA32x1CT.

Type: [FVP\\_Base\\_Cortex\\_A32x1](#).

**FVP\_Base\_Cortex\_A32x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A32x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A32x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A32x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A32x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A32x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A32x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A32x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A32x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A32x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A32x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A32x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A32x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A32x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).



**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A32x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A32x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A32x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A32x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A32x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A32x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A32x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A32x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A32x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A32x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A32x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A32x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A32x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A32x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A32x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A32x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A32x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A32x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A32x1.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A32x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A32x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x1.cluster0**

ARM Cortex-A32 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x1.cluster0.cpu0**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A32x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A32x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A32x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A32x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A32x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A32x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A32x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.5 FVP\_Base\_Cortex-A32x2

FVP\_Base\_Cortex-A32x2 contains the following instances:

### FVP\_Base\_Cortex-A32x2 instances

**FVP\_Base\_Cortex\_A32x2**

Base Platform Compute Subsystem for ARMCortexA32x2CT.

Type: [FVP\\_Base\\_Cortex\\_A32x2](#).

**FVP\_Base\_Cortex\_A32x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A32x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A32x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A32x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A32x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A32x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A32x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A32x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A32x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A32x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A32x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A32x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A32x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A32x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A32x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A32x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A32x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A32x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A32x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A32x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A32x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A32x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A32x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A32x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A32x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A32x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A32x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A32x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A32x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A32x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A32x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A32x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Cortex\_A32x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A32x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A32x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A32x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x2.cluster0**

ARM Cortex-A32 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x2.cluster0.cpu0**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A32x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x2.cluster0.cpu1**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).**FVP\_Base\_Cortex\_A32x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A32x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x2.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A32x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A32x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A32x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A32x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.6 FVP\_Base\_Cortex-A32x4

FVP\_Base\_Cortex-A32x4 contains the following instances:

### FVP\_Base\_Cortex-A32x4 instances

#### **FVP\_Base\_Cortex\_A32x4**

Base Platform Compute Subsystem for ARMCortexA32x4CT.

Type: `FVP_Base_Cortex_A32x4`.

#### **FVP\_Base\_Cortex\_A32x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A32x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A32x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A32x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A32x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A32x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A32x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A32x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A32x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A32x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A32x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A32x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A32x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A32x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A32x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A32x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A32x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A32x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A32x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A32x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A32x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A32x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A32x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A32x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A32x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A32x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A32x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A32x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A32x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A32x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A32x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A32x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A32x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A32x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A32x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A32x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A32x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A32x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A32x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A32x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A32x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A32x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A32x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A32x4.cluster0**

ARM Cortex-A32 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu0**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu1**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A32x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu2**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu3**

ARM Cortex-A32 CT model.

Type: [ARM\\_Cortex-A32](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A32x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A32x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A32x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A32x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A32x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.7 FVP\_Base\_Cortex-A35x1

FVP\_Base\_Cortex-A35x1 contains the following instances:

### **FVP\_Base\_Cortex-A35x1 instances**

#### **FVP\_Base\_Cortex\_A35x1**

Base Platform Compute Subsystem for ARMCortexA35x1CT.

Type: [FVP\\_Base\\_Cortex\\_A35x1](#).

#### **FVP\_Base\_Cortex\_A35x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A35x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A35x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A35x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A35x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A35x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A35x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A35x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A35x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A35x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A35x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A35x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A35x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A35x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A35x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A35x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A35x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A35x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A35x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A35x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A35x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A35x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A35x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A35x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A35x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A35x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A35x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A35x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A35x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A35x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A35x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A35x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A35x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A35x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A35x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A35x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A35x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A35x1.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).



**FVP\_Base\_Cortex\_A35x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A35x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x1.cluster0**

ARM Cortex-A35 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x1.cluster0.cpu0**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A35x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A35x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A35x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A35x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A35x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A35x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A35x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.8 FVP\_Base\_Cortex-A35x2

FVP\_Base\_Cortex-A35x2 contains the following instances:

### FVP\_Base\_Cortex-A35x2 instances

**FVP\_Base\_Cortex\_A35x2**

Base Platform Compute Subsystem for ARMCortexA35x2CT.

Type: [FVP\\_Base\\_Cortex\\_A35x2](#).

**FVP\_Base\_Cortex\_A35x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A35x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A35x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A35x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A35x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A35x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A35x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A35x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A35x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A35x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A35x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A35x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A35x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A35x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A35x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.



Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A35x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A35x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A35x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A35x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A35x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A35x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A35x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A35x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A35x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A35x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A35x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A35x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A35x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A35x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A35x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A35x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A35x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A35x2.bp.virtio9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A35x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A35x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A35x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x2.cluster0**

ARM Cortex-A35 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x2.cluster0.cpu0**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A35x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x2.cluster0.cpu1**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).**FVP\_Base\_Cortex\_A35x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A35x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x2.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A35x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A35x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A35x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A35x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.9 FVP\_Base\_Cortex-A35x4

FVP\_Base\_Cortex-A35x4 contains the following instances:

### FVP\_Base\_Cortex-A35x4 instances

#### **FVP\_Base\_Cortex\_A35x4**

Base Platform Compute Subsystem for ARMCortexA35x4CT.

Type: `FVP_Base_Cortex_A35x4`.

#### **FVP\_Base\_Cortex\_A35x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A35x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A35x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A35x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A35x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A35x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A35x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A35x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Cortex\_A35x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A35x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A35x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A35x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A35x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A35x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A35x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A35x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A35x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A35x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A35x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A35x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A35x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A35x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A35x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A35x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A35x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A35x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A35x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A35x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A35x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A35x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A35x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A35x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A35x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A35x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A35x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A35x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A35x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A35x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A35x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A35x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A35x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A35x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A35x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A35x4.cluster0**

ARM Cortex-A35 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu0**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu1**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A35x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Cortex\_A35x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu2**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu3**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A35x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A35x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A35x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A35x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A35x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.10 FVP\_Base\_Cortex-A510x1

FVP\_Base\_Cortex-A510x1 contains the following instances:

### **FVP\_Base\_Cortex-A510x1 instances**

#### **FVP\_Base\_Cortex\_A510x1**

Base Platform Compute Subsystem for ARMCortexA510x1CT.

Type: [FVP\\_Base\\_Cortex\\_A510x1](#).

#### **FVP\_Base\_Cortex\_A510x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A510x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A510x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A510x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A510x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A510x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A510x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A510x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A510x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A510x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A510x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A510x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A510x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).



**FVP\_Base\_Cortex\_A510x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A510x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A510x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A510x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A510x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A510x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A510x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A510x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A510x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A510x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A510x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A510x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A510x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A510x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A510x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A510x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A510x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A510x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A510x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x1.cluster0**

ARM Cortex-A510Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x1.cluster0.cpu0**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A510x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A510x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A510x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A510x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.11 FVP\_Base\_Cortex-A510x2

FVP\_Base\_Cortex-A510x2 contains the following instances:

### FVP\_Base\_Cortex-A510x2 instances

**FVP\_Base\_Cortex\_A510x2**

Base Platform Compute Subsystem for ARMCortexA510x2CT.

Type: [FVP\\_Base\\_Cortex\\_A510x2](#).

**FVP\_Base\_Cortex\_A510x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A510x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A510x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A510x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).



**FVP\_Base\_Cortex\_A510x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A510x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A510x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A510x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A510x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A510x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A510x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A510x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A510x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A510x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A510x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A510x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A510x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A510x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A510x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A510x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A510x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A510x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A510x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A510x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A510x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A510x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A510x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x2.cluster0**

ARM Cortex-A510Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu0**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu1**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A510x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A510x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A510x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).



## 7.12 FVP\_Base\_Cortex-A510x4

FVP\_Base\_Cortex-A510x4 contains the following instances:

### FVP\_Base\_Cortex-A510x4 instances

#### **FVP\_Base\_Cortex\_A510x4**

Base Platform Compute Subsystem for ARMCortexA510x4CT.

Type: [FVP\\_Base\\_Cortex\\_A510x4](#).

#### **FVP\_Base\_Cortex\_A510x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A510x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A510x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A510x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A510x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A510x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A510x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A510x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A510x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A510x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A510x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A510x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A510x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A510x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A510x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A510x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A510x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A510x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A510x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A510x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A510x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A510x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A510x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A510x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A510x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A510x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A510x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A510x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A510x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4.cluster0**

ARM Cortex-A510Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu0**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu1**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu2**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu3**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A510x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A510x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A510x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.13 FVP\_Base\_Cortex-A510x4+Cortex-A710x4

FVP\_Base\_Cortex-A510x4+Cortex-A710x4 contains the following instances:

### FVP\_Base\_Cortex-A510x4+Cortex-A710x4 instances

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4**

Base Platform Compute Subsystem for ARMCortexA510x4CT\_CortexA710x4CT.

Type: [FVP\\_Base\\_Cortex\\_A510x4\\_Cortex\\_A710x4](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.audioout**

SDL based Audio Output for PLO41\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).



**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hdlcd0.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hdlcd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hdlcd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0**

ARM Cortex-A710 CT heterogeneous cluster model.

Type: [Cluster\\_ARM\\_CortexA710\\_Heterogeneous\\_Cluster](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu0**

ARM Cortex-A510 CT Model in Heterogeneous Cluster.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu1**

ARM Cortex-A510 CT Model in Heterogeneous Cluster.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu2**  
ARM Cortex-A510 CT Model in Heterogeneous Cluster.  
Type: `cluster_ARM_Cortex-A510`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu3**  
ARM Cortex-A510 CT Model in Heterogeneous Cluster.  
Type: `cluster_ARM_Cortex-A510`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu4**  
ARM Cortex-A710 CT Model in Heterogeneous Cluster.  
Type: `cluster_ARM_CortexA710`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu5**  
ARM Cortex-A710 CT Model in Heterogeneous Cluster.  
Type: `cluster_ARM_CortexA710`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu6**  
ARM Cortex-A710 CT Model in Heterogeneous Cluster.  
Type: `cluster_ARM_CortexA710`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.cpu7**  
ARM Cortex-A710 CT Model in Heterogeneous Cluster.  
Type: `cluster_ARM_CortexA710`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.subcluster0**  
ARM Cortex-A510 CT Model in Heterogeneous SubCluster.  
Type: `subcluster_ARM_Cortex-A510`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0.subcluster1**  
ARM Cortex-A710 Cluster CT model.  
Type: `subcluster_ARM_CortexA710`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.cluster0\_labeller**  
Type: `Labeller`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.dapmemlogger**  
Bus Logger.  
Type: `PVBusLogger`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.elfloader**  
ELF loader component.  
Type: `ElfLoader`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.gic\_distributor**  
GIC Interrupt Redistribution Infrastructure component.  
Type: `GIC_IRI`.

**FVP\_Base\_Cortex\_A510x4\_Cortex\_A710x4.pctl1**  
Base Platforms Power Controller.  
Type: `Base_PowerController`.



## 7.14 FVP\_Base\_Cortex-A510x8

FVP\_Base\_Cortex-A510x8 contains the following instances:

### FVP\_Base\_Cortex-A510x8 instances

#### **FVP\_Base\_Cortex\_A510x8**

Base Platform Compute Subsystem for ARMCortexA510x8CT.

Type: [FVP\\_Base\\_Cortex\\_A510x8](#).

#### **FVP\_Base\_Cortex\_A510x8.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A510x8.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x8.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A510x8.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A510x8.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A510x8.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x8.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A510x8.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A510x8.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x8.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x8.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x8.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x8.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A510x8.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A510x8.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x8.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x8.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x8.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x8.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x8.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A510x8.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A510x8.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x8.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x8.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A510x8.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A510x8.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A510x8.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A510x8.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A510x8.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A510x8.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A510x8.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A510x8.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x8.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A510x8.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A510x8.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x8.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x8.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x8.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A510x8.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A510x8.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A510x8.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A510x8.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A510x8.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A510x8.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A510x8.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A510x8.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A510x8.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x8.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A510x8.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x8.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A510x8.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A510x8.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A510x8.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A510x8.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A510x8.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A510x8.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A510x8.cluster0**

ARM Cortex-A510Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu0**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu1**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu2**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu3**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu4**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu4.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu4.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu4.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu4.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu5**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu5.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu5.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu5.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu5.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu6**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu6.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu6.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A510x8.cluster0.cpu6.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu6.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu7**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu7.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu7.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu7.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0.cpu7.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A510x8.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A510x8.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A510x8.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A510x8.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A510x8.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.15 FVP\_Base\_Cortex-A53x1

FVP\_Base\_Cortex-A53x1 contains the following instances:

### FVP\_Base\_Cortex-A53x1 instances

#### **FVP\_Base\_Cortex\_A53x1**

Base Platform Compute Subsystem for ARMCortexA53x1CT.

Type: [FVP\\_Base\\_Cortex\\_A53x1](#).

#### **FVP\_Base\_Cortex\_A53x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A53x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A53x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A53x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A53x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A53x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A53x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A53x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A53x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A53x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A53x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A53x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A53x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A53x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A53x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A53x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A53x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A53x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A53x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A53x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A53x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A53x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A53x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A53x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A53x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A53x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A53x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A53x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A53x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A53x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A53x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A53x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A53x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A53x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A53x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A53x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A53x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x1.cluster0**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x1.cluster0.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A53x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A53x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A53x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A53x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A53x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A53x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A53x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.16 FVP\_Base\_Cortex-A53x2

FVP\_Base\_Cortex-A53x2 contains the following instances:

### FVP\_Base\_Cortex-A53x2 instances

**FVP\_Base\_Cortex\_A53x2**

Base Platform Compute Subsystem for ARMCortexA53x2CT.

Type: [FVP\\_Base\\_Cortex\\_A53x2](#).

**FVP\_Base\_Cortex\_A53x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A53x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A53x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A53x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A53x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A53x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A53x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A53x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A53x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A53x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A53x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A53x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A53x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A53x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).



**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A53x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A53x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A53x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A53x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A53x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A53x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A53x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A53x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A53x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A53x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A53x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A53x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A53x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A53x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A53x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A53x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A53x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A53x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A53x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A53x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A53x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x2.cluster0**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x2.cluster0.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A53x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x2.cluster0.cpu1**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A53x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A53x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x2.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A53x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A53x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A53x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A53x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.17 FVP\_Base\_Cortex-A53x4

FVP\_Base\_Cortex-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A53x4 instances

#### **FVP\_Base\_Cortex\_A53x4**

Base Platform Compute Subsystem for ARMCortexA53x4CT.

Type: `FVP_Base_Cortex_A53x4`.

#### **FVP\_Base\_Cortex\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Cortex\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A53x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A53x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A53x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A53x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A53x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A53x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A53x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A53x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A53x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A53x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A53x4.cluster0**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu1**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Cortex\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu2**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu3**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A53x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.18 FVP\_Base\_Cortex-A55

FVP\_Base\_Cortex-A55 contains the following instances:

### **FVP\_Base\_Cortex-A55 instances**

#### **FVP\_Base\_Cortex\_A55**

Base Platform Compute Subsystem for ARMCortexA55CT.

Type: [FVP\\_Base\\_Cortex\\_A55](#).

#### **FVP\_Base\_Cortex\_A55.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A55.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A55.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).



**FVP\_Base\_Cortex\_A55.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55.cluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu4**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55.cluster0.cpu4.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55.cluster0.cpu4.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu4.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu4.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu5**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55.cluster0.cpu5.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55.cluster0.cpu5.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu5.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu5.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55.cluster0.cpu6**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55.cluster0.cpu6.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu6.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu6.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu6.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu7**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu7.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu7.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu7.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0.cpu7.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A55.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A55.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A55.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.19 FVP\_Base\_Cortex-A55+Cortex-A76

FVP\_Base\_Cortex-A55+Cortex-A76 contains the following instances:

### FVP\_Base\_Cortex-A55+Cortex-A76 instances

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76**

Base Platform Compute Subsystem for ARMCortexA55CT\_CortexA76CT.

Type: [FVP\\_Base\\_Cortex\\_A55\\_Cortex\\_A76](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a

proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hdlcd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hdlcd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).



**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cluster0**

ARM Cortex-A55\_Cortex-A76 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cluster0.subcluster1**

ARM Cortex-A76 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A55\_Cortex\_A76.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.20 FVP\_Base\_Cortex-A55x1

FVP\_Base\_Cortex-A55x1 contains the following instances:

### FVP\_Base\_Cortex-A55x1 instances

**FVP\_Base\_Cortex\_A55x1**

Base Platform Compute Subsystem for ARM Cortex A55x1CT.

Type: [FVP\\_Base\\_Cortex\\_A55x1](#).

**FVP\_Base\_Cortex\_A55x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_2\_3**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).



**FVP\_Base\_Cortex\_A55x1.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A55x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x1.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1.cluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x1.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A55x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A55x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A55x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A55x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.21 FVP\_Base\_Cortex-A55x1+Cortex-A75x1

FVP\_Base\_Cortex-A55x1+Cortex-A75x1 contains the following instances:

### FVP\_Base\_Cortex-A55x1+Cortex-A75x1 instances

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1**

Base Platform Compute Subsystem for ARMCortexA55x1CT\_CortexA75x1CT.

Type: [FVP\\_Base\\_Cortex\\_A55x1\\_Cortex\\_A75x1](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hd1cd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hd1cd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hd1cd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cluster0**

ARM Cortex-A55\_Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cluster0.cpu1**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).



**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cluster0.subcluster1**

ARM Cortex-A75 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A75](#).**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A55x1\_Cortex\_A75x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.22 FVP\_Base\_Cortex-A55x2

FVP\_Base\_Cortex-A55x2 contains the following instances:

### FVP\_Base\_Cortex-A55x2 instances

**FVP\_Base\_Cortex\_A55x2**

Base Platform Compute Subsystem for ARMCortexA55x2CT.

Type: [FVP\\_Base\\_Cortex\\_A55x2](#).**FVP\_Base\_Cortex\_A55x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A55x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_A55x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC0](#).

**FVP\_Base\_Cortex\_A55x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x2.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x2.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd.pl111x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_A55x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55x2.bp.vc\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A55x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2.bp.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x2.bp.virtioP9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2.cluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x2.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A55x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A55x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A55x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A55x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.23 FVP\_Base\_Cortex-A55x2+Cortex-A75x2

FVP\_Base\_Cortex-A55x2+Cortex-A75x2 contains the following instances:

### FVP\_Base\_Cortex-A55x2+Cortex-A75x2 instances

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2**

Base Platform Compute Subsystem for ARMCortexA55x2CT\_CortexA75x2CT.

Type: [FVP\\_Base\\_Cortex\\_A55x2\\_Cortex\\_A75x2](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hd1cd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hd1cd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hd1cd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a



proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hd1cd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hd1cd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [Tzc\\_400](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.vis\_recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0**

ARM Cortex-A55\_Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0.cpu2**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0.cpu3**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0.subcluster1**

ARM Cortex-A75 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A55x2\_Cortex\_A75x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.24 FVP\_Base\_Cortex-A55x4

FVP\_Base\_Cortex-A55x4 contains the following instances:

### FVP\_Base\_Cortex-A55x4 instances

**FVP\_Base\_Cortex\_A55x4**

Base Platform Compute Subsystem for ARMCortexA55x4CT.

Type: [FVP\\_Base\\_Cortex\\_A55x4](#).

**FVP\_Base\_Cortex\_A55x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.



Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A55x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A55x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).



**FVP\_Base\_Cortex\_A55x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x4.bp.virtio9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4.cluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: ARM\_Cortex-A55.

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A55x4.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A55x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A55x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A55x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A55x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A55x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A55x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.25 FVP\_Base\_Cortex-A55x4+Cortex-A75x1

FVP\_Base\_Cortex-A55x4+Cortex-A75x1 contains the following instances:

### FVP\_Base\_Cortex-A55x4+Cortex-A75x1 instances

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1**

Base Platform Compute Subsystem for ARM Cortex A55x4 CT\_Cortex A75x1 CT.

Type: [FVP\\_Base\\_Cortex\\_A55x4\\_Cortex\\_A75x1](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hd1cd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hd1cd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hd1cd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hd1cd0\_labeller**

Type: [Labeller](#).



**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0**

ARM Cortex-A55\_Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.cpu4**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0.subcluster1**

ARM Cortex-A75 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.dapmemlogger**

Bus Logger.

Type: [PVBUSLogger](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.26 FVP\_Base\_Cortex-A55x4+Cortex-A75x2

FVP\_Base\_Cortex-A55x4+Cortex-A75x2 contains the following instances:

### FVP\_Base\_Cortex-A55x4+Cortex-A75x2 instances

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2**

Base Platform Compute Subsystem for ARMCortexA55x4CT\_CortexA75x2CT.

Type: `FVP_Base_Cortex_A55x4_Cortex_A75x2`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.



**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hd1cd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hd1cd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hd1cd0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.hostbridge**

Host Socket Interface Component.

Type: `HostBridge`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.mmc**

Generic Multimedia Card.

Type: `MMC`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: `IntelStrataFlashJ3`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: `FlashLoader`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).



**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0**

ARM Cortex-A55\_Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.cpu4**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.cpu5**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0.subcluster1**

ARM Cortex-A75 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.27 FVP\_Base\_Cortex-A55x4+Cortex-A75x4

FVP\_Base\_Cortex-A55x4+Cortex-A75x4 contains the following instances:

### FVP\_Base\_Cortex-A55x4+Cortex-A75x4 instances

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4**

Base Platform Compute Subsystem for ARMCortexA55x4CT\_CortexA75x4CT.

Type: [FVP\\_Base\\_Cortex\\_A55x4\\_Cortex\\_A75x4](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hd1cd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hd1cd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hd1cd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).



**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0**

ARM Cortex-A55\_Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu4**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu5**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu6**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.cpu7**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0.subcluster1**

ARM Cortex-A75 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A75](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A75x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.28 FVP\_Base\_Cortex-A55x4+Cortex-A76x2

FVP\_Base\_Cortex-A55x4+Cortex-A76x2 contains the following instances:

### FVP\_Base\_Cortex-A55x4+Cortex-A76x2 instances

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2**

Base Platform Compute Subsystem for ARMCortexA55x4CT\_CortexA76x2CT.

Type: `FVP_Base_Cortex_A55x4_Cortex_A76x2`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hdlcd0.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hd1cd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hd1cd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hd1cd0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.hostbridge**

Host Socket Interface Component.

Type: `HostBridge`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.mmc**

Generic Multimedia Card.

Type: `MMC`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: `IntelStrataFlashJ3`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: `FlashLoader`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0**

ARM Cortex-A55\_Cortex-A76 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.cpu4**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.cpu5**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0.subcluster1**

ARM Cortex-A76 Cluster CT model.

Type: `Subcluster_ARM_Cortex-A76`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.cluster0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.elfloader**

ELF loader component.

Type: `ElfLoader`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: `GIC_IRI`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A76x2.pctl**

Base Platforms Power Controller.

Type: `Base_PowerController`.

## 7.29 FVP\_Base\_Cortex-A55x4+Cortex-A78x4

FVP\_Base\_Cortex-A55x4+Cortex-A78x4 contains the following instances:

### FVP\_Base\_Cortex-A55x4+Cortex-A78x4 instances

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4**

Base Platform Compute Subsystem for ARMCortexA55x4CT\_CortexA78x4CT.

Type: `FVP_Base_Cortex_A55x4_Cortex_A78x4`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hd1cd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hd1cd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hd1cd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.



Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0**

ARM Cortex-A55\_Cortex-A78 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A55\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu0**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu1**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).

**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu2**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu3**

ARM Cortex-A55 CT model.

Type: [ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu4**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu5**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu6**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.cpu7**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.subcluster0**

ARM Cortex-A55 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A55](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0.subcluster1**

ARM Cortex-A78 Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A78](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A55x4\_Cortex\_A78x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.30 FVP\_Base\_Cortex-A57x1

FVP\_Base\_Cortex-A57x1 contains the following instances:

### FVP\_Base\_Cortex-A57x1 instances

#### **FVP\_Base\_Cortex\_A57x1**

Base Platform Compute Subsystem for ARMCortexA57x1CT.

Type: `FVP_Base_Cortex_A57x1`.

#### **FVP\_Base\_Cortex\_A57x1.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A57x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A57x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Cortex\_A57x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A57x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A57x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x1.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).



**FVP\_Base\_Cortex\_A57x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A57x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.31 FVP\_Base\_Cortex-A57x1-A35x1

FVP\_Base\_Cortex-A57x1-A35x1 contains the following instances:

### FVP\_Base\_Cortex-A57x1-A35x1 instances

**FVP\_Base\_Cortex\_A57x1\_A35x1**

Base Platform Compute Subsystem for ARM Cortex A57x1CT and ARM Cortex A35x1CT.

Type: [FVP\\_Base\\_Cortex\\_A57x1\\_A35x1](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.psrpm**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).



**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster0.labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1**

ARM Cortex-A35 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A35](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1.cpu0**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.cluster1.labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A57x1\_A35x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x1\_A35x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.32 FVP\_Base\_Cortex-A57x1-A53x1

FVP\_Base\_Cortex-A57x1-A53x1 contains the following instances:

### FVP\_Base\_Cortex-A57x1-A53x1 instances

**FVP\_Base\_Cortex\_A57x1\_A53x1**

Base Platform Compute Subsystem for ARMCortexA57x1CT and ARMCortexA53x1CT.

Type: [FVP\\_Base\\_Cortex\\_A57x1\\_A53x1](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).



**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.psrpm**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster0.labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.cluster1.labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).



**FVP\_Base\_Cortex\_A57x1\_A53x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x1\_A53x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.33 FVP\_Base\_Cortex-A57x2

FVP\_Base\_Cortex-A57x2 contains the following instances:

### FVP\_Base\_Cortex-A57x2 instances

**FVP\_Base\_Cortex\_A57x2**

Base Platform Compute Subsystem for ARMCortexA57x2CT.

Type: [FVP\\_Base\\_Cortex\\_A57x2](#).

**FVP\_Base\_Cortex\_A57x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A57x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).



**FVP\_Base\_Cortex\_A57x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A57x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x2.bp.virtio9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x2.cluster0.cpu1**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).**FVP\_Base\_Cortex\_A57x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A57x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x2.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A57x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A57x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A57x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A57x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.34 FVP\_Base\_Cortex-A57x2-A35x4

FVP\_Base\_Cortex-A57x2-A35x4 contains the following instances:

### FVP\_Base\_Cortex-A57x2-A35x4 instances

#### **FVP\_Base\_Cortex\_A57x2\_A35x4**

Base Platform Compute Subsystem for ARM Cortex A57x2CT and ARM Cortex A35x4CT.

Type: `FVP_Base_Cortex_A57x2_A35x4`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_2\_3**

ARM Dual-Timer Module (SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component



which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu1**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster0.labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1**

ARM Cortex-A35 Cluster CT model.

Type: Cluster\_ARM\_Cortex-A35.

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu0**

ARM Cortex-A35 CT model.

Type: ARM\_Cortex-A35.

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu1**

ARM Cortex-A35 CT model.

Type: ARM\_Cortex-A35.

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu1.l1icache**

PV Cache.



Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu2**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu3**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x2\_A35x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.35 FVP\_Base\_Cortex-A57x2-A53x4

FVP\_Base\_Cortex-A57x2-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A57x2-A53x4 instances

**FVP\_Base\_Cortex\_A57x2\_A53x4**

Base Platform Compute Subsystem for ARM Cortex A57x2CT and ARM Cortex A53x4CT.

Type: [FVP\\_Base\\_Cortex\\_A57x2\\_A53x4](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hd1cd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).



**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu1**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu1**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu2**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu3**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x2\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.36 FVP\_Base\_Cortex-A57x4

FVP\_Base\_Cortex-A57x4 contains the following instances:

### FVP\_Base\_Cortex-A57x4 instances

**FVP\_Base\_Cortex\_A57x4**

Base Platform Compute Subsystem for ARMCortexA57x4CT.

Type: [FVP\\_Base\\_Cortex\\_A57x4](#).

**FVP\_Base\_Cortex\_A57x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A57x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A57x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A57x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Cortex\_A57x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.cpu1**

ARM Cortex-A57 CT model.

Type: ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.cpu2**

ARM Cortex-A57 CT model.

Type: ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.cpu3**

ARM Cortex-A57 CT model.

Type: ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A57x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A57x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A57x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A57x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.37 FVP\_Base\_Cortex-A57x4-A35x4

FVP\_Base\_Cortex-A57x4-A35x4 contains the following instances:

### FVP\_Base\_Cortex-A57x4-A35x4 instances

**FVP\_Base\_Cortex\_A57x4\_A35x4**

Base Platform Compute Subsystem for ARMCortexA57x4CT and ARMCortexA35x4CT.

Type: [FVP\\_Base\\_Cortex\\_A57x4\\_A35x4](#).**FVP\_Base\_Cortex\_A57x4\_A35x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A57x4\_A35x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hd1cd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC0](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hd1cd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hd1cd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hd1cd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hd1cd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).



**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.virtioP9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: Cluster\_ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu1**

ARM Cortex-A57 CT model.

Type: ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu2**

ARM Cortex-A57 CT model.

Type: ARM\_Cortex-A57.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu3**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster0.labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1**

ARM Cortex-A35 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu0**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu1**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu2**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu3**

ARM Cortex-A35 CT model.

Type: [ARM\\_Cortex-A35](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).



**FVP\_Base\_Cortex\_A57x4\_A35x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x4\_A35x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.38 FVP\_Base\_Cortex-A57x4-A53x4

FVP\_Base\_Cortex-A57x4-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A57x4-A53x4 instances

**FVP\_Base\_Cortex\_A57x4\_A53x4**

Base Platform Compute Subsystem for ARM Cortex A57x4CT and ARM Cortex A53x4CT.

Type: [FVP\\_Base\\_Cortex\\_A57x4\\_A53x4](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hd1cd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).



**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0**

ARM Cortex-A57 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu0**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu1**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu2**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu3**

ARM Cortex-A57 CT model.

Type: [ARM\\_Cortex-A57](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster0.labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu1**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu2**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu3**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A57x4\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.39 FVP\_Base\_Cortex-A65AEx2

FVP\_Base\_Cortex-A65AEx2 contains the following instances:

### FVP\_Base\_Cortex-A65AEx2 instances

#### **FVP\_Base\_Cortex\_A65AEx2**

Base Platform Compute Subsystem for ARMCortexA65AEx2CT.

Type: [FVP\\_Base\\_Cortex\\_A65AEx2](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A65AEx2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.hd1cd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A65AEx2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65AEx2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0**

ARM Cortex-A65AE Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu0.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu0.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu1.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0.cpu1.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A65AEx2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A65AEx2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A65AEx2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.40 FVP\_Base\_Cortex-A65AEx2+Cortex-A76AEx2

FVP\_Base\_Cortex-A65AEx2+Cortex-A76AEx2 contains the following instances:

### FVP\_Base\_Cortex-A65AEx2+Cortex-A76AEx2 instances

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2**

Base Platform Compute Subsystem for ARM Cortex-A65AEx2CT\_Cortex-A76AEx2CT.

Type: [FVP\\_Base\\_Cortex\\_A65AEx2\\_Cortex\\_A76AEx2](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus



transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

#### **FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0**

ARM Cortex-A65AE\_Cortex-A76AE Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A65AE\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.cpu0.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.cpu0.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.cpu1.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.cpu1.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.cpu2**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.cpu3**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.subcluster0**

ARM Cortex-A65AE Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0.subcluster1**

ARM Cortex-A76AE Cluster CT model.

Type: [Subcluster\\_ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A65AEx2\_Cortex\_A76AEx2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.41 FVP\_Base\_Cortex-A65AEx4

FVP\_Base\_Cortex-A65AEx4 contains the following instances:

### FVP\_Base\_Cortex-A65AEx4 instances

**FVP\_Base\_Cortex\_A65AEx4**

Base Platform Compute Subsystem for ARMCortexA65AEx4CT.

Type: [FVP\\_Base\\_Cortex\\_A65AEx4](#).

**FVP\_Base\_Cortex\_A65AEx4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).



**FVP\_Base\_Cortex\_A65AEx4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65AEx4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0**

ARM Cortex-A65AE Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu0.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).



**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu0.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu1.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu1.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu2.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu2.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu3.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).**FVP\_Base\_Cortex\_A65AEx4.cluster0.cpu3.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).**FVP\_Base\_Cortex\_A65AEx4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A65AEx4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A65AEx4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A65AEx4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A65AEx4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.42 FVP\_Base\_Cortex-A65AEx4+Cortex-A76AEx4

FVP\_Base\_Cortex-A65AEx4+Cortex-A76AEx4 contains the following instances:

### FVP\_Base\_Cortex-A65AEx4+Cortex-A76AEx4 instances

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4**

Base Platform Compute Subsystem for ARM Cortex A65AE CT\_Cortex A76AE CT.

Type: `FVP_Base_Cortex_A65AEx4_Cortex_A76AEx4`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hdclcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()



callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0**

ARM Cortex-A65AE\_Cortex-A76AE Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A65AE\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu0.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu0.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu1.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu1.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu2.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu2.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu3.thread0**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu3.thread1**

ARM Cortex-A65AE CT model.

Type: [ARM\\_Cortex-A65AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu4**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu5**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu6**

ARM Cortex-A76AE CT model.

Type: `ARM_Cortex-A76AE`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.cpu7**

ARM Cortex-A76AE CT model.

Type: `ARM_Cortex-A76AE`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.subcluster0**

ARM Cortex-A65AE Cluster CT model.

Type: `Subcluster_ARM_Cortex-A65AE`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.subcluster1**

ARM Cortex-A76AE Cluster CT model.

Type: `Subcluster_ARM_Cortex-A76AE`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.cluster0.labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.elfloader**

ELF loader component.

Type: `ElfLoader`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: `GIC_IRI`.

**FVP\_Base\_Cortex\_A65AEx4\_Cortex\_A76AEx4.pctl**

Base Platforms Power Controller.

Type: `Base_PowerController`.

## 7.43 FVP\_Base\_Cortex-A65AEx8

FVP\_Base\_Cortex-A65AEx8 contains the following instances:

### FVP\_Base\_Cortex-A65AEx8 instances

**FVP\_Base\_Cortex\_A65AEx8**

Base Platform Compute Subsystem for ARMCortexA65AEx8CT.

Type: `FVP_Base_Cortex_A65AEx8`.

**FVP\_Base\_Cortex\_A65AEx8.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65AEx8.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65AEx8.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65AEx8.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A65AEx8.cluster0**

ARM Cortex-A65AE Cluster CT model.

Type: Cluster\_ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu0.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu0.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu1.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu1.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu2.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu2.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu3.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu3.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu4.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu4.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu4.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu4.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu4.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu4.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu5.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu5.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu5.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu5.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu5.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu5.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu6.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu6.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu6.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu6.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu6.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu6.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu7.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu7.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu7.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu7.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu7.thread0**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0.cpu7.thread1**

ARM Cortex-A65AE CT model.

Type: ARM\_Cortex-A65AE.

**FVP\_Base\_Cortex\_A65AEx8.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65AEx8.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A65AEx8.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A65AEx8.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A65AEx8.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.44 FVP\_Base\_Cortex-A65x1

FVP\_Base\_Cortex-A65x1 contains the following instances:

### **FVP\_Base\_Cortex-A65x1 instances**

#### **FVP\_Base\_Cortex\_A65x1**

Base Platform Compute Subsystem for ARMCortexA65x1CT.

Type: [FVP\\_Base\\_Cortex\\_A65x1](#).

#### **FVP\_Base\_Cortex\_A65x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A65x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A65x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A65x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A65x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).



**FVP\_Base\_Cortex\_A65x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A65x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A65x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A65x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65x1.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x1.cluster0**

ARM Cortex-A65 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A65x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x1.cluster0.cpu0.thread0**

ARM Cortex-A65 CT model.

Type: [ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x1.cluster0.cpu0.thread1**

ARM Cortex-A65 CT model.

Type: [ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A65x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A65x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A65x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.45 FVP\_Base\_Cortex-A65x2

FVP\_Base\_Cortex-A65x2 contains the following instances:

### FVP\_Base\_Cortex-A65x2 instances

**FVP\_Base\_Cortex\_A65x2**

Base Platform Compute Subsystem for ARMCortexA65x2CT.

Type: [FVP\\_Base\\_Cortex\\_A65x2](#).

**FVP\_Base\_Cortex\_A65x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A65x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A65x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A65x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A65x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).



**FVP\_Base\_Cortex\_A65x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x2.cluster0**

ARM Cortex-A65 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A65x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x2.cluster0.cpu0.thread0**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x2.cluster0.cpu0.thread1**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A65x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x2.cluster0.cpu1.thread0**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x2.cluster0.cpu1.thread1**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A65x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A65x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A65x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A65x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.46 FVP\_Base\_Cortex-A65x4

FVP\_Base\_Cortex-A65x4 contains the following instances:

### FVP\_Base\_Cortex-A65x4 instances

#### **FVP\_Base\_Cortex\_A65x4**

Base Platform Compute Subsystem for ARMCortexA65x4CT.

Type: [FVP\\_Base\\_Cortex\\_A65x4](#).

#### **FVP\_Base\_Cortex\_A65x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A65x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A65x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A65x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A65x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A65x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A65x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A65x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A65x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A65x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A65x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A65x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A65x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A65x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A65x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A65x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).



**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A65x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A65x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A65x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A65x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A65x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A65x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A65x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A65x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A65x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A65x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A65x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A65x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A65x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A65x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A65x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A65x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A65x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A65x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A65x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A65x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A65x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A65x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A65x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A65x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A65x4.cluster0**

ARM Cortex-A65 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu0.thread0**

ARM Cortex-A65 CT model.

Type: [ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu0.thread1**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x4.cluster0.cpu1.thread0**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu1.thread1**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A65x4.cluster0.cpu2.thread0**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu2.thread1**

ARM Cortex-A65 CT model.

Type: ARM\_Cortex-A65.

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu3.thread0**

ARM Cortex-A65 CT model.

Type: [ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x4.cluster0.cpu3.thread1**

ARM Cortex-A65 CT model.

Type: [ARM\\_Cortex-A65](#).

**FVP\_Base\_Cortex\_A65x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A65x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A65x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A65x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A65x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.47 FVP\_Base\_Cortex-A710

FVP\_Base\_Cortex-A710 contains the following instances:

### FVP\_Base\_Cortex-A710 instances

**FVP\_Base\_Cortex\_A710**

Base Platform Compute Subsystem for ARMCortexA710CT.



Type: `FVP_Base_Cortex_A710`.

**FVP\_Base\_Cortex\_A710.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A710.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A710.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

#### **FVP\_Base\_Cortex\_A710.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

#### **FVP\_Base\_Cortex\_A710.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A710.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A710.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A710.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A710.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A710.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A710.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A710.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A710.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A710.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A710.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A710.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A710.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A710.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A710.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A710.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A710.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A710.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A710.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A710.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A710.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A710.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A710.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A710.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A710.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A710.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A710.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A710.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A710.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A710.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A710.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A710.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A710.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A710.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A710.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A710.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A710.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A710.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A710.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A710.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A710.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710.cluster0**

ARM Cortex-A710 Cluster CT model.

Type: [cluster\\_ARM\\_CortexA710](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu0**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu1**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu2**

ARM Cortex-A710 CT model.

Type: ARM\_Cortex-A710.

**FVP\_Base\_Cortex\_A710.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A710.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu3**

ARM Cortex-A710 CT model.

Type: ARM\_Cortex-A710.

**FVP\_Base\_Cortex\_A710.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A710.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu4**

ARM Cortex-A710 CT model.

Type: ARM\_Cortex-A710.

**FVP\_Base\_Cortex\_A710.cluster0.cpu4.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A710.cluster0.cpu4.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu4.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710.cluster0.cpu4.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu5**

ARM Cortex-A710 CT model.

Type: ARM\_Cortex-A710.

**FVP\_Base\_Cortex\_A710.cluster0.cpu5.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A710.cluster0.cpu5.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu5.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu5.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu6**

ARM Cortex-A710 CT model.

Type: ARM\_Cortex-A710.

**FVP\_Base\_Cortex\_A710.cluster0.cpu6.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A710.cluster0.cpu6.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu6.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu6.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu7**

ARM Cortex-A710 CT model.

Type: ARM\_Cortex-A710.

**FVP\_Base\_Cortex\_A710.cluster0.cpu7.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A710.cluster0.cpu7.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu7.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0.cpu7.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A710.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A710.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A710.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A710.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A710.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.48 FVP\_Base\_Cortex-A710x1

FVP\_Base\_Cortex-A710x1 contains the following instances:

### FVP\_Base\_Cortex-A710x1 instances

**FVP\_Base\_Cortex\_A710x1**

Base Platform Compute Subsystem for ARMCortexA710x1CT.

Type: [FVP\\_Base\\_Cortex\\_A710x1](#).**FVP\_Base\_Cortex\_A710x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A710x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A710x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A710x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A710x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A710x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A710x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A710x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A710x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A710x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A710x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A710x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A710x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A710x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A710x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A710x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A710x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A710x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A710x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A710x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A710x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A710x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A710x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A710x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A710x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A710x1.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A710x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A710x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A710x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x1.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A710x1.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x1.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A710x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A710x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A710x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A710x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A710x1.cluster0**

ARM Cortex-A710 Cluster CT model.

Type: `Cluster_ARM_CortexA710`.**FVP\_Base\_Cortex\_A710x1.cluster0.cpu0**

ARM Cortex-A710 CT model.

Type: `ARM_Cortex-A710`.**FVP\_Base\_Cortex\_A710x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.**FVP\_Base\_Cortex\_A710x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A710x1.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A710x1.cluster0.cpu0.l2cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A710x1.cluster0\_labeller**Type: `Labeller`.**FVP\_Base\_Cortex\_A710x1.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.**FVP\_Base\_Cortex\_A710x1.elfloader**

ELF loader component.

Type: `ElfLoader`.**FVP\_Base\_Cortex\_A710x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: `GIC_IRI`.**FVP\_Base\_Cortex\_A710x1.pctl**

Base Platforms Power Controller.

Type: `Base_PowerController`.

## 7.49 FVP\_Base\_Cortex-A710x2

FVP\_Base\_Cortex-A710x2 contains the following instances:

### FVP\_Base\_Cortex-A710x2 instances

**FVP\_Base\_Cortex\_A710x2**

Base Platform Compute Subsystem for ARMCortexA710x2CT.

Type: `FVP_Base_Cortex_A710x2`.

**FVP\_Base\_Cortex\_A710x2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A710x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A710x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A710x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A710x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A710x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A710x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A710x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A710x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A710x2.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A710x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A710x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A710x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).



**FVP\_Base\_Cortex\_A710x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A710x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A710x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A710x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A710x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A710x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A710x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A710x2.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A710x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A710x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A710x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A710x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A710x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A710x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A710x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A710x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x2.cluster0**

ARM Cortex-A710 Cluster CT model.

Type: [cluster\\_ARM\\_CortexA710](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu0**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu1**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A710x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A710x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A710x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.50 FVP\_Base\_Cortex-A710x4

FVP\_Base\_Cortex-A710x4 contains the following instances:

### FVP\_Base\_Cortex-A710x4 instances

**FVP\_Base\_Cortex\_A710x4**

Base Platform Compute Subsystem for ARMCortexA710x4CT.

Type: [FVP\\_Base\\_Cortex\\_A710x4](#).

**FVP\_Base\_Cortex\_A710x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A710x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A710x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A710x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A710x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A710x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A710x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A710x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).



**FVP\_Base\_Cortex\_A710x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A710x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A710x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A710x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A710x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A710x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A710x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A710x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A710x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A710x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A710x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A710x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A710x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A710x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A710x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A710x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A710x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A710x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A710x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A710x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A710x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A710x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A710x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A710x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A710x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A710x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A710x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A710x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A710x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A710x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A710x4.cluster0**

ARM Cortex-A710 Cluster CT model.

Type: [Cluster\\_ARM\\_CortexA710](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu0**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu1**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu2**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Cortex\_A710x4.cluster0.cpu3**

ARM Cortex-A710 CT model.

Type: [ARM\\_Cortex-A710](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A710x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A710x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A710x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A710x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A710x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.51 FVP\_Base\_Cortex-A72x1

FVP\_Base\_Cortex-A72x1 contains the following instances:

### FVP\_Base\_Cortex-A72x1 instances

**FVP\_Base\_Cortex\_A72x1**

Base Platform Compute Subsystem for ARMCortexA72x1CT.

Type: [FVP\\_Base\\_Cortex\\_A72x1](#).

**FVP\_Base\_Cortex\_A72x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A72x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A72x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A72x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A72x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A72x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x1.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x1.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A72x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A72x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

#### **FVP\_Base\_Cortex\_A72x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).



**FVP\_Base\_Cortex\_A72x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A72x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A72x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A72x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A72x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A72x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A72x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A72x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A72x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A72x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A72x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A72x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A72x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A72x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A72x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1.cluster0**

ARM Cortex-A72 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x1.cluster0.cpu0**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A72x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A72x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A72x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A72x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.52 FVP\_Base\_Cortex-A72x1-A53x1

FVP\_Base\_Cortex-A72x1-A53x1 contains the following instances:

### FVP\_Base\_Cortex-A72x1-A53x1 instances

#### **FVP\_Base\_Cortex\_A72x1\_A53x1**

Base Platform Compute Subsystem for ARM Cortex A72x1CT and ARM Cortex A53x1CT.

Type: `FVP_Base_Cortex_A72x1_A53x1`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_2\_3**

ARM Dual-Timer Module (SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component



which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0**

ARM Cortex-A72 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0.cpu0**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.dapmemlogger**

Bus Logger.

Type: [PVBUSLogger](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A72x1\_A53x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).



## 7.53 FVP\_Base\_Cortex-A72x2

FVP\_Base\_Cortex-A72x2 contains the following instances:

### FVP\_Base\_Cortex-A72x2 instances

#### **FVP\_Base\_Cortex\_A72x2**

Base Platform Compute Subsystem for ARMCortexA72x2CT.

Type: `FVP_Base_Cortex_A72x2`.

#### **FVP\_Base\_Cortex\_A72x2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A72x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A72x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A72x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A72x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A72x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A72x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A72x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A72x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A72x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A72x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A72x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A72x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A72x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A72x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A72x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A72x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A72x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A72x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A72x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A72x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A72x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A72x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A72x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A72x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A72x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A72x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A72x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A72x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A72x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2.cluster0**

ARM Cortex-A72 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu0**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu1**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x2.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A72x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A72x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A72x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A72x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.54 FVP\_Base\_Cortex-A72x2-A53x4

FVP\_Base\_Cortex-A72x2-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A72x2-A53x4 instances

**FVP\_Base\_Cortex\_A72x2\_A53x4**

Base Platform Compute Subsystem for ARMCortexA72x2CT and ARMCortexA53x4CT.

Type: [FVP\\_Base\\_Cortex\\_A72x2\\_A53x4](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x2\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC0](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0**

ARM Cortex-A72 Cluster CT model.

Type: `Cluster_ARM_Cortex-A72`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu0**

ARM Cortex-A72 CT model.

Type: `ARM_Cortex-A72`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu1**

ARM Cortex-A72 CT model.

Type: `ARM_Cortex-A72`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster0\_labeller**Type: `Labeller`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: `Cluster_ARM_Cortex-A53`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: `ARM_Cortex-A53`.**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu1**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu2**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu3**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.cluster1\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A72x2\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.55 FVP\_Base\_Cortex-A72x4

FVP\_Base\_Cortex-A72x4 contains the following instances:

### FVP\_Base\_Cortex-A72x4 instances

**FVP\_Base\_Cortex\_A72x4**

Base Platform Compute Subsystem for ARMCortexA72x4CT.

Type: [FVP\\_Base\\_Cortex\\_A72x4](#).**FVP\_Base\_Cortex\_A72x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A72x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_A72x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A72x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A72x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A72x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A72x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC](#).

**FVP\_Base\_Cortex\_A72x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x4.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x4.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A72x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A72x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A72x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A72x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A72x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A72x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A72x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_A72x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A72x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A72x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A72x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A72x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A72x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A72x4.bp.vc\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A72x4.bp.vdacc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A72x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A72x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A72x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4.bp.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A72x4.bp.virtioP9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A72x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A72x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A72x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4.cluster0**

ARM Cortex-A72 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu0**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu1**

ARM Cortex-A72 CT model.

Type: ARM\_Cortex-A72.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu2**

ARM Cortex-A72 CT model.

Type: ARM\_Cortex-A72.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu3**

ARM Cortex-A72 CT model.

Type: ARM\_Cortex-A72.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A72x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A72x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A72x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A72x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A72x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.56 FVP\_Base\_Cortex-A72x4-A53x4

FVP\_Base\_Cortex-A72x4-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A72x4-A53x4 instances

**FVP\_Base\_Cortex\_A72x4\_A53x4**

Base Platform Compute Subsystem for ARMCortexA72x4CT and ARMCortexA53x4CT.

Type: [FVP\\_Base\\_Cortex\\_A72x4\\_A53x4](#).**FVP\_Base\_Cortex\_A72x4\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0**

ARM Cortex-A72 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu0**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu1**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu2**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu2.l1dcache**

PV Cache.



Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu3**

ARM Cortex-A72 CT model.

Type: [ARM\\_Cortex-A72](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster0.labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu1**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu2**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu3**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A72x4\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A72x4\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.57 FVP\_Base\_Cortex-A73x1

FVP\_Base\_Cortex-A73x1 contains the following instances:

### FVP\_Base\_Cortex-A73x1 instances

#### **FVP\_Base\_Cortex\_A73x1**

Base Platform Compute Subsystem for ARMCortexA73x1CT.

Type: [FVP\\_Base\\_Cortex\\_A73x1](#).

#### **FVP\_Base\_Cortex\_A73x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A73x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A73x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A73x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A73x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A73x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A73x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A73x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A73x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A73x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).



**FVP\_Base\_Cortex\_A73x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A73x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A73x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A73x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A73x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A73x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A73x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A73x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A73x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A73x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A73x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A73x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A73x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A73x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A73x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A73x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A73x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A73x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A73x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A73x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1.cluster0**

ARM Cortex-A73 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x1.cluster0.cpu0**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A73x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A73x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A73x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A73x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.58 FVP\_Base\_Cortex-A73x1-A53x1

FVP\_Base\_Cortex-A73x1-A53x1 contains the following instances:

### FVP\_Base\_Cortex-A73x1-A53x1 instances

**FVP\_Base\_Cortex\_A73x1\_A53x1**

Base Platform Compute Subsystem for ARM Cortex A73x1CT and ARM Cortex A53x1CT.

Type: [FVP\\_Base\\_Cortex\\_A73x1\\_A53x1](#).**FVP\_Base\_Cortex\_A73x1\_A53x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A73x1\_A53x1.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0**

ARM Cortex-A73 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0.cpu0**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A73x1\_A53x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.59 FVP\_Base\_Cortex-A73x2

FVP\_Base\_Cortex-A73x2 contains the following instances:

### FVP\_Base\_Cortex-A73x2 instances

**FVP\_Base\_Cortex\_A73x2**

Base Platform Compute Subsystem for ARMCortexA73x2CT.

Type: [FVP\\_Base\\_Cortex\\_A73x2](#).

**FVP\_Base\_Cortex\_A73x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A73x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A73x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A73x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A73x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A73x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A73x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A73x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.



Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A73x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A73x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A73x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A73x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A73x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A73x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A73x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A73x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A73x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A73x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A73x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A73x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A73x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A73x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A73x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A73x2.bp.virtio9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A73x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A73x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A73x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2.cluster0**

ARM Cortex-A73 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x2.cluster0.cpu0**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x2.cluster0.cpu1**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).**FVP\_Base\_Cortex\_A73x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A73x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x2.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A73x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A73x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A73x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A73x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.60 FVP\_Base\_Cortex-A73x2-A53x4

FVP\_Base\_Cortex-A73x2-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A73x2-A53x4 instances

#### **FVP\_Base\_Cortex\_A73x2\_A53x4**

Base Platform Compute Subsystem for ARM Cortex A73x2CT and ARM Cortex A53x4CT.

Type: `FVP_Base_Cortex_A73x2_A53x4`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module (SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module (SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hd1cd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hd1cd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0**

ARM Cortex-A73 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu0**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu1**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).



**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: Cluster\_ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu1**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu2**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu3**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A73x2\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.61 FVP\_Base\_Cortex-A73x4

FVP\_Base\_Cortex-A73x4 contains the following instances:

### FVP\_Base\_Cortex-A73x4 instances

**FVP\_Base\_Cortex\_A73x4**

Base Platform Compute Subsystem for ARMCortexA73x4CT.

Type: [FVP\\_Base\\_Cortex\\_A73x4](#).

**FVP\_Base\_Cortex\_A73x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A73x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A73x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A73x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A73x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A73x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A73x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A73x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).



**FVP\_Base\_Cortex\_A73x4.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A73x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A73x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A73x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A73x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A73x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A73x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A73x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A73x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A73x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A73x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A73x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A73x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A73x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A73x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A73x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A73x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A73x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A73x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A73x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4.cluster0**

ARM Cortex-A73 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu0**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu1**

ARM Cortex-A73 CT model.

Type: [ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0.cpu2**

ARM Cortex-A73 CT model.

Type: ARM\_Cortex-A73.

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0.cpu3**

ARM Cortex-A73 CT model.

Type: ARM\_Cortex-A73.

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A73x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_Cortex\_A73x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_Base\_Cortex\_A73x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A73x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.62 FVP\_Base\_Cortex-A73x4-A53x4

FVP\_Base\_Cortex-A73x4-A53x4 contains the following instances:

### FVP\_Base\_Cortex-A73x4-A53x4 instances

#### **FVP\_Base\_Cortex\_A73x4\_A53x4**

Base Platform Compute Subsystem for ARMCortexA73x4CT and ARMCortexA53x4CT.

Type: [FVP\\_Base\\_Cortex\\_A73x4\\_A53x4](#).

#### **FVP\_Base\_Cortex\_A73x4\_A53x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0**

ARM Cortex-A73 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A73](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu0**

ARM Cortex-A73 CT model.

Type: ARM\_Cortex-A73.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu1**

ARM Cortex-A73 CT model.

Type: ARM\_Cortex-A73.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu2**

ARM Cortex-A73 CT model.

Type: ARM\_Cortex-A73.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu3**

ARM Cortex-A73 CT model.

Type: ARM\_Cortex-A73.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1**

ARM Cortex-A53 Cluster CT model.

Type: Cluster\_ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu0**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu1**

ARM Cortex-A53 CT model.

Type: ARM\_Cortex-A53.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu2**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu3**

ARM Cortex-A53 CT model.

Type: [ARM\\_Cortex-A53](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A73x4\_A53x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.63 FVP\_Base\_Cortex-A75

FVP\_Base\_Cortex-A75 contains the following instances:

### FVP\_Base\_Cortex-A75 instances

**FVP\_Base\_Cortex\_A75**

Base Platform Compute Subsystem for ARMCortexA75CT.

Type: [FVP\\_Base\\_Cortex\\_A75](#).

**FVP\_Base\_Cortex\_A75.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A75.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A75.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A75.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A75.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A75.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).



**FVP\_Base\_Cortex\_A75.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A75.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A75.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A75.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A75.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A75.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A75.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A75.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A75.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A75.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A75.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A75.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A75.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A75.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A75.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A75.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A75.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A75.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A75.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A75.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A75.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A75.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A75.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A75.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A75.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A75.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A75.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A75.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A75.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A75.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75.cluster0**

ARM Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A75.cluster0.cpu0**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A75.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A75.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75.cluster0.cpu1**

ARM Cortex-A75 CT model.

Type: ARM\_Cortex-A75.

**FVP\_Base\_Cortex\_A75.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A75.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu2**

ARM Cortex-A75 CT model.

Type: ARM\_Cortex-A75.

**FVP\_Base\_Cortex\_A75.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A75.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu3**

ARM Cortex-A75 CT model.

Type: ARM\_Cortex-A75.

**FVP\_Base\_Cortex\_A75.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A75.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Cortex\_A75.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A75.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A75.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A75.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A75.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.64 FVP\_Base\_Cortex-A75x1

FVP\_Base\_Cortex-A75x1 contains the following instances:

### FVP\_Base\_Cortex-A75x1 instances

**FVP\_Base\_Cortex\_A75x1**

Base Platform Compute Subsystem for ARMCortexA75x1CT.

Type: [FVP\\_Base\\_Cortex\\_A75x1](#).**FVP\_Base\_Cortex\_A75x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A75x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_A75x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A75x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A75x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A75x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A75x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A75x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A75x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A75x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A75x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A75x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A75x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A75x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A75x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A75x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A75x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A75x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A75x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_A75x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A75x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A75x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A75x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A75x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A75x1.bp.vc\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A75x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A75x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A75x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A75x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x1.bp.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A75x1.bp.virtioP9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A75x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A75x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A75x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x1.cluster0**

ARM Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A75x1.cluster0.cpu0**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A75x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A75x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A75x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A75x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A75x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A75x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.65 FVP\_Base\_Cortex-A75x2

FVP\_Base\_Cortex-A75x2 contains the following instances:

### FVP\_Base\_Cortex-A75x2 instances

**FVP\_Base\_Cortex\_A75x2**

Base Platform Compute Subsystem for ARMCortexA75x2CT.

Type: [FVP\\_Base\\_Cortex\\_A75x2](#).**FVP\_Base\_Cortex\_A75x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A75x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A75x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A75x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A75x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).



**FVP\_Base\_Cortex\_A75x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A75x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A75x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A75x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A75x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A75x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A75x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A75x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A75x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A75x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A75x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A75x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A75x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A75x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A75x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x2.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A75x2.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x2.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A75x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A75x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A75x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A75x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x2.cluster0**

ARM Cortex-A75 Cluster CT model.

Type: `Cluster_ARM_Cortex-A75`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu0**

ARM Cortex-A75 CT model.

Type: `ARM_Cortex-A75`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu0.l2cache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu1**

ARM Cortex-A75 CT model.

Type: `ARM_Cortex-A75`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_A75x2.cluster0.cpu1.l2cache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_A75x2.cluster0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A75x2.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_Cortex\_A75x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_Base\_Cortex\_A75x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_A75x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.66 FVP\_Base\_Cortex-A75x4

FVP\_Base\_Cortex-A75x4 contains the following instances:

### FVP\_Base\_Cortex-A75x4 instances

#### **FVP\_Base\_Cortex\_A75x4**

Base Platform Compute Subsystem for ARMCortexA75x4CT.

Type: [FVP\\_Base\\_Cortex\\_A75x4](#).

#### **FVP\_Base\_Cortex\_A75x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).



**FVP\_Base\_Cortex\_A75x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A75x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A75x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A75x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A75x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A75x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A75x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A75x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A75x4.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A75x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A75x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A75x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A75x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A75x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A75x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A75x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A75x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A75x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).



**FVP\_Base\_Cortex\_A75x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A75x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A75x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A75x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A75x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A75x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A75x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A75x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A75x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A75x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A75x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A75x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A75x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A75x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A75x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A75x4.cluster0**

ARM Cortex-A75 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu0**

ARM Cortex-A75 CT model.

Type: [ARM\\_Cortex-A75](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu1**

ARM Cortex-A75 CT model.

Type: ARM\_Cortex-A75.

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu2**

ARM Cortex-A75 CT model.

Type: ARM\_Cortex-A75.

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu3**

ARM Cortex-A75 CT model.

Type: ARM\_Cortex-A75.

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A75x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A75x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A75x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A75x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A75x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A75x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.67 FVP\_Base\_Cortex-A76

FVP\_Base\_Cortex-A76 contains the following instances:

### FVP\_Base\_Cortex-A76 instances

**FVP\_Base\_Cortex\_A76**

Base Platform Compute Subsystem for ARMCortexA76CT.

Type: [FVP\\_Base\\_Cortex\\_A76](#).**FVP\_Base\_Cortex\_A76.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A76.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_A76.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A76.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A76.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A76.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A76.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A76.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76.bp.hdlcd0.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76.bp.hdlcd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76.bp.hdlcd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A76.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A76.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_A76.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A76.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A76.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A76.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A76.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A76.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A76.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A76.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A76.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A76.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A76.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A76.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A76.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A76.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_A76.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A76.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A76.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76.bp.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A76.bp.virtioP9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A76.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A76.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A76.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76.cluster0**

ARM Cortex-A76 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76.cluster0.cpu0**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A76.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu1**

ARM Cortex-A76 CT model.

Type: ARM\_Cortex-A76.

**FVP\_Base\_Cortex\_A76.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A76.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu2**

ARM Cortex-A76 CT model.

Type: ARM\_Cortex-A76.

**FVP\_Base\_Cortex\_A76.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A76.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu3**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A76.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A76.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A76.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A76.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.68 FVP\_Base\_Cortex-A76AEx2

FVP\_Base\_Cortex-A76AEx2 contains the following instances:

### FVP\_Base\_Cortex-A76AEx2 instances

**FVP\_Base\_Cortex\_A76AEx2**

Base Platform Compute Subsystem for ARMCortexA76AEx2CT.



Type: `FVP_Base_Cortex_A76AEx2`.

**FVP\_Base\_Cortex\_A76AEx2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hd1cd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A76AEx2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A76AEx2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A76AEx2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0**

ARM Cortex-A76AE Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu0**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu1**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A76AEx2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A76AEx2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A76AEx2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.69 FVP\_Base\_Cortex-A76AEx4

FVP\_Base\_Cortex-A76AEx4 contains the following instances:

### FVP\_Base\_Cortex-A76AEx4 instances

**FVP\_Base\_Cortex\_A76AEx4**

Base Platform Compute Subsystem for ARMCortexA76AEx4CT.

Type: [FVP\\_Base\\_Cortex\\_A76AEx4](#).

**FVP\_Base\_Cortex\_A76AEx4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76AEx4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).



**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76AEx4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A76AEx4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0**

ARM Cortex-A76AE Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu0**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu1**

ARM Cortex-A76AE CT model.

Type: ARM\_Cortex-A76AE.

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu2**

ARM Cortex-A76AE CT model.

Type: ARM\_Cortex-A76AE.

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu3**

ARM Cortex-A76AE CT model.

Type: [ARM\\_Cortex-A76AE](#).**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76AEx4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76AEx4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A76AEx4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A76AEx4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A76AEx4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A76AEx4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.70 FVP\_Base\_Cortex-A76x1

FVP\_Base\_Cortex-A76x1 contains the following instances:

### FVP\_Base\_Cortex-A76x1 instances

**FVP\_Base\_Cortex\_A76x1**

Base Platform Compute Subsystem for ARMCortexA76x1CT.

Type: [FVP\\_Base\\_Cortex\\_A76x1](#).**FVP\_Base\_Cortex\_A76x1.bp**

Peripherals and address map for the Base Platform.



Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A76x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A76x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A76x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A76x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC](#).

**FVP\_Base\_Cortex\_A76x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76x1.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76x1.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A76x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A76x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

#### **FVP\_Base\_Cortex\_A76x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A76x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x1.bp.sm91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A76x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A76x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A76x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A76x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A76x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A76x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A76x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A76x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A76x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A76x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A76x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A76x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A76x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A76x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x1.cluster0**

ARM Cortex-A76 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76x1.cluster0.cpu0**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A76x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A76x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A76x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A76x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.71 FVP\_Base\_Cortex-A76x2

FVP\_Base\_Cortex-A76x2 contains the following instances:

### FVP\_Base\_Cortex-A76x2 instances

#### **FVP\_Base\_Cortex\_A76x2**

Base Platform Compute Subsystem for ARMCortexA76x2CT.

Type: [FVP\\_Base\\_Cortex\\_A76x2](#).

#### **FVP\_Base\_Cortex\_A76x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A76x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A76x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A76x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A76x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A76x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A76x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A76x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A76x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A76x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A76x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A76x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A76x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A76x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A76x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A76x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A76x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A76x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A76x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A76x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A76x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A76x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A76x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A76x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A76x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A76x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A76x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x2.cluster0**

ARM Cortex-A76 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu0**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu1**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A76x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A76x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A76x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A76x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A76x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.72 FVP\_Base\_Cortex-A76x4

FVP\_Base\_Cortex-A76x4 contains the following instances:

### FVP\_Base\_Cortex-A76x4 instances

**FVP\_Base\_Cortex\_A76x4**

Base Platform Compute Subsystem for ARMCortexA76x4CT.

Type: [FVP\\_Base\\_Cortex\\_A76x4](#).**FVP\_Base\_Cortex\_A76x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A76x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A76x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).



**FVP\_Base\_Cortex\_A76x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A76x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A76x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A76x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A76x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A76x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A76x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A76x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A76x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A76x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A76x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A76x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A76x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A76x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A76x4.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A76x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A76x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A76x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A76x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A76x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A76x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A76x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A76x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A76x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A76x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A76x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).



**FVP\_Base\_Cortex\_A76x4.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A76x4.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x4.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A76x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A76x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A76x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A76x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A76x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A76x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A76x4.cluster0**

ARM Cortex-A76 Cluster CT model.

Type: Cluster\_ARM\_Cortex-A76.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu0**

ARM Cortex-A76 CT model.

Type: ARM\_Cortex-A76.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu1**

ARM Cortex-A76 CT model.

Type: ARM\_Cortex-A76.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu2**

ARM Cortex-A76 CT model.

Type: ARM\_Cortex-A76.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A76x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu3**

ARM Cortex-A76 CT model.

Type: [ARM\\_Cortex-A76](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A76x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A76x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A76x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A76x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A76x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.73 FVP\_Base\_Cortex-A77x1

FVP\_Base\_Cortex-A77x1 contains the following instances:

### FVP\_Base\_Cortex-A77x1 instances

#### **FVP\_Base\_Cortex\_A77x1**

Base Platform Compute Subsystem for ARMCortexA77x1CT.

Type: `FVP_Base_Cortex_A77x1`.

#### **FVP\_Base\_Cortex\_A77x1.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A77x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A77x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A77x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A77x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A77x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A77x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A77x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A77x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A77x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A77x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A77x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A77x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A77x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A77x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A77x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A77x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A77x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A77x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A77x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A77x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A77x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A77x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A77x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A77x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A77x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A77x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A77x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A77x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A77x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A77x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A77x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A77x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A77x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A77x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A77x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A77x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x1.cluster0**

ARM Cortex-A77 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x1.cluster0.cpu0**

ARM Cortex-A77 CT model.

Type: [ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A77x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A77x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A77x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A77x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.74 FVP\_Base\_Cortex-A77x2

FVP\_Base\_Cortex-A77x2 contains the following instances:

### FVP\_Base\_Cortex-A77x2 instances

**FVP\_Base\_Cortex\_A77x2**

Base Platform Compute Subsystem for ARMCortexA77x2CT.

Type: [FVP\\_Base\\_Cortex\\_A77x2](#).

**FVP\_Base\_Cortex\_A77x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A77x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A77x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A77x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A77x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A77x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A77x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A77x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A77x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A77x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A77x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A77x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A77x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A77x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A77x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A77x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A77x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A77x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A77x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A77x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A77x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A77x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A77x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A77x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A77x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A77x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A77x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A77x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A77x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A77x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A77x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A77x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Cortex\_A77x2.bp.virtio9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A77x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A77x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A77x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x2.cluster0**

ARM Cortex-A77 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x2.cluster0.cpu0**

ARM Cortex-A77 CT model.

Type: [ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A77x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu1**

ARM Cortex-A77 CT model.

Type: [ARM\\_Cortex-A77](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A77x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A77x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A77x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A77x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A77x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A77x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.75 FVP\_Base\_Cortex-A77x4

FVP\_Base\_Cortex-A77x4 contains the following instances:

### FVP\_Base\_Cortex-A77x4 instances

#### **FVP\_Base\_Cortex\_A77x4**

Base Platform Compute Subsystem for ARMCortexA77x4CT.

Type: `FVP_Base_Cortex_A77x4`.

#### **FVP\_Base\_Cortex\_A77x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A77x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A77x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A77x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A77x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A77x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A77x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A77x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A77x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A77x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A77x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A77x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_Base\_Cortex\_A77x4.bp.hdlcd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_Base\_Cortex\_A77x4.bp.hdlcd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_Base\_Cortex\_A77x4.bp.hdlcd0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A77x4.bp.hostbridge**

Host Socket Interface Component.

Type: `HostBridge`.

**FVP\_Base\_Cortex\_A77x4.bp.mmc**

Generic Multimedia Card.

Type: `MMC`.

**FVP\_Base\_Cortex\_A77x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: `IntelStrataFlashJ3`.

**FVP\_Base\_Cortex\_A77x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: `FlashLoader`.

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A77x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A77x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A77x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A77x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A77x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A77x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A77x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A77x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A77x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A77x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A77x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A77x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A77x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A77x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A77x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A77x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A77x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A77x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A77x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A77x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A77x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A77x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A77x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A77x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A77x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A77x4.cluster0**

ARM Cortex-A77 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu0**

ARM Cortex-A77 CT model.

Type: [ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu1**

ARM Cortex-A77 CT model.

Type: [ARM\\_Cortex-A77](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu2**

ARM Cortex-A77 CT model.

Type: ARM\_Cortex-A77.

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu3**

ARM Cortex-A77 CT model.

Type: ARM\_Cortex-A77.

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A77x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A77x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A77x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A77x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A77x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.76 FVP\_Base\_Cortex-A78AEx2

FVP\_Base\_Cortex-A78AEx2 contains the following instances:

### FVP\_Base\_Cortex-A78AEx2 instances

**FVP\_Base\_Cortex\_A78AEx2**

Base Platform Compute Subsystem for ARMCortexA78AEx2CT.

Type: [FVP\\_Base\\_Cortex\\_A78AEx2](#).

**FVP\_Base\_Cortex\_A78AEx2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Cortex\_A78AEx2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78AEx2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0**

ARM Cortex-A78AE Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78AE](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu0**

ARM Cortex-A78AE CT model.

Type: [ARM\\_Cortex-A78AE](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu1**

ARM Cortex-A78AE CT model.

Type: [ARM\\_Cortex-A78AE](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A78AEx2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A78AEx2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A78AEx2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.77 FVP\_Base\_Cortex-A78AEx4

FVP\_Base\_Cortex-A78AEx4 contains the following instances:

### FVP\_Base\_Cortex-A78AEx4 instances

#### **FVP\_Base\_Cortex\_A78AEx4**

Base Platform Compute Subsystem for ARMCortexA78AEx4CT.

Type: [FVP\\_Base\\_Cortex\\_A78AEx4](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78AEx4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78AEx4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0**

ARM Cortex-A78AE Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78AE](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu0**

ARM Cortex-A78AE CT model.

Type: [ARM\\_Cortex-A78AE](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu1**

ARM Cortex-A78AE CT model.

Type: [ARM\\_Cortex-A78AE](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu2**

ARM Cortex-A78AE CT model.

Type: ARM\_Cortex-A78AE.

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu3**

ARM Cortex-A78AE CT model.

Type: ARM\_Cortex-A78AE.

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78AEx4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78AEx4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A78AEx4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A78AEx4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A78AEx4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.78 FVP\_Base\_Cortex-A78C

FVP\_Base\_Cortex-A78C contains the following instances:

### FVP\_Base\_Cortex-A78C instances

**FVP\_Base\_Cortex\_A78C**

Base Platform Compute Subsystem for ARMCortexA78CCT.

Type: [FVP\\_Base\\_Cortex\\_A78C](#).

**FVP\_Base\_Cortex\_A78C.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78C.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78C.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78C.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78C.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78C.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78C.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78C.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78C.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78C.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78C.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78C.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78C.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78C.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78C.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78C.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78C.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78C.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78C.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78C.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78C.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78C.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78C.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78C.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78C.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78C.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78C.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78C.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78C.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78C.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78C.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78C.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78C.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78C.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78C.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78C.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78C.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78C.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78C.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78C.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78C.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78C.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78C.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78C.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78C.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78C.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78C.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78C.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78C.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78C.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78C.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78C.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78C.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A78C.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78C.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78C.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78C.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78C.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78C.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78C.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Cortex\_A78C.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78C.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78C.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78C.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78C.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78C.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78C.cluster0**

ARM Cortex-A78C Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu0**

ARM Cortex-A78C CT model.

Type: [ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu1**

ARM Cortex-A78C CT model.

Type: ARM\_Cortex-A78C.

**FVP\_Base\_Cortex\_A78C.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A78C.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu2**

ARM Cortex-A78C CT model.

Type: ARM\_Cortex-A78C.

**FVP\_Base\_Cortex\_A78C.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A78C.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78C.cluster0.cpu3**

ARM Cortex-A78C CT model.

Type: [ARM\\_Cortex-A78C](#).**FVP\_Base\_Cortex\_A78C.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A78C.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78C.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78C.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78C.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A78C.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A78C.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A78C.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A78C.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.79 FVP\_Base\_Cortex-A78Cx1

FVP\_Base\_Cortex-A78Cx1 contains the following instances:

### FVP\_Base\_Cortex-A78Cx1 instances

**FVP\_Base\_Cortex\_A78Cx1**

Base Platform Compute Subsystem for ARMCortexA78Cx1CT.

Type: [FVP\\_Base\\_Cortex\\_A78Cx1](#).**FVP\_Base\_Cortex\_A78Cx1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).



**FVP\_Base\_Cortex\_A78Cx1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

#### **FVP\_Base\_Cortex\_A78Cx1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78Cx1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0**

ARM Cortex-A78C Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0.cpu0**

ARM Cortex-A78C CT model.

Type: [ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A78Cx1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A78Cx1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A78Cx1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.80 FVP\_Base\_Cortex-A78Cx2

FVP\_Base\_Cortex-A78Cx2 contains the following instances:

### FVP\_Base\_Cortex-A78Cx2 instances

#### **FVP\_Base\_Cortex\_A78Cx2**

Base Platform Compute Subsystem for ARMCortexA78Cx2CT.

Type: [FVP\\_Base\\_Cortex\\_A78Cx2](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A78Cx2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.hdlcd0.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_Base\_Cortex\_A78Cx2.bp.hd1cd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_Base\_Cortex\_A78Cx2.bp.hd1cd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_Base\_Cortex\_A78Cx2.bp.hd1cd0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_A78Cx2.bp.hostbridge**

Host Socket Interface Component.

Type: `HostBridge`.

**FVP\_Base\_Cortex\_A78Cx2.bp.mmc**

Generic Multimedia Card.

Type: `MMC`.

**FVP\_Base\_Cortex\_A78Cx2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: `IntelStrataFlashJ3`.

**FVP\_Base\_Cortex\_A78Cx2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: `FlashLoader`.

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A78Cx2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78Cx2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0**

ARM Cortex-A78C Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu0**

ARM Cortex-A78C CT model.

Type: [ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu1**

ARM Cortex-A78C CT model.

Type: [ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A78Cx2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A78Cx2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A78Cx2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A78Cx2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.81 FVP\_Base\_Cortex-A78Cx4

FVP\_Base\_Cortex-A78Cx4 contains the following instances:

### FVP\_Base\_Cortex-A78Cx4 instances

**FVP\_Base\_Cortex\_A78Cx4**

Base Platform Compute Subsystem for ARMCortexA78Cx4CT.

Type: [FVP\\_Base\\_Cortex\\_A78Cx4](#).**FVP\_Base\_Cortex\_A78Cx4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).



**FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78Cx4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78Cx4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0**

ARM Cortex-A78C Cluster CT model.

Type: Cluster\_ARM\_Cortex-A78C.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu0**

ARM Cortex-A78C CT model.

Type: ARM\_Cortex-A78C.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu1**

ARM Cortex-A78C CT model.

Type: ARM\_Cortex-A78C.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu2**

ARM Cortex-A78C CT model.

Type: ARM\_Cortex-A78C.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu3**

ARM Cortex-A78C CT model.

Type: [ARM\\_Cortex-A78C](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78Cx4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78Cx4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A78Cx4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A78Cx4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A78Cx4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.82 FVP\_Base\_Cortex-A78x1

FVP\_Base\_Cortex-A78x1 contains the following instances:

### FVP\_Base\_Cortex-A78x1 instances

#### **FVP\_Base\_Cortex\_A78x1**

Base Platform Compute Subsystem for ARMCortexA78x1CT.

Type: [FVP\\_Base\\_Cortex\\_A78x1](#).

#### **FVP\_Base\_Cortex\_A78x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_A78x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A78x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A78x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_A78x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x1.cluster0**

ARM Cortex-A78 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x1.cluster0.cpu0**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A78x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A78x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A78x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.83 FVP\_Base\_Cortex-A78x2

FVP\_Base\_Cortex-A78x2 contains the following instances:

### FVP\_Base\_Cortex-A78x2 instances

**FVP\_Base\_Cortex\_A78x2**

Base Platform Compute Subsystem for ARMCortexA78x2CT.

Type: [FVP\\_Base\\_Cortex\\_A78x2](#).

**FVP\_Base\_Cortex\_A78x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).



**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x2.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_A78x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_A78x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x2.cluster0**

ARM Cortex-A78 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x2.cluster0.cpu0**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu1**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_A78x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_A78x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_A78x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_A78x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_A78x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.84 FVP\_Base\_Cortex-A78x4

FVP\_Base\_Cortex-A78x4 contains the following instances:

### FVP\_Base\_Cortex-A78x4 instances

#### **FVP\_Base\_Cortex\_A78x4**

Base Platform Compute Subsystem for ARMCortexA78x4CT.

Type: `FVP_Base_Cortex_A78x4`.

#### **FVP\_Base\_Cortex\_A78x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Cortex\_A78x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Cortex\_A78x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_A78x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_A78x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_A78x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_A78x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Cortex\_A78x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_A78x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_A78x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_A78x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_A78x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_A78x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_A78x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_A78x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_A78x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_A78x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_A78x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_A78x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_A78x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_A78x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_A78x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_A78x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_A78x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_A78x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_A78x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TzC\\_400](#).

**FVP\_Base\_Cortex\_A78x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_A78x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_A78x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_A78x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_A78x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_A78x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_A78x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_A78x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_A78x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_A78x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_A78x4.cluster0**

ARM Cortex-A78 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu0**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu1**

ARM Cortex-A78 CT model.

Type: [ARM\\_Cortex-A78](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).



**FVP\_Base\_Cortex\_A78x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu2**

ARM Cortex-A78 CT model.

Type: ARM\_Cortex-A78.

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu3**

ARM Cortex-A78 CT model.

Type: ARM\_Cortex-A78.

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_A78x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_A78x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_A78x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_A78x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_A78x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.85 FVP\_Base\_Cortex-X1x1

FVP\_Base\_Cortex-X1x1 contains the following instances:

### FVP\_Base\_Cortex-X1x1 instances

**FVP\_Base\_Cortex\_X1x1**

Base Platform Compute Subsystem for ARMCortexX1x1CT.

Type: [FVP\\_Base\\_Cortex\\_X1x1](#).

**FVP\_Base\_Cortex\_X1x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X1x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X1x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X1x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X1x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X1x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X1x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_X1x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X1x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X1x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X1x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X1x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_X1x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_X1x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.



Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X1x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X1x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X1x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X1x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X1x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x1.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_X1x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X1x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_X1x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X1x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X1x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X1x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X1x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X1x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X1x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_X1x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X1x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X1x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X1x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X1x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X1x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X1x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x1.cluster0**

ARM Cortex-X1 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-X1](#).

**FVP\_Base\_Cortex\_X1x1.cluster0.cpu0**

ARM Cortex-X1 CT model.

Type: [ARM\\_Cortex-X1](#).

**FVP\_Base\_Cortex\_X1x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_X1x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_X1x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_X1x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_X1x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_X1x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.86 FVP\_Base\_Cortex-X1x2

FVP\_Base\_Cortex-X1x2 contains the following instances:

### FVP\_Base\_Cortex-X1x2 instances

**FVP\_Base\_Cortex\_X1x2**

Base Platform Compute Subsystem for ARM CortexX1x2CT.

Type: [FVP\\_Base\\_Cortex\\_X1x2](#).**FVP\_Base\_Cortex\_X1x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_X1x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X1x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X1x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X1x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X1x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X1x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Cortex\_X1x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X1x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_X1x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X1x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X1x2.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X1x2.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X1x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_X1x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_X1x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X1x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X1x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X1x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X1x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X1x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_X1x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X1x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_X1x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X1x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X1x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X1x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X1x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X1x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X1x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_X1x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X1x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x2.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X1x2.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x2.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X1x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X1x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X1x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X1x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x2.cluster0**

ARM Cortex-X1 Cluster CT model.

Type: `Cluster_ARM_Cortex-X1`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu0**

ARM Cortex-X1 CT model.

Type: `ARM_Cortex-X1`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu0.l2cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu1**

ARM Cortex-X1 CT model.

Type: `ARM_Cortex-X1`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu1.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_X1x2.cluster0.cpu1.l2cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Cortex\_X1x2.cluster0\_labeller**Type: `Labeller`.**FVP\_Base\_Cortex\_X1x2.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.**FVP\_Base\_Cortex\_X1x2.elfloader**

ELF loader component.



Type: [ElfLoader](#).

#### **FVP\_Base\_Cortex\_X1x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_X1x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.87 FVP\_Base\_Cortex-X1x4

FVP\_Base\_Cortex-X1x4 contains the following instances:

### FVP\_Base\_Cortex-X1x4 instances

#### **FVP\_Base\_Cortex\_X1x4**

Base Platform Compute Subsystem for ARMCortexX1x4CT.

Type: [FVP\\_Base\\_Cortex\\_X1x4](#).

#### **FVP\_Base\_Cortex\_X1x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X1x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X1x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X1x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X1x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X1x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X1x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X1x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X1x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_X1x4.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X1x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X1x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X1x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X1x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X1x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X1x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X1x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_X1x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X1x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).



**FVP\_Base\_Cortex\_X1x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X1x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X1x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X1x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X1x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X1x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X1x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X1x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_X1x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X1x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X1x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X1x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X1x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X1x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X1x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X1x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X1x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X1x4.cluster0**

ARM Cortex-X1 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-X1](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu0**

ARM Cortex-X1 CT model.

Type: [ARM\\_Cortex-X1](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu1**

ARM Cortex-X1 CT model.

Type: ARM\_Cortex-X1.

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu2**

ARM Cortex-X1 CT model.

Type: ARM\_Cortex-X1.

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu3**

ARM Cortex-X1 CT model.

Type: ARM\_Cortex-X1.

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X1x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X1x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_X1x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_X1x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_X1x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_X1x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.88 FVP\_Base\_Cortex-X2

FVP\_Base\_Cortex-X2 contains the following instances:

### FVP\_Base\_Cortex-X2 instances

**FVP\_Base\_Cortex\_X2**

Base Platform Compute Subsystem for ARMCortexX2CT.

Type: [FVP\\_Base\\_Cortex\\_X2](#).**FVP\_Base\_Cortex\_X2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_X2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Cortex\_X2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).



**FVP\_Base\_Cortex\_X2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC0](#).

**FVP\_Base\_Cortex\_X2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_X2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_X2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_X2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_X2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_X2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_X2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_X2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_X2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X2.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Cortex\_X2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2.cluster0**

ARM Cortex-X2 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu0**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu1**

ARM Cortex-X2 CT model.

Type: ARM\_Cortex-X2.

**FVP\_Base\_Cortex\_X2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu2**

ARM Cortex-X2 CT model.

Type: ARM\_Cortex-X2.

**FVP\_Base\_Cortex\_X2.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X2.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Cortex\_X2.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu3**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu4**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu4.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu4.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu4.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu4.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu5**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).**FVP\_Base\_Cortex\_X2.cluster0.cpu5.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu5.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu5.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu5.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu6**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu6.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu6.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu6.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu6.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu7**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu7.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu7.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu7.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0.cpu7.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Cortex\_X2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Cortex\_X2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Cortex\_X2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.89 FVP\_Base\_Cortex-X2x1

FVP\_Base\_Cortex-X2x1 contains the following instances:

### FVP\_Base\_Cortex-X2x1 instances

**FVP\_Base\_Cortex\_X2x1**

Base Platform Compute Subsystem for ARMCortexX2x1CT.

Type: [FVP\\_Base\\_Cortex\\_X2x1](#).

**FVP\_Base\_Cortex\_X2x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X2x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X2x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X2x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X2x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_X2x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_X2x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_X2x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).



**FVP\_Base\_Cortex\_X2x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X2x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X2x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X2x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X2x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X2x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x1.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_Cortex\_X2x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_X2x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X2x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X2x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X2x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X2x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X2x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_X2x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X2x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X2x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X2x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X2x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X2x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X2x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x1.cluster0**

ARM Cortex-X2 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2x1.cluster0.cpu0**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Cortex\_X2x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_X2x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_X2x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_X2x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_X2x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.90 FVP\_Base\_Cortex-X2x2

FVP\_Base\_Cortex-X2x2 contains the following instances:

### FVP\_Base\_Cortex-X2x2 instances

**FVP\_Base\_Cortex\_X2x2**

Base Platform Compute Subsystem for ARMCortexX2x2CT.

Type: [FVP\\_Base\\_Cortex\\_X2x2](#).**FVP\_Base\_Cortex\_X2x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Cortex\_X2x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X2x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X2x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X2x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X2x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Cortex\_X2x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2x2.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2x2.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Cortex\_X2x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Cortex\_X2x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X2x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X2x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X2x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X2x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X2x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x2.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_X2x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_X2x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X2x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X2x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X2x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X2x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X2x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_X2x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X2x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x2.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X2x2.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x2.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X2x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X2x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X2x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X2x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Cortex\_X2x2.cluster0**

ARM Cortex-X2 Cluster CT model.

Type: `Cluster_ARM_Cortex-X2`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu0**

ARM Cortex-X2 CT model.

Type: `ARM_Cortex-X2`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu0.l2cache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu1**

ARM Cortex-X2 CT model.

Type: `ARM_Cortex-X2`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_X2x2.cluster0.cpu1.l2cache**

PV Cache.

Type: `PVCache`.

**FVP\_Base\_Cortex\_X2x2.cluster0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Cortex\_X2x2.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_Cortex\_X2x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_Base\_Cortex\_X2x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Cortex\_X2x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.91 FVP\_Base\_Cortex-X2x4

FVP\_Base\_Cortex-X2x4 contains the following instances:

### FVP\_Base\_Cortex-X2x4 instances

#### **FVP\_Base\_Cortex\_X2x4**

Base Platform Compute Subsystem for ARMCortexX2x4CT.

Type: [FVP\\_Base\\_Cortex\\_X2x4](#).

#### **FVP\_Base\_Cortex\_X2x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Cortex\_X2x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Cortex\_X2x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Cortex\_X2x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Cortex\_X2x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Cortex\_X2x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Cortex\_X2x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Cortex\_X2x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Cortex\_X2x4.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).



Type: [PL180\\_MCI](#).

**FVP\_Base\_Cortex\_X2x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Cortex\_X2x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Cortex\_X2x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Cortex\_X2x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Cortex\_X2x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Cortex\_X2x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Cortex\_X2x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Cortex\_X2x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Cortex\_X2x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Cortex\_X2x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Cortex\_X2x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Cortex\_X2x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Cortex\_X2x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Cortex\_X2x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Cortex\_X2x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Cortex\_X2x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Cortex\_X2x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Cortex\_X2x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Cortex\_X2x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Cortex\_X2x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Cortex\_X2x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Cortex\_X2x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Cortex\_X2x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Cortex\_X2x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Cortex\_X2x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Cortex\_X2x4.cluster0**

ARM Cortex-X2 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu0**

ARM Cortex-X2 CT model.

Type: [ARM\\_Cortex-X2](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu1**

ARM Cortex-X2 CT model.

Type: ARM\_Cortex-X2.

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu2**

ARM Cortex-X2 CT model.

Type: ARM\_Cortex-X2.

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu3**

ARM Cortex-X2 CT model.

Type: ARM\_Cortex-X2.

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Cortex\_X2x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Cortex\_X2x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Cortex\_X2x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Cortex\_X2x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Cortex\_X2x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Cortex\_X2x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.92 FVP\_Base\_Neoverse-E1x1

FVP\_Base\_Neoverse-E1x1 contains the following instances:

### FVP\_Base\_Neoverse-E1x1 instances

**FVP\_Base\_Neoverse\_E1x1**

Base Platform Compute Subsystem for ARMNeoverseE1x1CT.

Type: [FVP\\_Base\\_Neoverse\\_E1x1](#).**FVP\_Base\_Neoverse\_E1x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_E1x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_E1x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_E1x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC0](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_E1x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_E1x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_E1x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_E1x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_E1x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_E1x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_E1x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_E1x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_E1x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_E1x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_E1x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_E1x1.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_E1x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Neoverse\_E1x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_E1x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_E1x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x1.bp.virtio9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_E1x1.bp.virtio9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_E1x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_E1x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_E1x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x1.cluster0**

ARM Neoverse-E1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).



**FVP\_Base\_Neoverse\_E1x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x1.cluster0.cpu0.thread0**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).**FVP\_Base\_Neoverse\_E1x1.cluster0.cpu0.thread1**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).**FVP\_Base\_Neoverse\_E1x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Neoverse\_E1x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Neoverse\_E1x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Neoverse\_E1x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Neoverse\_E1x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.93 FVP\_Base\_Neoverse-E1x2

FVP\_Base\_Neoverse-E1x2 contains the following instances:

### FVP\_Base\_Neoverse-E1x2 instances

**FVP\_Base\_Neoverse\_E1x2**

Base Platform Compute Subsystem for ARMNeoverseE1x2CT.

Type: [FVP\\_Base\\_Neoverse\\_E1x2](#).**FVP\_Base\_Neoverse\_E1x2.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Neoverse\_E1x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_E1x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_E1x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_E1x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_E1x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

#### **FVP\_Base\_Neoverse\_E1x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).



**FVP\_Base\_Neoverse\_E1x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_E1x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_E1x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_E1x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_E1x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_E1x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_E1x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_E1x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_E1x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_E1x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_E1x2.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_E1x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_E1x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_E1x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0**

ARM Neoverse-E1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu0.thread0**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu0.thread1**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu1.thread0**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0.cpu1.thread1**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Neoverse\_E1x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Neoverse\_E1x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Neoverse\_E1x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.94 FVP\_Base\_Neoverse-E1x4

FVP\_Base\_Neoverse-E1x4 contains the following instances:

### FVP\_Base\_Neoverse-E1x4 instances

**FVP\_Base\_Neoverse\_E1x4**

Base Platform Compute Subsystem for ARMNeoverseE1x4CT.

Type: [FVP\\_Base\\_Neoverse\\_E1x4](#).

**FVP\_Base\_Neoverse\_E1x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_E1x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_E1x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_E1x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_E1x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_E1x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).



**FVP\_Base\_Neoverse\_E1x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_E1x4.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_E1x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_E1x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_E1x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_E1x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_E1x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_E1x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_E1x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_E1x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_E1x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_E1x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_E1x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_E1x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_E1x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_E1x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_E1x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_E1x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_E1x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_E1x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_E1x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_E1x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_E1x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_E1x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_E1x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_E1x4.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_E1x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_E1x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_E1x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_E1x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_E1x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0**

ARM Neoverse-E1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-E1](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu0.thread0**

ARM Neoverse-E1 CT model.

Type: ARM\_Neoverse-E1.

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu0.thread1**

ARM Neoverse-E1 CT model.

Type: ARM\_Neoverse-E1.

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu1.thread0**

ARM Neoverse-E1 CT model.

Type: ARM\_Neoverse-E1.

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu1.thread1**

ARM Neoverse-E1 CT model.

Type: ARM\_Neoverse-E1.

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu2.thread0**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu2.thread1**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu3.thread0**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).**FVP\_Base\_Neoverse\_E1x4.cluster0.cpu3.thread1**

ARM Neoverse-E1 CT model.

Type: [ARM\\_Neoverse-E1](#).**FVP\_Base\_Neoverse\_E1x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Neoverse\_E1x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Neoverse\_E1x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Neoverse\_E1x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Neoverse\_E1x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.95 FVP\_Base\_Neoverse-N1

FVP\_Base\_Neoverse-N1 contains the following instances:

### FVP\_Base\_Neoverse-N1 instances

#### **FVP\_Base\_Neoverse\_N1**

Base Platform Compute Subsystem for ARMNeoverseN1CT.

Type: [FVP\\_Base\\_Neoverse\\_N1](#).

#### **FVP\_Base\_Neoverse\_N1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Neoverse\_N1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Neoverse\_N1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

#### **FVP\_Base\_Neoverse\_N1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

#### **FVP\_Base\_Neoverse\_N1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_N1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_N1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_N1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a

proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1.bp.hdlcd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1.bp.hdlcd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_N1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_N1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_N1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_N1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_N1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).



**FVP\_Base\_Neoverse\_N1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_N1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_N1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_N1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_N1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_N1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_N1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_N1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_N1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [Tzc\\_400](#).

**FVP\_Base\_Neoverse\_N1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_N1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_N1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_N1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_N1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_N1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_N1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_N1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_N1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1.cluster0**

ARM Neoverse-N1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu0**

ARM Neoverse-N1 CT model.

Type: [ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu1**

ARM Neoverse-N1 CT model.

Type: [ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu2**

ARM Neoverse-N1 CT model.

Type: ARM\_Neoverse-N1.

**FVP\_Base\_Neoverse\_N1.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_N1.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu3**

ARM Neoverse-N1 CT model.

Type: ARM\_Neoverse-N1.

**FVP\_Base\_Neoverse\_N1.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_N1.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Neoverse\_N1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Neoverse\_N1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Neoverse\_N1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.96 FVP\_Base\_Neoverse-N1x1

FVP\_Base\_Neoverse-N1x1 contains the following instances:

### FVP\_Base\_Neoverse-N1x1 instances

**FVP\_Base\_Neoverse\_N1x1**

Base Platform Compute Subsystem for ARMNeoverseN1x1CT.

Type: [FVP\\_Base\\_Neoverse\\_N1x1](#).

**FVP\_Base\_Neoverse\_N1x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_N1x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_N1x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Neoverse\_N1x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_N1x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_N1x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_N1x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_N1x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_N1x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_N1x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_N1x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_N1x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_N1x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_N1x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_N1x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_N1x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_N1x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_N1x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_N1x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_N1x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_N1x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_N1x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_N1x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_N1x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x1.cluster0**

ARM Neoverse-N1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1x1.cluster0.cpu0**

ARM Neoverse-N1 CT model.

Type: [ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).



**FVP\_Base\_Neoverse\_N1x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x1.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Neoverse\_N1x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Neoverse\_N1x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Neoverse\_N1x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Neoverse\_N1x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.97 FVP\_Base\_Neoverse-N1x2

FVP\_Base\_Neoverse-N1x2 contains the following instances:

### FVP\_Base\_Neoverse-N1x2 instances

**FVP\_Base\_Neoverse\_N1x2**

Base Platform Compute Subsystem for ARMNeoverseN1x2CT.

Type: [FVP\\_Base\\_Neoverse\\_N1x2](#).**FVP\_Base\_Neoverse\_N1x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_N1x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_N1x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_N1x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_N1x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_N1x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_N1x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_N1x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_N1x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_N1x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_Base\_Neoverse\_N1x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_N1x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_N1x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_N1x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_N1x2.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_N1x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_N1x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_N1x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x2.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_N1x2.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x2.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_N1x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_N1x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_N1x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_N1x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x2.cluster0**

ARM Neoverse-N1 Cluster CT model.

Type: `cluster_ARM_Neoverse-N1`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu0**

ARM Neoverse-N1 CT model.

Type: `ARM_Neoverse-N1`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu0.l2cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu1**

ARM Neoverse-N1 CT model.

Type: `ARM_Neoverse-N1`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu1.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N1x2.cluster0.cpu1.l2cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N1x2.cluster0\_labeller**Type: `Labeller`.**FVP\_Base\_Neoverse\_N1x2.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.**FVP\_Base\_Neoverse\_N1x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_Base\_Neoverse\_N1x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_Base\_Neoverse\_N1x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.98 FVP\_Base\_Neoverse-N1x4

FVP\_Base\_Neoverse-N1x4 contains the following instances:

### FVP\_Base\_Neoverse-N1x4 instances

#### **FVP\_Base\_Neoverse\_N1x4**

Base Platform Compute Subsystem for ARMNeoverseN1x4CT.

Type: [FVP\\_Base\\_Neoverse\\_N1x4](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N1x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N1x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_N1x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_N1x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N1x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_N1x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_N1x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_N1x4.bp.hdlcd0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for



the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_N1x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_N1x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_N1x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_N1x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_N1x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N1x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N1x4.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N1x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_N1x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_N1x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_N1x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N1x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_N1x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_N1x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_N1x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_N1x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_N1x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_N1x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N1x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_N1x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_N1x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N1x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_N1x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0**

ARM Neoverse-N1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu0**

ARM Neoverse-N1 CT model.

Type: [ARM\\_Neoverse-N1](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu1**

ARM Neoverse-N1 CT model.

Type: ARM\_Neoverse-N1.

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu2**

ARM Neoverse-N1 CT model.

Type: ARM\_Neoverse-N1.

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu3**

ARM Neoverse-N1 CT model.

Type: ARM\_Neoverse-N1.

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).



**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_N1x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Neoverse\_N1x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Neoverse\_N1x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Neoverse\_N1x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Neoverse\_N1x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.99 FVP\_Base\_Neoverse-N2

FVP\_Base\_Neoverse-N2 contains the following instances:

### FVP\_Base\_Neoverse-N2 instances

**FVP\_Base\_Neoverse\_N2**

Base Platform Compute Subsystem for ARMNeoverseN2CT.

Type: [FVP\\_Base\\_Neoverse\\_N2](#).**FVP\_Base\_Neoverse\_N2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_Neoverse\_N2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_Neoverse\_N2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_N2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_N2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_N2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_N2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_Neoverse\_N2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_N2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_N2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_N2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_N2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_N2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_N2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_N2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N2.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N2.bp.pl1111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N2.bp.pl1111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_N2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_N2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_N2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_N2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_N2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).



**FVP\_Base\_Neoverse\_N2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_N2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_N2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_N2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_N2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_N2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_N2.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_N2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [vEDCC](#).

**FVP\_Base\_Neoverse\_N2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_N2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_N2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2.bp.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_N2.bp.virtioP9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_N2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_N2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_N2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2.cluster0**

ARM Neoverse-N2 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-N2](#).

**FVP\_Base\_Neoverse\_N2.cluster0.cpu0**

ARM Neoverse-N2 CT model.

Type: [ARM\\_Neoverse-N2](#).

**FVP\_Base\_Neoverse\_N2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_N2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_N2.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Neoverse\_N2.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Neoverse\_N2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Neoverse\_N2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.100 FVP\_Base\_Neoverse-N2x1

FVP\_Base\_Neoverse-N2x1 contains the following instances:

### FVP\_Base\_Neoverse-N2x1 instances

**FVP\_Base\_Neoverse\_N2x1**

Base Platform Compute Subsystem for ARMNeoverseN2x1CT.

Type: [FVP\\_Base\\_Neoverse\\_N2x1](#).

**FVP\_Base\_Neoverse\_N2x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_N2x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_N2x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_N2x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N2x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).



**FVP\_Base\_Neoverse\_N2x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_N2x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N2x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_N2x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_N2x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_N2x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_N2x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_N2x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_N2x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_N2x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_N2x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_N2x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_N2x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_N2x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_N2x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_N2x1.bp.ve\_sysregs**

Type: [vE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_N2x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_N2x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_N2x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2x1.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_N2x1.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2x1.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_N2x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_N2x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_N2x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_N2x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_N2x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_N2x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_N2x1.cluster0**

ARM Neoverse-N2 Cluster CT model.

Type: `cluster_ARM_Neoverse-N2`.**FVP\_Base\_Neoverse\_N2x1.cluster0.cpu0**

ARM Neoverse-N2 CT model.

Type: `ARM_Neoverse-N2`.**FVP\_Base\_Neoverse\_N2x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.**FVP\_Base\_Neoverse\_N2x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N2x1.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N2x1.cluster0.cpu0.l2cache**

PV Cache.

Type: `PVCache`.**FVP\_Base\_Neoverse\_N2x1.cluster0.labeller**Type: `Labeller`.**FVP\_Base\_Neoverse\_N2x1.dapmemlogger**

Bus Logger.

Type: `PVBusLogger`.**FVP\_Base\_Neoverse\_N2x1.elfloader**

ELF loader component.

Type: `ElfLoader`.**FVP\_Base\_Neoverse\_N2x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: `GIC_IRI`.**FVP\_Base\_Neoverse\_N2x1.pctl**

Base Platforms Power Controller.

Type: `Base_PowerController`.

## 7.101 FVP\_Base\_Neoverse-V1

FVP\_Base\_Neoverse-V1 contains the following instances:

### FVP\_Base\_Neoverse-V1 instances

**FVP\_Base\_Neoverse\_V1**

Base Platform Compute Subsystem for ARMNeoverseV1CT.

Type: `FVP_Base_Neoverse_V1`.

**FVP\_Base\_Neoverse\_V1.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.



Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_V1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_V1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_V1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_V1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_V1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_V1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_V1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_V1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_V1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_V1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_V1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_V1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_Base\_Neoverse\_V1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

#### **FVP\_Base\_Neoverse\_V1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_Base\_Neoverse\_V1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_Base\_Neoverse\_V1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_Base\_Neoverse\_V1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_Base\_Neoverse\_V1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_V1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_V1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_V1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_V1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_V1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_V1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_V1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_V1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_V1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).



**FVP\_Base\_Neoverse\_V1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_V1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_V1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_V1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_V1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_V1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_V1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1.cluster0**

ARM Neoverse-V1 Cluster CT model.

Type: [cluster\\_ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu0**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu1**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu2**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu3**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Neoverse\_V1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Neoverse\_V1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Neoverse\_V1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.102 FVP\_Base\_Neoverse-V1x1

FVP\_Base\_Neoverse-V1x1 contains the following instances:

### FVP\_Base\_Neoverse-V1x1 instances

**FVP\_Base\_Neoverse\_V1x1**

Base Platform Compute Subsystem for ARMNeoverseV1x1CT.

Type: [FVP\\_Base\\_Neoverse\\_V1x1](#).

**FVP\_Base\_Neoverse\_V1x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_V1x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_V1x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_V1x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_V1x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).



**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_V1x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_V1x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_V1x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_V1x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_V1x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x1.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_V1x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_V1x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_V1x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_V1x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_V1x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_V1x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_V1x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_V1x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_V1x1.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_V1x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_V1x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_V1x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0**

ARM Neoverse-V1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0.cpu0**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x1.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Neoverse\_V1x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Neoverse\_V1x1.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Neoverse\_V1x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.103 FVP\_Base\_Neoverse-V1x2

FVP\_Base\_Neoverse-V1x2 contains the following instances:

### FVP\_Base\_Neoverse-V1x2 instances

**FVP\_Base\_Neoverse\_V1x2**

Base Platform Compute Subsystem for ARMNeoverseV1x2CT.

Type: [FVP\\_Base\\_Neoverse\\_V1x2](#).

**FVP\_Base\_Neoverse\_V1x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_V1x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_V1x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_Neoverse\_V1x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_V1x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_Neoverse\_V1x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_Neoverse\_V1x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd.pl111x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_V1x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_V1x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_V1x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_V1x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_V1x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_V1x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_V1x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_V1x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_V1x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_V1x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_V1x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_V1x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x2.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_V1x2.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x2.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_Neoverse\_V1x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_V1x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_V1x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_V1x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x2.cluster0**

ARM Neoverse-V1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu0**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu1**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x2.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x2.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_Neoverse\_V1x2.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_Neoverse\_V1x2.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_Base\_Neoverse\_V1x2.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).**FVP\_Base\_Neoverse\_V1x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.104 FVP\_Base\_Neoverse-V1x4

FVP\_Base\_Neoverse-V1x4 contains the following instances:

### FVP\_Base\_Neoverse-V1x4 instances

#### **FVP\_Base\_Neoverse\_V1x4**

Base Platform Compute Subsystem for ARMNeoverseV1x4CT.

Type: `FVP_Base_Neoverse_V1x4`.

#### **FVP\_Base\_Neoverse\_V1x4.bp**

Peripherals and address map for the Base Platform.

Type: `BasePlatformPeripherals`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

#### **FVP\_Base\_Neoverse\_V1x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_Neoverse\_V1x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_Neoverse\_V1x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_Base\_Neoverse\_V1x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_Neoverse\_V1x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_Neoverse\_V1x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1x4.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component

which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_Base\_Neoverse\_V1x4.bp.hd1cd0.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_Base\_Neoverse\_V1x4.bp.hd1cd0.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_Base\_Neoverse\_V1x4.bp.hd1cd0\_labeller**

Type: `Labeller`.

**FVP\_Base\_Neoverse\_V1x4.bp.hostbridge**

Host Socket Interface Component.

Type: `HostBridge`.

**FVP\_Base\_Neoverse\_V1x4.bp.mmc**

Generic Multimedia Card.

Type: `MMC`.

**FVP\_Base\_Neoverse\_V1x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: `IntelStrataFlashJ3`.

**FVP\_Base\_Neoverse\_V1x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: `FlashLoader`.

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart0.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: `PL011_Uart`.

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart1.clk\_divider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_Neoverse\_V1x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_Neoverse\_V1x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_Neoverse\_V1x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_Neoverse\_V1x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_Neoverse\_V1x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_Neoverse\_V1x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_Neoverse\_V1x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_Neoverse\_V1x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_Neoverse\_V1x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_Neoverse\_V1x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_Neoverse\_V1x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_Neoverse\_V1x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_Neoverse\_V1x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_Neoverse\_V1x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_Neoverse\_V1x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_Neoverse\_V1x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_Neoverse\_V1x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_Neoverse\_V1x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_Neoverse\_V1x4.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_Neoverse\_V1x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_Neoverse\_V1x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_Base\_Neoverse\_V1x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0**

ARM Neoverse-V1 Cluster CT model.

Type: [Cluster\\_ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu0**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu1**

ARM Neoverse-V1 CT model.

Type: [ARM\\_Neoverse-V1](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu2**

ARM Neoverse-V1 CT model.

Type: ARM\_Neoverse-V1.

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu3**

ARM Neoverse-V1 CT model.

Type: ARM\_Neoverse-V1.

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_Neoverse\_V1x4.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_Neoverse\_V1x4.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_Neoverse\_V1x4.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_Neoverse\_V1x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_Neoverse\_V1x4.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_Neoverse\_V1x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 7.105 FVP\_Base\_RevC-2xAEMvA

FVP\_Base\_RevC-2xAEMvA contains the following instances:

### FVP\_Base\_RevC-2xAEMvA instances

**FVP\_Base\_RevC\_2xAEMvA**

Base Platform Compute Subsystem for AEMvACT and AEMvACT.

Type: [FVP\\_Base\\_RevC\\_2xAEMvA](#).

**FVP\_Base\_RevC\_2xAEMvA.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_Base\_RevC\_2xAEMvA.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.telnet\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.telnet\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).



**FVP\_Base\_RevC\_2xAEMvA.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.cci550**

This is a cache coherent interconnect.

Type: [CCI550](#).

**FVP\_Base\_RevC\_2xAEMvA.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster0**

ARM AEMvA Cluster CT model.

Type: [Cluster\\_ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu0**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu1**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu2**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu3**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster0\_labeller**Type: [Labeller](#).**FVP\_Base\_RevC\_2xAEMvA.cluster1**

ARM AEMvA Cluster CT model.

Type: Cluster\_ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu0**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu1**

ARM AEM-A MP CT model.

Type: ARM\_AEM-A\_MP.

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu2**

ARM AEM-A MP CT model.

Type: [ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu3**

ARM AEM-A MP CT model.

Type: [ARM\\_AEM-A\\_MP](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_2xAEMvA.cluster1\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_2xAEMvA.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_RevC\_2xAEMvA.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_RevC\_2xAEMvA.gpu**

G76 addon for the Base Platform.

Type: G76\_DB.

**FVP\_Base\_RevC\_2xAEMvA.gpu.gpu**

ARM Mali-G76 GPU.

Type: Mali\_G76.

**FVP\_Base\_RevC\_2xAEMvA.pci**

PCI addon for the Base Platform.

Type: BasePlatformPCIRevC.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci**

Type: AHCI\_PCI.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.ahci**

AHCI controller with attached SATA disks and PCIe interface.

Type: AHCI\_SATA.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.buslogger**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice**

PCI Wrapper for memory mapped components.

Type: PCIDevice.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.dmalogger**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.incoming\_memory\_logger**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.lost\_mastered\_transactions**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.lost\_transactions\_to\_pcie**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.msix\_pba\_logger**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.msix\_table\_logger**

Bus Logger.

Type: PVBusLogger.

**FVP\_Base\_RevC\_2xAEMvA.pci.ahci\_pci.pcidevice.to\_client\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pci\_smmuv3**

System MMUv3 configured for PCI-E Sub-system.

Type: [SMMUv3\\_FOR\\_PCIE](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pci\_smmuv3.mmu**

SMMUv3 AEM.

Type: [SMMUv3AEM](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pci\_smmuv3.msirewriter**

Recognise writes to the GITS\_TRANSLATER register and rewrite them to go to the GITS\_TRANSLATE64R register. The DeviceID is expected to be in the bottom 32 bits of ExtendedID of the transaction. Debug transactions and reads are not rewritten. This component can also, optionally, apply a 16 bit 'label' to the top 16 bits of the MasterID in the same way that the Labeller component does.

Type: [MSIRewriter](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0**

PCI Wrapper for memory mapped components.

Type: [PCIDevice](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.dmalogger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.incoming\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.lost\_mastered\_transactions**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.lost\_transactions\_to\_pcie**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.msix\_pba\_logger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.msix\_table\_logger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice0.to\_client\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1**

PCI Wrapper for memory mapped components.

Type: [PCIDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.dmalogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.incoming\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.lost\_mastered\_transactions**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.lost\_transactions\_to\_pcie**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.msix\_pba\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.msix\_table\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcidevice1.to\_client\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcivirtioblockdevice0**

virtio PCI block device.

Type: [VirtioPCIBlockDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pcivirtioblockdevice1**

virtio PCI block device.

Type: [VirtioPCIBlockDevice](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pvbus2pci**

PVBus to PCI Bridge.

Type: [PVBus2PCI](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pvbus2pci.cfglogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pvbus2pci.devicelogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.pvbus2pci.dmalogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_2xAEMvA.pci.smmulogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_RevC\_2xAEMvA.pci.tbu0\_pre\_smmu\_logger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_Base\_RevC\_2xAEMvA.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).**FVP\_Base\_RevC\_2xAEMvA.test\_engine**

Test Engine for base platform.

Type: [TestEngine](#).**FVP\_Base\_RevC\_2xAEMvA.test\_engine.device0**

SMMUv3 Test Engine.

Type: [SMMUv3TestEngine](#).

## 7.106 FVP\_Base\_RevC-Cortex-A510

FVP\_Base\_RevC-Cortex-A510 contains the following instances:

### FVP\_Base\_RevC-Cortex-A510 instances

**FVP\_Base\_RevC\_Cortex\_A510**

Base Platform Compute Subsystem for ARMCortexA510CT.

Type: [FVP\\_Base\\_RevC\\_Cortex\\_A510](#).**FVP\_Base\_RevC\_Cortex\_A510.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).



**FVP\_Base\_RevC\_Cortex\_A510.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.cci550**

This is a cache coherent interconnect.

Type: [CCI550](#).

**FVP\_Base\_RevC\_Cortex\_A510.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0**

ARM Cortex-A510Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A510](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu0**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu0.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu1**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu1.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu2**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu2.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu3**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu3.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu4**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu4.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu4.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu4.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu4.l2cache**

PV Cache.

Type: [PVCache](#).**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu5**

ARM Cortex-A510CT model.

Type: ARM\_Cortex-A510.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu5.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu5.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu5.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu5.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu6**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu6.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu6.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu6.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu6.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu7**

ARM Cortex-A510CT model.

Type: [ARM\\_Cortex-A510](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu7.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu7.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu7.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0.cpu7.l2cache**

PV Cache.

Type: [PVCache](#).

**FVP\_Base\_RevC\_Cortex\_A510.cluster0\_labeller**

Type: [Labeller](#).

**FVP\_Base\_RevC\_Cortex\_A510.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_Base\_RevC\_Cortex\_A510.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci**

PCI addon for the Base Platform.

Type: [BasePlatformPCIRevC](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci**

Type: [AHCI\\_PCI](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.ahci**

AHCI controller with attached SATA disks and PCIe interface.

Type: [AHCI\\_SATA](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.buslogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice**

PCI Wrapper for memory mapped components.

Type: [PCIDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.dmalogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.incoming\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.lost\_mastered\_transactions**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.lost\_transactions\_to\_pcie**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.msix\_pba\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.msix\_table\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.ahci\_pci.pcidevice.to\_client\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pci\_smmuv3**

System MMUv3 configured for PCI-E Sub-system.

Type: [SMMUv3\\_FOR\\_PCIE](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pci\_smmuv3.mmu**

SMMUv3 AEM.

Type: [SMMUv3AEM](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pci\_smmuv3.msirewriter**

Recognise writes to the GITS\_TRANSLATER register and rewrite them to go to the GITS\_TRANSLATE64R register. The DeviceID is expected to be in the bottom 32 bits of ExtendedID of the transaction. Debug transactions and reads are not rewritten. This component can also, optionally, apply a 16 bit 'label' to the top 16 bits of the MasterID in the same way that the Labeller component does.

Type: [MSIRewriter](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0**

PCI Wrapper for memory mapped components.

Type: [PCIDevice](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.dmalogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.incoming\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.lost\_mastered\_transactions**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.lost\_transactions\_to\_pcie**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.msix\_pba\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.msix\_table\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice0.to\_client\_memory\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1**

PCI Wrapper for memory mapped components.

Type: `PCIDevice`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.dmalogger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.incoming\_memory\_logger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.lost\_mastered\_transactions**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.lost\_transactions\_to\_pcie**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.msix\_pba\_logger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.msix\_table\_logger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcidevice1.to\_client\_memory\_logger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcivirtioiblockdevice0**

virtio PCI block device.

Type: `VirtioPCIBlockDevice`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pcivirtioiblockdevice1**

virtio PCI block device.

Type: `VirtioPCIBlockDevice`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pvbus2pci**

PVBus to PCI Bridge.

Type: `PVBus2PCI`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pvbus2pci.cfglogger**

Bus Logger.

Type: `PVBusLogger`.

**FVP\_Base\_RevC\_Cortex\_A510.pci.pvbus2pci.devicelogger**

Bus Logger.

Type: `PVBusLogger`.



**FVP\_Base\_RevC\_Cortex\_A510.pci.pvbus2pci.dmalogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.smmulogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pci.tbu0\_pre\_smmu\_logger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_Base\_RevC\_Cortex\_A510.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 8 BaseR Platform FVPs

This chapter lists the BaseR Platform FVPs and the instances in them.

For the BaseR Platform memory map, see [BaseR Platform memory map](#) in the Fast Models Reference Manual.

### 8.1 FVP\_BaseR\_AEMv8R

FVP\_BaseR\_AEMv8R contains the following instances:

#### FVP\_BaseR\_AEMv8R instances

##### **FVP\_BaseR\_AEMv8R**

Base Platform Compute Subsystem for AEMv8RMPCT.

Type: [FVP\\_BaseR\\_AEMv8R](#).

##### **FVP\_BaseR\_AEMv8R.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

##### **FVP\_BaseR\_AEMv8R.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

##### **FVP\_BaseR\_AEMv8R.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

##### **FVP\_BaseR\_AEMv8R.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

##### **FVP\_BaseR\_AEMv8R.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

##### **FVP\_BaseR\_AEMv8R.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

##### **FVP\_BaseR\_AEMv8R.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_BaseR\_AEMv8R.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_AEMv8R.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_AEMv8R.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_BaseR\_AEMv8R.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_BaseR\_AEMv8R.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_AEMv8R.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_AEMv8R.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_BaseR\_AEMv8R.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_AEMv8R.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_AEMv8R.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_AEMv8R.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_AEMv8R.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_BaseR\_AEMv8R.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_BaseR\_AEMv8R.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_AEMv8R.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_AEMv8R.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_AEMv8R.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_AEMv8R.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_AEMv8R.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_BaseR\_AEMv8R.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_BaseR\_AEMv8R.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_AEMv8R.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_AEMv8R.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_BaseR\_AEMv8R.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_BaseR\_AEMv8R.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_AEMv8R.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_AEMv8R.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_AEMv8R.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_AEMv8R.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).



**FVP\_BaseR\_AEMv8R.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_BaseR\_AEMv8R.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_BaseR\_AEMv8R.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_BaseR\_AEMv8R.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_BaseR\_AEMv8R.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_AEMv8R.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_AEMv8R.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_BaseR\_AEMv8R.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_AEMv8R.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_BaseR\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_AEMv8R.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_AEMv8R.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_AEMv8R.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_AEMv8R.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_BaseR\_AEMv8R.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_BaseR\_AEMv8R.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_BaseR\_AEMv8R.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_AEMv8R.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [Tzc\\_400](#).

**FVP\_BaseR\_AEMv8R.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_BaseR\_AEMv8R.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_BaseR\_AEMv8R.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_BaseR\_AEMv8R.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_AEMv8R.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_BaseR\_AEMv8R.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_AEMv8R.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_BaseR\_AEMv8R.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_AEMv8R.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_BaseR\_AEMv8R.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_BaseR\_AEMv8R.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_AEMv8R.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_BaseR\_AEMv8R.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_AEMv8R.cluster0**

ARMAEMv8-R Cluster CT model.

Type: [Cluster\\_ARMAEMv8-R\\_MP](#).

**FVP\_BaseR\_AEMv8R.cluster0.cpu0**

ARMAEMv8-R MP CT model.

Type: [ARMAEMv8-R\\_MP](#).

**FVP\_BaseR\_AEMv8R.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_BaseR\_AEMv8R.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_BaseR\_AEMv8R.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_BaseR\_AEMv8R.cluster0.cpu1**

ARMAEMv8-R MP CT model.

Type: [ARMAEMv8-R\\_MP](#).

**FVP\_BaseR\_AEMv8R.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_BaseR\_AEMv8R.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0.cpu2**

ARMAEMv8-R MP CT model.

Type: ARMAEMv8-R\_MP.

**FVP\_BaseR\_AEMv8R.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_BaseR\_AEMv8R.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0.cpu3**

ARMAEMv8-R MP CT model.

Type: ARMAEMv8-R\_MP.

**FVP\_BaseR\_AEMv8R.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_BaseR\_AEMv8R.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_AEMv8R.cluster0\_labeller**Type: [Labeller](#).**FVP\_BaseR\_AEMv8R.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_BaseR\_AEMv8R.elfloader**

ELF loader component.

Type: [ElfLoader](#).

#### **FVP\_BaseR\_AEMv8R.flash\_ram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_BaseR\_AEMv8R.gic\_distributor**

GIC Interrupt Redistribution Infrastructure component.

Type: [GIC\\_IRI](#).

#### **FVP\_BaseR\_AEMv8R.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 8.2 FVP\_BaseR\_Cortex-R52x1

FVP\_BaseR\_Cortex-R52x1 contains the following instances:

### FVP\_BaseR\_Cortex-R52x1 instances

#### **FVP\_BaseR\_Cortex\_R52x1**

Base Platform Compute Subsystem for ARMCortexR52x1CT.

Type: [FVP\\_BaseR\\_Cortex\\_R52x1](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x1.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_BaseR\_Cortex\_R52x1.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hdlcd0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x1.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_BaseR\_Cortex\_R52x1.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x1.cluster0**

ARM CortexR52 MP CT model.

Type: [ARM\\_CortexR52](#).

**FVP\_BaseR\_Cortex\_R52x1.cluster0.cpu0**

ARM CortexR52 MP CT model.

Type: [ARM\\_CortexR52](#).

**FVP\_BaseR\_Cortex\_R52x1.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).



**FVP\_BaseR\_Cortex\_R52x1.cluster0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x1.cluster0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x1.cluster0.gic\_iri**

GIC IRI internal to cluster.

Type: [gic\\_iri](#).**FVP\_BaseR\_Cortex\_R52x1.cluster0.labeller**Type: [Labeller](#).**FVP\_BaseR\_Cortex\_R52x1.dapmemlogger**

Bus Logger.

Type: [PVBusLogger](#).**FVP\_BaseR\_Cortex\_R52x1.elfloader**

ELF loader component.

Type: [ElfLoader](#).**FVP\_BaseR\_Cortex\_R52x1.flash\_ram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).**FVP\_BaseR\_Cortex\_R52x1.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 8.3 FVP\_BaseR\_Cortex-R52x2

FVP\_BaseR\_Cortex-R52x2 contains the following instances:

### FVP\_BaseR\_Cortex-R52x2 instances

**FVP\_BaseR\_Cortex\_R52x2**

Base Platform Compute Subsystem for ARMCortexR52x2CT.

Type: [FVP\\_BaseR\\_Cortex\\_R52x2](#).**FVP\_BaseR\_Cortex\_R52x2.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hdlcd0.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hdlcd0.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hdlcd0.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_BaseR\_Cortex\_R52x2.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.virtioblockdevice\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.virtiop9device\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x2.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_BaseR\_Cortex\_R52x2.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x2.cluster0**

ARM CortexR52 MP CT model.

Type: ARM\_CortexR52.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu0**

ARM CortexR52 MP CT model.

Type: ARM\_CortexR52.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu0.l1dcache**

PV Cache.

Type: PVCache.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu0.l1icache**

PV Cache.

Type: PVCache.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu1**

ARM CortexR52 MP CT model.

Type: ARM\_CortexR52.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu1.l1dcache**

PV Cache.

Type: PVCache.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.cpu1.l1icache**

PV Cache.

Type: PVCache.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.gic\_iri**

GIC IRI internal to cluster.

Type: gic\_iri.

**FVP\_BaseR\_Cortex\_R52x2.cluster0.labeller**

Type: Labeller.

**FVP\_BaseR\_Cortex\_R52x2.dapmemlogger**

Bus Logger.

Type: PVBusLogger.

**FVP\_BaseR\_Cortex\_R52x2.elfloader**

ELF loader component.

Type: ElfLoader.

**FVP\_BaseR\_Cortex\_R52x2.flash\_ram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_BaseR\_Cortex\_R52x2.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 8.4 FVP\_BaseR\_Cortex-R52x4

FVP\_BaseR\_Cortex-R52x4 contains the following instances:

### **FVP\_BaseR\_Cortex-R52x4 instances**

#### **FVP\_BaseR\_Cortex\_R52x4**

Base Platform Compute Subsystem for ARMCortexR52x4CT.

Type: [FVP\\_BaseR\\_Cortex\\_R52x4](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp**

Peripherals and address map for the Base Platform.

Type: [BasePlatformPeripherals](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.ap\_refclk**

ARM Generic Timer.

Type: [MemoryMappedGenericTimer](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clock300MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clock32KHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dram\_alias\_warning**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.generic\_watchdog**

ARM Generic Watchdog.

Type: [MemoryMappedGenericWatchdog](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.hdlcd0**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.hdlcd0.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).



**FVP\_BaseR\_Cortex\_R52x4.bp.hdlcd0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.hdlcd0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.hdlcd0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.hdlcd0\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.nontrustedrom**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.nontrustedromloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl1050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl111\_clcd\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.refcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.reset\_or**

Or Gate.

Type: [OrGate](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.secureflash**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.secureflashloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.trusted\_key\_storage**

Trusted Root-Key Storage unit.

Type: [RootKeyStorage](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.trusted\_nv\_counter**

Trusted Non-Volatile Counter unit.

Type: [NonVolatileCounter](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.trusted\_rng**

Random Number Generator unit.

Type: [RandomNumberGenerator](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.trusted\_watchdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.tzc\_400**

TrustZone Address Space Controller.

Type: [TZC\\_400](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.virtio\_net**

VirtioNet device over MMIO transport.

Type: [VirtioNetMMIO](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.virtio\_net\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.virtio\_blockdevice\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.virtio\_p9device\_labeller**

Type: [Labeller](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.vis\_recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.bp.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_BaseR\_Cortex\_R52x4.clockdivider0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0**

ARM CortexR52 MP CT model.

Type: [ARM\\_CortexR52](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu0**

ARM CortexR52 MP CT model.

Type: [ARM\\_CortexR52](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [Tlbcadi](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu1**

ARM CortexR52 MP CT model.

Type: [ARM\\_CortexR52](#).

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu2**

ARM CortexR52 MP CT model.

Type: ARM\_CortexR52.

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu3**

ARM CortexR52 MP CT model.

Type: ARM\_CortexR52.

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x4.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_BaseR\_Cortex\_R52x4.cluster0.gic\_iri**

GIC IRI internal to cluster.

Type: gic\_iri.

**FVP\_BaseR\_Cortex\_R52x4.cluster0\_labeller**Type: [Labeller](#).**FVP\_BaseR\_Cortex\_R52x4.dapmemlogger**

Bus Logger.



Type: [PVBusLogger](#).

**FVP\_BaseR\_Cortex\_R52x4.elfloader**

ELF loader component.

Type: [ElfLoader](#).

**FVP\_BaseR\_Cortex\_R52x4.flash\_ram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_BaseR\_Cortex\_R52x4.pctl**

Base Platforms Power Controller.

Type: [Base\\_PowerController](#).

## 9 VE Platform FVPs

This chapter lists the VE Platform FVPs and the instances in them.

For the VE memory maps, see [VE memory map for Cortex-A series](#) and [VE memory map for Cortex-R series](#) in the Fast Models Reference Manual.

### 9.1 FVP\_VE\_Cortex-A15x1

FVP\_VE\_Cortex-A15x1 contains the following instances:

#### FVP\_VE\_Cortex-A15x1 instances

##### **FVP\_VE\_Cortex\_A15x1**

Top level component of the Cortex\_A15x1 Versatile Express inspired model.

Type: FVP\_VE\_Cortex\_A15x1.

##### **FVP\_VE\_Cortex\_A15x1.cluster**

ARM Cortex-A15 Cluster CT model.

Type: cluster\_ARM\_Cortex-A15.

##### **FVP\_VE\_Cortex\_A15x1.cluster.cpu0**

ARM Cortex-A15 CT model.

Type: ARM\_Cortex-A15.

##### **FVP\_VE\_Cortex\_A15x1.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

##### **FVP\_VE\_Cortex\_A15x1.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

##### **FVP\_VE\_Cortex\_A15x1.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

##### **FVP\_VE\_Cortex\_A15x1.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

##### **FVP\_VE\_Cortex\_A15x1.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).

##### **FVP\_VE\_Cortex\_A15x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: VEDaughterBoard.

**FVP\_VE\_Cortex\_A15x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A15x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: `VEDCC`.

**FVP\_VE\_Cortex\_A15x1.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: `MemoryMappedCounterModule`.

**FVP\_VE\_Cortex\_A15x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: `VEMotherBoard`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).



Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.virtioBlockDevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.virtioP9Device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.2 FVP\_VE\_Cortex-A15x1-A7x1

FVP\_VE\_Cortex-A15x1-A7x1 contains the following instances:

### FVP\_VE\_Cortex-A15x1-A7x1 instances

**FVP\_VE\_Cortex\_A15x1\_A7x1**

Top level component of the Cortex A15x1 A7x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A15x1\\_A7x1](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile**

Dual cluster ARM Cortex-A15x1 and ARM Cortex-A7x1 Core Tile.

Type: [ARM\\_Cortex\\_A15x1\\_A7x1\\_CT](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0**

ARM Cortex-A15 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0.cpu0**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1**

ARM Cortex-A7 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1.cpu0**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.dualclustersystemconfigurationblock**

Dual Cluster System Configuration Block.

Type: [DualClusterSystemConfigurationBlock](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.coretile.v7\_vgic**

System VGIC architecture version v7.

Type: [v7\\_VGIC](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x1\_A7x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.3 FVP\_VE\_Cortex-A15x2

FVP\_VE\_Cortex-A15x2 contains the following instances:

### FVP\_VE\_Cortex-A15x2 instances

**FVP\_VE\_Cortex\_A15x2**

Top level component of the Cortex\_A15x2 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A15x2](#).

**FVP\_VE\_Cortex\_A15x2.cluster**

ARM Cortex-A15 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu0**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu1**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu1.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2.cluster.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).



**FVP\_VE\_Cortex\_A15x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A15x2.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A15x2.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.virtioblockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A15x2.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x2.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.4 FVP\_VE\_Cortex-A15x2-A7x2

FVP\_VE\_Cortex-A15x2-A7x2 contains the following instances:

### FVP\_VE\_Cortex-A15x2-A7x2 instances

#### **FVP\_VE\_Cortex\_A15x2\_A7x2**

Top level component of the Cortex A15x2 A7x2 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A15x2\\_A7x2](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.coretile**

Dual cluster ARM Cortex-A15x2 and ARM Cortex-A7x2 Core Tile.

Type: [ARM\\_Cortex\\_A15x2\\_A7x2\\_CT](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0**

ARM Cortex-A15 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu0**

ARM Cortex-A15 CT model.

Type: ARM\_Cortex-A15.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu0.itlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu1**

ARM Cortex-A15 CT model.

Type: ARM\_Cortex-A15.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu1.itlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1**

ARM Cortex-A7 Cluster CT model.

Type: cluster\_ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu0**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu1**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu1.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.dualclustersystemconfigurationblock**

Dual Cluster System Configuration Block.

Type: [DualClusterSystemConfigurationBlock](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.coretile.v7\_vgic**

System VGIC architecture version v7.

Type: [v7\\_VGIC](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).



Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.virtioBlockDevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x2\_A7x2.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.5 FVP\_VE\_Cortex-A15x4

FVP\_VE\_Cortex-A15x4 contains the following instances:

### FVP\_VE\_Cortex-A15x4 instances

**FVP\_VE\_Cortex\_A15x4**

Top level component of the Cortex\_A15x4 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A15x4](#).

**FVP\_VE\_Cortex\_A15x4.cluster**

ARM Cortex-A15 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu0**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu1**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu1.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu2**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu2.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu3**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu3.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal()

callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).



**FVP\_VE\_Cortex\_A15x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A15x4.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A15x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.virtioBlockDevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.virtioP9Device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.6 FVP\_VE\_Cortex-A15x4-A7x4

FVP\_VE\_Cortex-A15x4-A7x4 contains the following instances:

### FVP\_VE\_Cortex-A15x4-A7x4 instances

**FVP\_VE\_Cortex\_A15x4\_A7x4**

Top level component of the Cortex A15x4 A7x4 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A15x4\\_A7x4](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile**

Dual cluster ARM Cortex-A15x4 and ARM Cortex-A7x4 Core Tile.

Type: [ARM\\_Cortex\\_A15x4\\_A7x4\\_CT](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0**

ARM Cortex-A15 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu0**

ARM Cortex-A15 CT model.

Type: [ARM\\_Cortex-A15](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu0.itlb**

TLB - instruction, data or unified.



Type: `Tlbcadi`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu1**

ARM Cortex-A15 CT model.

Type: `ARM_Cortex-A15`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu1.itlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu2**

ARM Cortex-A15 CT model.

Type: `ARM_Cortex-A15`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu2.itlb**

TLB - instruction, data or unified.

Type: `Tlbcadi`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu2.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu2.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu3**

ARM Cortex-A15 CT model.

Type: `ARM_Cortex-A15`.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu3.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1**

ARM Cortex-A7 Cluster CT model.

Type: cluster\_ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu0**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu0.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu1**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu1.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu2**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu2.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu3**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu3.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.dualclustersystemconfigurationblock**

Dual Cluster System Configuration Block.

Type: [DualClusterSystemConfigurationBlock](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.coretile.v7\_vgic**

System VGIC architecture version v7.

Type: [v7\\_VGIC](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).



**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A15x4\_A7x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.7 FVP\_VE\_Cortex-A17x1

FVP\_VE\_Cortex-A17x1 contains the following instances:

### FVP\_VE\_Cortex-A17x1 instances

#### **FVP\_VE\_Cortex\_A17x1**

Top level component of the Cortex\_A17x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A17x1](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster**

ARM Cortex-A17 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A17](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster.cpu0**

ARM Cortex-A17 CT model.

Type: [ARM\\_Cortex-A17](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_A17x1.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A17x1.gic400**

GIC-400 Generic Interrupt Controller.

Type: [GIC\\_400](#).

**FVP\_VE\_Cortex\_A17x1.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A17x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).



**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A17x1.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.8 FVP\_VE\_Cortex-A17x1-A7x1

FVP\_VE\_Cortex-A17x1-A7x1 contains the following instances:

### FVP\_VE\_Cortex-A17x1-A7x1 instances

#### **FVP\_VE\_Cortex\_A17x1\_A7x1**

Top level component of the Cortex A17x1 A7x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A17x1\\_A7x1](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.coretile**

Dual cluster ARM Cortex-A17x1 and ARM Cortex-A7x1 Core Tile.

Type: [ARM\\_Cortex\\_A17x1\\_A7x1\\_CT](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cci400**

Cache Coherent Interconnect for AXI4 ACE.

Type: [CCI400](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.clockdivider1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0**

ARM Cortex-A17 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A17](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0.cpu0**

ARM Cortex-A17 CT model.

Type: ARM\_Cortex-A17.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0.cpu0.itlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1**

ARM Cortex-A7 Cluster CT model.

Type: Cluster\_ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1.cpu0**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1.cpu0.itlb**

TLB - instruction, data or unified.

Type: Tlbcadi.

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).



**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.dualclustersystemconfigurationblock**

Dual Cluster System Configuration Block.

Type: [DualClusterSystemConfigurationBlock](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.coretile.v7\_vgic**

System VGIC architecture version v7.

Type: [v7\\_VGIC](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x1\_A7x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.9 FVP\_VE\_Cortex-A17x2

FVP\_VE\_Cortex-A17x2 contains the following instances:

### FVP\_VE\_Cortex-A17x2 instances

#### **FVP\_VE\_Cortex\_A17x2**

Top level component of the Cortex\_A17x2 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A17x2](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster**

ARM Cortex-A17 Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A17](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster.cpu0**

ARM Cortex-A17 CT model.

Type: [ARM\\_Cortex-A17](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_A17x2.cluster.cpu1**

ARM Cortex-A17 CT model.

Type: `ARM_Cortex-A17`.

**FVP\_VE\_Cortex\_A17x2.cluster.cpu1.dtlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

**FVP\_VE\_Cortex\_A17x2.cluster.cpu1.itlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

**FVP\_VE\_Cortex\_A17x2.cluster.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A17x2.cluster.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A17x2.cluster.l2\_cache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A17x2.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: `VEDaughterBoard`.

**FVP\_VE\_Cortex\_A17x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A17x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A17x2.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A17x2.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A17x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A17x2.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.hdlcd.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.hdlcd.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This means that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.hdlcd.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.hdlcd.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x2.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A17x2.gic400**

GIC-400 Generic Interrupt Controller.

Type: [GIC\\_400](#).

**FVP\_VE\_Cortex\_A17x2.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A17x2.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).



Type: [PL011\\_Uart](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_A17x2.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.virtioBlockDevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x2.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.10 FVP\_VE\_Cortex-A17x4

FVP\_VE\_Cortex-A17x4 contains the following instances:

### FVP\_VE\_Cortex-A17x4 instances

**FVP\_VE\_Cortex\_A17x4**

Top level component of the Cortex\_A17x4 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A17x4](#).

**FVP\_VE\_Cortex\_A17x4.cluster**

ARM Cortex-A17 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A17](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu0**

ARM Cortex-A17 CT model.

Type: ARM\_Cortex-A17.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu1**

ARM Cortex-A17 CT model.

Type: ARM\_Cortex-A17.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu1.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu2**

ARM Cortex-A17 CT model.

Type: ARM\_Cortex-A17.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu2.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4.cluster.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu3**

ARM Cortex-A17 CT model.

Type: [ARM\\_Cortex-A17](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu3.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.hdlcd.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.hdlcd.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.hdlcd.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A17x4.gic400**

GIC-400 Generic Interrupt Controller.

Type: [GIC\\_400](#).

**FVP\_VE\_Cortex\_A17x4.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A17x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).



**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PLO50\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.11 FVP\_VE\_Cortex-A17x4-A7x4

FVP\_VE\_Cortex-A17x4-A7x4 contains the following instances:

### FVP\_VE\_Cortex-A17x4-A7x4 instances

**FVP\_VE\_Cortex\_A17x4\_A7x4**

Top level component of the Cortex A17x4 A7x4 Versatile Express inspired model.

Type: `FVP_VE_Cortex_A17x4_A7x4`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile`**

Dual cluster ARM Cortex-A17x4 and ARM Cortex-A7x4 Core Tile.

Type: `ARM_Cortex_A17x4_A7x4_CT`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cci400`**

Cache Coherent Interconnect for AXI4 ACE.

Type: `CCI400`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.clockdivider`**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.clockdivider1`**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0`**

ARM Cortex-A17 Cluster CT model.

Type: `Cluster_ARM_Cortex-A17`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0.cpu0`**

ARM Cortex-A17 CT model.

Type: `ARM_Cortex-A17`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0.cpu0.dtlb`**

TLB - instruction, data or unified.

Type: `TlbCadi`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0.cpu0.itlb`**

TLB - instruction, data or unified.

Type: `TlbCadi`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0.cpu0.l1dcache`**

PV Cache.

Type: `PVCache`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0.cpu0.l1icache`**

PV Cache.

Type: `PVCache`.

**`FVP_VE_Cortex_A17x4_A7x4.coretile.cluster0.cpu1`**

ARM Cortex-A17 CT model.

Type: `ARM_Cortex-A17`.



**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu1.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu2**

ARM Cortex-A17 CT model.

Type: ARM\_Cortex-A17.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu2.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu2.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu3**

ARM Cortex-A17 CT model.

Type: ARM\_Cortex-A17.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu3.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu3.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster0.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1**

ARM Cortex-A7 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu0**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu0.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu0.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu1**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu1.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu1.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu2**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu2.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu3**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu3.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.cluster1.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.dualclustersystemconfigurationblock**

Dual Cluster System Configuration Block.

Type: [DualClusterSystemConfigurationBlock](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.coretile.v7\_vgic**

System VGIC architecture version v7.

Type: [v7\\_VGIC](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A17x4\_A7x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.12 FVP\_VE\_Cortex-A5x1

FVP\_VE\_Cortex-A5x1 contains the following instances:

### FVP\_VE\_Cortex-A5x1 instances

**FVP\_VE\_Cortex\_A5x1**

Top level component of the Cortex-A5x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A5x1](#).

**FVP\_VE\_Cortex\_A5x1.cluster**

ARM CORTEXA5MP Cluster CT model.

Type: [cluster\\_ARM\\_Cortex-A5MP](#).

**FVP\_VE\_Cortex\_A5x1.cluster.cpu0**

ARM CORTEXA5MP CT model.

Type: [ARM\\_Cortex-A5MP](#).

**FVP\_VE\_Cortex\_A5x1.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A5x1.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A5x1.cluster.cpu0.utlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.hdlcd.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.hdlcd.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A5x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).



**FVP\_VE\_Cortex\_A5x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x1.motherboard.ve\_sysregs**

Type: `VE_SysRegs`.

**FVP\_VE\_Cortex\_A5x1.motherboard.virtio\_blockdevice**

virtio block device.

Type: `VirtioBlockDevice`.

**FVP\_VE\_Cortex\_A5x1.motherboard.virtio\_p9device**

virtio P9 server.

Type: `VirtioP9Device`.

**FVP\_VE\_Cortex\_A5x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: `VEVisualisation`.

**FVP\_VE\_Cortex\_A5x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: `VisEventRecorder`.

**FVP\_VE\_Cortex\_A5x1.motherboard.vis.recorder.playbackDivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A5x1.motherboard.vis.recorder.recordingDivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A5x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A5x1.periph\_clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

## 9.13 FVP\_VE\_Cortex-A5x2

FVP\_VE\_Cortex-A5x2 contains the following instances:

### FVP\_VE\_Cortex-A5x2 instances

#### **FVP\_VE\_Cortex\_A5x2**

Top level component of the Cortex-A5x2 Versatile Express inspired model.

Type: `FVP_VE_Cortex_A5x2`.

#### **FVP\_VE\_Cortex\_A5x2.cluster**

ARM CORTEXA5MP Cluster CT model.

Type: `cluster_ARM_Cortex-A5MP`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu0**

ARM CORTEXA5MP CT model.

Type: `ARM_Cortex-A5MP`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu0.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu1**

ARM CORTEXA5MP CT model.

Type: `ARM_Cortex-A5MP`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x2.cluster.cpu1.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A5x2.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: `VEDaughterBoard`.

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

#### **FVP\_VE\_Cortex\_A5x2.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).



**FVP\_VE\_Cortex\_A5x2.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A5x2.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.audioout**

SDL based Audio Output for PLO41\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x2.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x2.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



## 9.14 FVP\_VE\_Cortex-A5x4

FVP\_VE\_Cortex-A5x4 contains the following instances:

### FVP\_VE\_Cortex-A5x4 instances

#### **FVP\_VE\_Cortex\_A5x4**

Top level component of the Cortex-A5x4 Versatile Express inspired model.

Type: `FVP_VE_Cortex_A5x4`.

#### **FVP\_VE\_Cortex\_A5x4.cluster**

ARM CORTEXA5MP Cluster CT model.

Type: `cluster_ARM_Cortex-A5MP`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu0**

ARM CORTEXA5MP CT model.

Type: `ARM_Cortex-A5MP`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu0.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu1**

ARM CORTEXA5MP CT model.

Type: `ARM_Cortex-A5MP`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu1.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A5x4.cluster.cpu2**

ARM CORTEXA5MP CT model.

Type: `ARM_Cortex-A5MP`.

**FVP\_VE\_Cortex\_A5x4.cluster.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A5x4.cluster.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A5x4.cluster.cpu2.utlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A5x4.cluster.cpu3**

ARM CORTEXA5MP CT model.

Type: [ARM\\_Cortex-A5MP](#).

**FVP\_VE\_Cortex\_A5x4.cluster.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A5x4.cluster.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A5x4.cluster.cpu3.utlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.hdlcd.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.hdlcd.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.hdlcd.timer.timer.thread**

A [SchedulerThread](#) instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.hdlcd.timer.timer.thread\_event**

A [SchedulerThreadEvent](#) instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A5x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus



transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

#### **FVP\_VE\_Cortex\_A5x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A5x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A5x4.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.15 FVP\_VE\_Cortex-A7x1

FVP\_VE\_Cortex-A7x1 contains the following instances:

### FVP\_VE\_Cortex-A7x1 instances

**FVP\_VE\_Cortex\_A7x1**

Top level component of the Cortex\_A7x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A7x1](#).

**FVP\_VE\_Cortex\_A7x1.cluster**

ARM Cortex-A7 Cluster CT model.

Type: `cluster_ARM_Cortex-A7`.

**FVP\_VE\_Cortex\_A7x1.cluster.cpu0**

ARM Cortex-A7 CT model.

Type: `ARM_Cortex-A7`.

**FVP\_VE\_Cortex\_A7x1.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

**FVP\_VE\_Cortex\_A7x1.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

**FVP\_VE\_Cortex\_A7x1.cluster.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A7x1.cluster.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A7x1.cluster.l2\_cache**

PV Cache.

Type: `PVCache`.

**FVP\_VE\_Cortex\_A7x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: `VEDaughterBoard`.

**FVP\_VE\_Cortex\_A7x1.daughterboard.clockCLCD**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A7x1.daughterboard.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A7x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A7x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A7x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A7x1.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A7x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.



Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_A7x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.virtioBlockDevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.virtioP9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.16 FVP\_VE\_Cortex-A7x2

FVP\_VE\_Cortex-A7x2 contains the following instances:

### FVP\_VE\_Cortex-A7x2 instances

**FVP\_VE\_Cortex\_A7x2**

Top level component of the Cortex\_A7x2 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A7x2](#).

**FVP\_VE\_Cortex\_A7x2.cluster**

ARM Cortex-A7 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A7](#).

**FVP\_VE\_Cortex\_A7x2.cluster.cpu0**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A7x2.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A7x2.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A7x2.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A7x2.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A7x2.cluster.cpu1**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

**FVP\_VE\_Cortex\_A7x2.cluster.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A7x2.cluster.cpu1.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

**FVP\_VE\_Cortex\_A7x2.cluster.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A7x2.cluster.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A7x2.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: VEDaughterBoard.

**FVP\_VE\_Cortex\_A7x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

#### **FVP\_VE\_Cortex\_A7x2.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).



**FVP\_VE\_Cortex\_A7x2.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: [MemoryMappedCounterModule](#).

**FVP\_VE\_Cortex\_A7x2.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x2.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.17 FVP\_VE\_Cortex-A7x4

FVP\_VE\_Cortex-A7x4 contains the following instances:

### FVP\_VE\_Cortex-A7x4 instances

#### **FVP\_VE\_Cortex\_A7x4**

Top level component of the Cortex\_A7x3 Versatile Express inspired model.

Type: FVP\_VE\_Cortex\_A7x4.

#### **FVP\_VE\_Cortex\_A7x4.cluster**

ARM Cortex-A7 Cluster CT model.

Type: cluster\_ARM\_Cortex-A7.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu0**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu0.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu0.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu1**

ARM Cortex-A7 CT model.

Type: ARM\_Cortex-A7.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu1.dtlb**

TLB - instruction, data or unified.

Type: TlbCadi.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu1.itlb**

TLB - instruction, data or unified.

Type: TlbCadi.

#### **FVP\_VE\_Cortex\_A7x4.cluster.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).



**FVP\_VE\_Cortex\_A7x4.cluster.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu2**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu2.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu2.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu3**

ARM Cortex-A7 CT model.

Type: [ARM\\_Cortex-A7](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu3.dtlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu3.itlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A7x4.cluster.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A7x4.cluster.l2\_cache**

PV Cache.

Type: [PVCache](#).**FVP\_VE\_Cortex\_A7x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A7x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: `VEDCC`.

**FVP\_VE\_Cortex\_A7x4.globalcounter**

Memory Mapped Counter Module for Generic Timers.

Type: `MemoryMappedCounterModule`.

**FVP\_VE\_Cortex\_A7x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: `VEMotherBoard`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: `SP804_Timer`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A7x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).



**FVP\_VE\_Cortex\_A7x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.virtioBlockDevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.virtioP9Device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A7x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

## 9.18 FVP\_VE\_Cortex-A9x1

FVP\_VE\_Cortex-A9x1 contains the following instances:

### FVP\_VE\_Cortex-A9x1 instances

**FVP\_VE\_Cortex\_A9x1**

Top level component of the Cortex-A9x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_A9x1](#).

**FVP\_VE\_Cortex\_A9x1.cluster**

ARM CORTEXA9MP Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-A9MP](#).

**FVP\_VE\_Cortex\_A9x1.cluster.cpu0**

ARM CORTEXA9MP CT model.

Type: [ARM\\_Cortex-A9MP](#).

**FVP\_VE\_Cortex\_A9x1.cluster.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A9x1.cluster.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A9x1.cluster.cpu0.utlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLC](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.hdlcd.timer**

A [ClockTimerThread\(64\)](#) is a drop-in replacement for a [ClockTimer\(64\)](#) component. The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A9x1.daughterboard.hdlcd.timer.timer**

A [ClockTimerThread64](#) is a drop-in replacement for [ClockTimer64](#). The main difference to the [ClockTimer](#) component is that the [ClockTimerThread](#) runs the [signal\(\)](#) callback from a proper scheduler thread. This mean that the [signal\(\)](#) function may directly or indirectly invoke [wait\(\)](#) functions to wait for time or events. This is not allowed for the [ClockTimer](#) component which does not use a thread. Components which issue bus transactions from within the timer [signal\(\)](#) callback must use [ClockTimerThread\(64\)](#) rather than [ClockTimer\(64\)](#).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A9x1.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x1.motherboard.ve\_sysregs**

Type: `VE_SysRegs`.

**FVP\_VE\_Cortex\_A9x1.motherboard.virtio\_blockdevice**

virtio block device.

Type: `VirtioBlockDevice`.

**FVP\_VE\_Cortex\_A9x1.motherboard.virtio\_p9device**

virtio P9 server.

Type: `VirtioP9Device`.

**FVP\_VE\_Cortex\_A9x1.motherboard.vis**

Display window for VE using Visualisation library.

Type: `VEVisualisation`.

**FVP\_VE\_Cortex\_A9x1.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: `VisEventRecorder`.

**FVP\_VE\_Cortex\_A9x1.motherboard.vis.recorder.playbackDivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A9x1.motherboard.vis.recorder.recordingDivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_A9x1.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_A9x1.periph\_clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

## 9.19 FVP\_VE\_Cortex-A9x2

FVP\_VE\_Cortex-A9x2 contains the following instances:

### FVP\_VE\_Cortex-A9x2 instances

#### **FVP\_VE\_Cortex\_A9x2**

Top level component of the Cortex-A9x2 Versatile Express inspired model.

Type: `FVP_VE_Cortex_A9x2`.

#### **FVP\_VE\_Cortex\_A9x2.cluster**

ARM CORTEXA9MP Cluster CT model.

Type: `cluster_ARM_Cortex-A9MP`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu0**

ARM CORTEXA9MP CT model.

Type: `ARM_Cortex-A9MP`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu0.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu1**

ARM CORTEXA9MP CT model.

Type: `ARM_Cortex-A9MP`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x2.cluster.cpu1.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A9x2.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: `VEDaughterBoard`.

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCD](#).

#### **FVP\_VE\_Cortex\_A9x2.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A9x2.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).



**FVP\_VE\_Cortex\_A9x2.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.audioout**

SDL based Audio Output for PLO41\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.virtio\_p9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x2.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x2.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.20 FVP\_VE\_Cortex-A9x4

FVP\_VE\_Cortex-A9x4 contains the following instances:

### FVP\_VE\_Cortex-A9x4 instances

#### **FVP\_VE\_Cortex\_A9x4**

Top level component of the Cortex-A9x4 Versatile Express inspired model.

Type: `FVP_VE_Cortex_A9x4`.

#### **FVP\_VE\_Cortex\_A9x4.cluster**

ARM CORTEXA9MP Cluster CT model.

Type: `cluster_ARM_Cortex-A9MP`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu0**

ARM CORTEXA9MP CT model.

Type: `ARM_Cortex-A9MP`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu0.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu1**

ARM CORTEXA9MP CT model.

Type: `ARM_Cortex-A9MP`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu1.utlb**

TLB - instruction, data or unified.

Type: `TlbCadi`.

#### **FVP\_VE\_Cortex\_A9x4.cluster.cpu2**

ARM CORTEXA9MP CT model.

Type: `ARM_Cortex-A9MP`.

**FVP\_VE\_Cortex\_A9x4.cluster.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A9x4.cluster.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A9x4.cluster.cpu2.utlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A9x4.cluster.cpu3**

ARM CORTEXA9MP CT model.

Type: [ARM\\_Cortex-A9MP](#).

**FVP\_VE\_Cortex\_A9x4.cluster.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A9x4.cluster.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_A9x4.cluster.cpu3.utlb**

TLB - instruction, data or unified.

Type: [TlbCadi](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard**

Daughtercard, inspired by the ARM Versatile Express development platform.

Type: [VEDaughterBoard](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.dmc**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.dmc\_phy**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).



**FVP\_VE\_Cortex\_A9x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.dram\_aliased**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.dram\_limit\_4**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.dram\_limit\_8**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.hdlcd**

ARM PrimeCell HD Color LCD Controller (Nominal Designation PL370).

Type: [PL370\\_HDLCDC](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.hdlcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.hdlcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.hdlcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.hdlcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.introuter**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.nonsecure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.secureDRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.secureRO**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.secureROloader**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.secureSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.secure\_region**

Allow TrustZone secure/normal bus signals to be routed separately.

Type: [TZSwitch](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.sram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.daughterboard.vedcc**

Daughterboard Configuration Control (DCC).

Type: [VEDCC](#).

**FVP\_VE\_Cortex\_A9x4.motherboard**

Model inspired by the ARM Versatile Express Motherboard.

Type: [VEMotherBoard](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.Timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.dummy\_local\_dap\_rom**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

#### **FVP\_VE\_Cortex\_A9x4.motherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.virtio\_blockdevice**

virtio block device.

Type: [VirtioBlockDevice](#).



**FVP\_VE\_Cortex\_A9x4.motherboard.virtiop9device**

virtio P9 server.

Type: [VirtioP9Device](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_A9x4.motherboard.vram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_A9x4.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.21 FVP\_VE\_Cortex-R4

FVP\_VE\_Cortex-R4 contains the following instances:

### FVP\_VE\_Cortex-R4 instances

**FVP\_VE\_Cortex\_R4**

Top level component of the Cortex\_R4 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_R4](#).

**FVP\_VE\_Cortex\_R4.daughterboard**

Cortex-R4 DaughterBoard for Versatile Express.

Type: `VEDaughterBoardCortex_R4`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.core**

ARM CORTEXR4 CT model.

Type: `ARM_Cortex-R4`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.core.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.core.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: `PVBusExclusiveMonitor`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: `PL111_CLCD`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: `PL11x_CLCD`.

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

#### **FVP\_VE\_Cortex\_R4.daughterboard.pl390\_gic**

Generic Interrupt Controller (PL390).

Type: [PL390\\_GIC](#).

#### **FVP\_VE\_Cortex\_R4.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_R4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.psrpm**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).



**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R4.vemotherboard.ve\_sysregs**

Type: `VE_SysRegs`.

**FVP\_VE\_Cortex\_R4.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_R4.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: `VEVisualisation`.

**FVP\_VE\_Cortex\_R4.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: `VisEventRecorder`.

**FVP\_VE\_Cortex\_R4.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_R4.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

## 9.22 FVP\_VE\_Cortex-R5x1

FVP\_VE\_Cortex-R5x1 contains the following instances:

### FVP\_VE\_Cortex-R5x1 instances

**FVP\_VE\_Cortex\_R5x1**

Top level component of the Cortex\_R5x1 Versatile Express inspired model.

Type: `FVP_VE_Cortex_R5x1`.

**FVP\_VE\_Cortex\_R5x1.daughterboard**

Cortex-R5x1 DaughterBoard for Versatile Express.

Type: `VEDaughterBoardCortex_R5x1`.

**FVP\_VE\_Cortex\_R5x1.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_VE\_Cortex\_R5x1.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.core**

ARM CORTEXR5 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-R5](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.core.cpu0**

ARM CORTEXR5 CT model.

Type: [ARM\\_Cortex-R5](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_R5x1.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_R5x1.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_R5x1.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

#### **FVP\_VE\_Cortex\_R5x1.daughterboard.pl390\_gic**

Generic Interrupt Controller (PL390).

Type: [PL390\\_GIC](#).

#### **FVP\_VE\_Cortex\_R5x1.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke

wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

#### **FVP\_VE\_Cortex\_R5x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_VE\_Cortex\_R5x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x1.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.23 FVP\_VE\_Cortex-R5x2

FVP\_VE\_Cortex-R5x2 contains the following instances:

### FVP\_VE\_Cortex-R5x2 instances

**FVP\_VE\_Cortex\_R5x2**

Top level component of the Cortex\_R5x2 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_R5x2](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard**

Cortex-R5x2 DaughterBoard for Versatile Express.

Type: [VEDaughterBoardCortex\\_R5x2](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard.core**

ARM CORTEXR5 Cluster CT model.

Type: `cluster_ARM_Cortex-R5`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.core.cpu0**

ARM CORTEXR5 CT model.

Type: `ARM_Cortex-R5`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.core.cpu1**

ARM CORTEXR5 CT model.

Type: `ARM_Cortex-R5`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: `PVBusExclusiveMonitor`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: `PL111_CLCD`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: `PL11x_CLCD`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl111\_clcd.pl11x\_clcd.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard.pl390\_gic**

Generic Interrupt Controller (PL390).

Type: [PL390\\_GIC](#).

**FVP\_VE\_Cortex\_R5x2.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.clock100Hz**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.clock24MHz**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.clock35MHz**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.clock50Hz**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.



Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R5x2.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R5x2.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.24 FVP\_VE\_Cortex-R7x1

FVP\_VE\_Cortex-R7x1 contains the following instances:

### FVP\_VE\_Cortex-R7x1 instances

#### **FVP\_VE\_Cortex\_R7x1**

Top level component of the Cortex\_R7x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_R7x1](#).

#### **FVP\_VE\_Cortex\_R7x1.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R7x1.daughterboard**

Cortex\_R7x1 DaughterBoard for Versatile Express.

Type: [VEDaughterBoardCortex\\_R7x1](#).

#### **FVP\_VE\_Cortex\_R7x1.daughterboard.core**

ARM CORTEXR7 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-R7](#).

#### **FVP\_VE\_Cortex\_R7x1.daughterboard.core.cpu0**

ARM CORTEXR7 CT model.

Type: [ARM\\_Cortex-R7](#).

#### **FVP\_VE\_Cortex\_R7x1.daughterboard.core.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_R7x1.daughterboard.core.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

#### **FVP\_VE\_Cortex\_R7x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_R7x1.daughterboard.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

**FVP\_VE\_Cortex\_R7x1.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke



wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

#### **FVP\_VE\_Cortex\_R7x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x1.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.25 FVP\_VE\_Cortex-R7x2

FVP\_VE\_Cortex-R7x2 contains the following instances:

### FVP\_VE\_Cortex-R7x2 instances

**FVP\_VE\_Cortex\_R7x2**

Top level component of the Cortex\_R7x2 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_R7x2](#).

**FVP\_VE\_Cortex\_R7x2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard**

Cortex\_R7x2 DaughterBoard for Versatile Express.

Type: [VEDaughterBoardCortex\\_R7x2](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core**

ARM CORTEXR7 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-R7](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core.cpu0**

ARM CORTEXR7 CT model.

Type: [ARM\\_Cortex-R7](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core.cpu1**

ARM CORTEXR7 CT model.

Type: [ARM\\_Cortex-R7](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.core.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

**FVP\_VE\_Cortex\_R7x2.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).



**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R7x2.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.26 FVP\_VE\_Cortex-R8x1

FVP\_VE\_Cortex-R8x1 contains the following instances:

### FVP\_VE\_Cortex-R8x1 instances

**FVP\_VE\_Cortex\_R8x1**

Top level component of the Cortex\_R8x1 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_R8x1](#).

**FVP\_VE\_Cortex\_R8x1.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard**

Cortex\_R8x1 DaughterBoard for Versatile Express.

Type: [VEDaughterBoardCortex\\_R8x1](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.core**

ARM CORTEXR8 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.core.cpu0**

ARM CORTEXR8 CT model.

Type: [ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.core.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.core.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

**FVP\_VE\_Cortex\_R8x1.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

#### **FVP\_VE\_Cortex\_R8x1.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x1.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.27 FVP\_VE\_Cortex-R8x2

FVP\_VE\_Cortex-R8x2 contains the following instances:

### FVP\_VE\_Cortex-R8x2 instances

#### **FVP\_VE\_Cortex\_R8x2**

Top level component of the Cortex\_R8x2 Versatile Express inspired model.

Type: `FVP_VE_Cortex_R8x2`.

#### **FVP\_VE\_Cortex\_R8x2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard**

Cortex\_R8x2 DaughterBoard for Versatile Express.

Type: `VEDaughterBoardCortex_R8x2`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core**

ARM CORTEXR8 Cluster CT model.

Type: `Cluster_ARM_Cortex-R8`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core.cpu0**

ARM CORTEXR8 CT model.

Type: `ARM_Cortex-R8`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core.cpu0.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core.cpu0.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core.cpu1**

ARM CORTEXR8 CT model.

Type: `ARM_Cortex-R8`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core.cpu1.l1dcache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.core.cpu1.l1icache**

PV Cache.

Type: `PVCache`.

#### **FVP\_VE\_Cortex\_R8x2.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_VE\_Cortex\_R8x2.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_R8x2.daughterboard.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

**FVP\_VE\_Cortex\_R8x2.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

#### **FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke

wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x2.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

## 9.28 FVP\_VE\_Cortex-R8x4

FVP\_VE\_Cortex-R8x4 contains the following instances:

### FVP\_VE\_Cortex-R8x4 instances

**FVP\_VE\_Cortex\_R8x4**

Top level component of the Cortex\_R8x4 Versatile Express inspired model.

Type: [FVP\\_VE\\_Cortex\\_R8x4](#).

**FVP\_VE\_Cortex\_R8x4.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard**

Cortex\_R8x4 DaughterBoard for Versatile Express.

Type: [VEDaughterBoardCortex\\_R8x4](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core**

ARM CORTEXR8 Cluster CT model.

Type: [Cluster\\_ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu0**

ARM CORTEXR8 CT model.

Type: [ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu0.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu0.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu1**

ARM CORTEXR8 CT model.

Type: [ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu1.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu1.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu2**

ARM CORTEXR8 CT model.

Type: [ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu2.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu2.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu3**

ARM CORTEXR8 CT model.

Type: [ARM\\_Cortex-R8](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu3.l1dcache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.core.cpu3.l1icache**

PV Cache.

Type: [PVCache](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.dram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.exclusive\_monitor**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.periph\_clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.pl310\_l2cc**

ARM PrimeCell Level 2 Cache Controller (PL310).

Type: [PL310\\_L2CC](#).

**FVP\_VE\_Cortex\_R8x4.daughterboard.veinterruptmapper**

Interrupt Mapping peripheral (non-cascaded).

Type: [VEInterruptMapper](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard**

Model inspired by the ARM Versatile Express Motherboard for R profile.

Type: [VEMotherBoardR](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.audioout**

SDL based Audio Output for PL041\_AACI.

Type: [AudioOut\\_SDL](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.clock100Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.clock24MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.clock35MHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.clockCLCD**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.dummy\_CF**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.dummy\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.dummy\_usb**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.flash0**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.flash1**

Intel Strata Flash J3 LISA+ model.

Type: [IntelStrataFlashJ3](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.flashloader0**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.flashloader1**

A device that can preload a gzipped image into flash at startup.

Type: [FlashLoader](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.mmc**

Generic Multimedia Card.

Type: [MMC](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart0**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart1**

ARM PrimeCell UART(PL011).



Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart2**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart3**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart3.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart4**

ARM PrimeCell UART(PL011).

Type: [PL011\\_Uart](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl011\_uart4.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl031\_rtc**

ARM PrimeCell Real Time Clock(PL031).

Type: [PL031\\_RTC](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl041\_aaci**

ARM PrimeCell Advanced Audio CODEC Interface(PL041).

Type: [PL041\\_AACI](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl050\_kmi0**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl050\_kmi0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl050\_kmi1**

ARM PrimeCell PS2 Keyboard/Mouse Interface(PL050).

Type: [PL050\\_KMI](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl050\_kmi1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl111\_clcd**

ARM PrimeCell Color LCD Controller(PL111).

Type: [PL111\\_CLCD](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl111\_clcd.pl11x\_clcd**

Internal component used by PL110 and PL111 CLCD controllers.

Type: [PL11x\\_CLCD](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_VE\_Cortex\_R8x4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl111\_clcd.pl11x\_clcd.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.pl180\_mci**

ARM PrimeCell Multimedia Card Interface (PL180).

Type: [PL180\\_MCI](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.ps2keyboard**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Keyboard](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.ps2mouse**

Interface component, which takes the keypress/release signals from the Visualisation component and translates them into clocked PS2Data signals which can be routed to a PL050\_KMI component.

Type: [PS2Mouse](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.psram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.sp805\_wdog**

ARM Watchdog Module(SP805).

Type: [SP805\\_Watchdog](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.sp810\_sysctrl**

Only EB relevant functionalities are fully implemented.

Type: [SP810\\_SysCtrl](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.sp810\_sysctrl.clkdiv\_clk0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.sp810\_sysctrl.clkdiv\_clk1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.sp810\_sysctrl.clkdiv\_clk2**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.sp810\_sysctrl.clkdiv\_clk3**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.terminal\_0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.terminal\_1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.terminal\_2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.terminal\_3**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.terminal\_4**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_0\_1**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_0\_1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_0\_1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_0\_1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_0\_1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_2\_3**

ARM Dual-Timer Module(SP804).

Type: [SP804\\_Timer](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_2\_3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_2\_3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_2\_3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.timer\_2\_3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.ve\_sysregs**

Type: [VE\\_SysRegs](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.video\_ram**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.vis**

Display window for VE using Visualisation library.

Type: [VEVisualisation](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.vis.recorder**

Event recorder component for visualisation component (allows to playback and record interactive GUI sessions).

Type: [VisEventRecorder](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.vis.recorder.playbackDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_VE\_Cortex\_R8x4.vemotherboard.vis.recorder.recordingDivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

# 10 MPS2 Platform FVPs

This chapter lists the MPS2 Platform FVPs and the instances in them.

For the MPS2 memory maps, see [MPS2 - memory maps](#) in the Fast Models Reference Manual.

## 10.1 FVP\_MPS2\_AEMv8M

FVP\_MPS2\_AEMv8M contains the following instances:

### FVP\_MPS2\_AEMv8M instances

#### **FVP\_MPS2\_AEMv8M**

Type: FVP\_MPS2\_AEMv8M.

#### **FVP\_MPS2\_AEMv8M.aborting\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

#### **FVP\_MPS2\_AEMv8M.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_AEMv8M.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_AEMv8M.cpu0**

ARM AEMv8M CT model.

Type: ARM\_AEMv8M.

#### **FVP\_MPS2\_AEMv8M.cpu1**

ARM AEMv8M CT model.

Type: ARM\_AEMv8M.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.UART2**

ARM CMSDK UART Module.



Type: CMSDK\_UART.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: OrGate.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: OrGate.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: OrGate.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: PL080\_DMACH.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread64.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: SchedulerThread.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: SchedulerThreadEvent.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0\_idau\_labeller**

Type: LabellerIdauSecurity.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma0\_securitymodifier**

Type: SecurityModifier.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: `MPS2_SecureCtrl`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: `CMSDK_Timer`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: `CMSDK_Timer`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: `MPS2_Visualisation`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: `OrGate`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: `PL022_SSP_MPS2`.

#### **FVP\_MPS2\_AEMv8M.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sm91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [SSE200](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.idau\_labeller**

Type: `LabellerIdauSecurity`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: `IoTSS_CPUIdentity`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: `IoTSS_SystemControl`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: `IoTSS_SystemInfo`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer**

Type: SVOS\_DualTimer.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.



**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_AEMv8M.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.2 FVP\_MPS2\_Cortex-M0

FVP\_MPS2\_Cortex-M0 contains the following instances:

### FVP\_MPS2\_Cortex-M0 instances

**FVP\_MPS2\_Cortex\_M0**

Type: [FVP\\_MPS2\\_Cortex\\_M0](#).

**FVP\_MPS2\_Cortex\_M0.armcortexm0ct**

ARM CORTEXM0 CT model.

Type: [ARM\\_Cortex-M0](#).

**FVP\_MPS2\_Cortex\_M0.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: [OrGate](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: [OrGate](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: [OrGate](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a

proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3\_idau\_labeller**

Type: `LabellerIdauSecurity`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.dma3\_securitymodifier**

Type: `SecurityModifier`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).



**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: `MPS2_Audio`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: `CMSDK_DualTimer`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: `PVBusExclusiveMonitor`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: `PVBusExclusiveMonitor`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: `MPS2_LCD`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: `MPS2_SecureCtrl`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_timer0.clk\_div**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_timer1.clk\_div**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: `MPS2_Visualisation`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: `PL022_SSP_MPS2`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.signal\_router**

Signal router.

Type: `SignalRouter`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sm91c111**

SMSC 91C111 ethernet controller.

Type: `SMSC_91C111`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `SSE200`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: `WarningMemory`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.clock32kHz**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: `CMSDK_DualTimer`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBUSExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).



**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: SignalRouter.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M0.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.3 FVP\_MPS2\_Cortex-M0plus

FVP\_MPS2\_Cortex-M0plus contains the following instances:

### FVP\_MPS2\_Cortex-M0plus instances

**FVP\_MPS2\_Cortex\_M0plus**

Type: [FVP\\_MPS2\\_Cortex\\_M0plus](#).

**FVP\_MPS2\_Cortex\_M0plus.armcortexm0plusct**

ARM CORTEXM0+ CT model.

Type: ARM\_Cortex-M0+.

**FVP\_MPS2\_Cortex\_M0plus.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.clock50Hz**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: `CMSDK_SysCtrl`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: `PL080_DMAC`.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread`.



**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [sse200](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M0plus.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).



## 10.4 FVP\_MPS2\_Cortex-M23

FVP\_MPS2\_Cortex-M23 contains the following instances:

### FVP\_MPS2\_Cortex-M23 instances

#### **FVP\_MPS2\_Cortex\_M23**

Type: FVP\_MPS2\_Cortex\_M23.

#### **FVP\_MPS2\_Cortex\_M23.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_Cortex\_M23.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_Cortex\_M23.cpu0**

ARM CORTEXM23 CT model.

Type: ARM\_Cortex-M23.

#### **FVP\_MPS2\_Cortex\_M23.cpu1**

ARM CORTEXM23 CT model.

Type: ARM\_Cortex-M23.

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO\_connection\_test**

Type: [GPIO\\_Connection\\_Test](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: [GPIO\\_Port\\_Transfer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: [GPIO1\\_Connection\\_Test](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: [CMSDK\\_UART](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: [CMSDK\\_UART](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: [CMSDK\\_UART](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: [MPS2\\_VGA](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: [CMSDK\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.signal\_router**

Signal router.

Type: `SignalRouter`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: `SMSC_91C111`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `sse200`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

#### **FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: SignalRouter.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer**

Type: [SVOS\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M23.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.5 FVP\_MPS2\_Cortex-M3

FVP\_MPS2\_Cortex-M3 contains the following instances:

### FVP\_MPS2\_Cortex-M3 instances

**FVP\_MPS2\_Cortex\_M3**

Type: [FVP\\_MPS2\\_Cortex\\_M3](#).

**FVP\_MPS2\_Cortex\_M3.armcortexm3ct**

ARM CORTEXM3 CT model.

Type: [ARM\\_Cortex-M3](#).

**FVP\_MPS2\_Cortex\_M3.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2**

MPS2 DUT.

Type: [FVP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMACE](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMACE](#).

#### **FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).



**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: `MPS2_SecureCtrl`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: `MPS2_Visualisation`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: `PL022_SSP_MPS2`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [SSE200](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cpulcore\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.cpuldbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).



**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.idau\_labeller**

Type: `LabellerIdauSecurity`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: `IoTSS_CPUIIdentity`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: `IoTSS_SystemControl`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: `IoTSS_SystemInfo`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer**

Type: SVOS\_DualTimer.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M3.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.6 FVP\_MPS2\_Cortex-M33

FVP\_MPS2\_Cortex-M33 contains the following instances:

### FVP\_MPS2\_Cortex-M33 instances

**FVP\_MPS2\_Cortex\_M33**

Type: [FVP\\_MPS2\\_Cortex\\_M33](#).

**FVP\_MPS2\_Cortex\_M33.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.cpu0**

ARM CORTEXM33 CT model.

Type: [ARM\\_Cortex-M33](#).

**FVP\_MPS2\_Cortex\_M33.cpu1**

ARM CORTEXM33 CT model.

Type: ARM\_Cortex-M33.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAL](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This means that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMACH](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMACH](#).

#### **FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: MPS2\_LCD.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: IoTSS\_MemoryProtectionController.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: MPS2\_Visualisation.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.niden\_or\_gate**

Or Gate.



Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [SSE200](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBUSExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: SignalRouter.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M33.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.7 FVP\_MPS2\_Cortex-M35P

FVP\_MPS2\_Cortex-M35P contains the following instances:

### FVP\_MPS2\_Cortex-M35P instances

**FVP\_MPS2\_Cortex\_M35P**

Type: [FVP\\_MPS2\\_Cortex\\_M35P](#).

**FVP\_MPS2\_Cortex\_M35P.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.cpu0**

ARM CORTEXM35P CT model.

Type: [ARM\\_Cortex-M35P](#).

**FVP\_MPS2\_Cortex\_M35P.cpu1**

ARM CORTEXM35P CT model.

Type: [ARM\\_Cortex-M35P](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2**

MPS2 DUT.

Type: [FVP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO\_connection\_test**

Type: [GPIO\\_Connection\\_Test](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: [GPIO\\_Port\\_Transfer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: [GPIO1\\_Connection\\_Test](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: [CMSDK\\_UART](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: [CMSDK\\_UART](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: [CMSDK\\_UART](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: [MPS2\\_VGA](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: `CMSDK_SysCtrl`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: `PL080_DMACE`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for

the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.



Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [sse200](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIIdentity](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: `IoTSS_SystemControl`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: `IoTSS_SystemInfo`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.



**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer**

Type: [SVOS\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: PVBusRouter.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: PVBusRouter.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: TelnetTerminal.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: TelnetTerminal.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: TelnetTerminal.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: MPS2\_TouchScreen.

**FVP\_MPS2\_Cortex\_M35P.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: OrGate.

## 10.8 FVP\_MPS2\_Cortex-M4

FVP\_MPS2\_Cortex-M4 contains the following instances:

### FVP\_MPS2\_Cortex-M4 instances

#### **FVP\_MPS2\_Cortex\_M4**

Type: FVP\_MPS2\_Cortex\_M4.

#### **FVP\_MPS2\_Cortex\_M4.armcortexm4ct**

ARM CORTEXM4 CT model.

Type: ARM\_Cortex-M4.

#### **FVP\_MPS2\_Cortex\_M4.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_Cortex\_M4.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.clock50Hz**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: `CMSDK_SysCtrl`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: `OrGate`.



**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.signal\_router**

Signal router.

Type: `SignalRouter`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: `SMSC_91C111`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `sse200`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.



**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

#### **FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: SignalRouter.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).



**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M4.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.9 FVP\_MPS2\_Cortex-M55

FVP\_MPS2\_Cortex-M55 contains the following instances:

### FVP\_MPS2\_Cortex-M55 instances

**FVP\_MPS2\_Cortex\_M55**

Type: [FVP\\_MPS2\\_Cortex\\_M55](#).

**FVP\_MPS2\_Cortex\_M55.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.core0\_bus\_gasket**

Type: [STLBusGasket](#).

**FVP\_MPS2\_Cortex\_M55.cpu0**

ARM Cortex-M55 CT model.

Type: [ARM\\_Cortex-M55](#).

**FVP\_MPS2\_Cortex\_M55.cpu1**

ARM Cortex-M55 CT model.

Type: [ARM\\_Cortex-M55](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2**

MPS2 DUT.

Type: [FVP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: OrGate.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: OrGate.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: OrGate.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: PL080\_DMAL.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread64.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: SchedulerThread.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: SchedulerThreadEvent.

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0\_idau\_labeller**

Type: LabellerIdauSecurity.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma0\_securitymodifier**

Type: `SecurityModifier`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: `PL080_DMAC`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1.timer.timer**

A `ClockTimerThread64` is a drop-in replacement for `ClockTimer64`. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread64`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1.timer.timer.thread**

A `SchedulerThread` instance represents a co-routine thread in the simulation.

Type: `SchedulerThread`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1.timer.timer.thread\_event**

A `SchedulerThreadEvent` instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1\_idau\_labeller**

Type: `LabellerIdauSecurity`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma1\_securitymodifier**

Type: `SecurityModifier`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: `PL080_DMAC`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This mean that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).



**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: `PL022_SSP_MPS2`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.signal\_router**

Signal router.

Type: `SignalRouter`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: `SMSC_91C111`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `SSE200`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.clock32kHz**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.clockdivider**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new [ClockSignal](#) on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A [ClockDivider](#) is a library component that takes a [ClockSignal](#) on its input port (which could come from the output of a [MasterClock](#), or from another [ClockDivider](#)), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).



**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M55.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.10 FVP\_MPS2\_Cortex-M7

FVP\_MPS2\_Cortex-M7 contains the following instances:

### FVP\_MPS2\_Cortex-M7 instances

**FVP\_MPS2\_Cortex\_M7**

Type: [FVP\\_MPS2\\_Cortex\\_M7](#).

**FVP\_MPS2\_Cortex\_M7.armcortexm7ct**

ARM CORTEXM7 CT model.

Type: [ARM\\_Cortex-M7](#).

**FVP\_MPS2\_Cortex\_M7.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.default\_ahb\_slave**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: `CMSDK_SysCtrl`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: `OrGate`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: `OrGate`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: `OrGate`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: `PL080_DMAC`.

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).



**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `sse200`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: `WarningMemory`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.clock32kHz**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.



**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIidentity](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_Cortex\_M7.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.11 FVP\_MPS2\_SSE-200\_AEMv8M\_pipeline

FVP\_MPS2\_SSE-200\_AEMv8M\_pipeline contains the following instances:

### FVP\_MPS2\_SSE-200\_AEMv8M\_pipeline instances

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline**

Type: `FVP_MPS2_SSE_200_AEMv8M_pipeline`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.aborting\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: `WarningMemory`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.cpu0**

ARM AEMv8M CT model.

Type: `ARM_AEMv8M`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.cpu1**

ARM AEMv8M CT model.

Type: `ARM_AEMv8M`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2**

MPS2 DUT.

Type: `FVP_MPS2`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: `CMSDK_GPIO`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: `CMSDK_GPIO`.

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: `CMSDK_GPIO`.



**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.vga\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBUSExclusiveSquasher](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

#### **FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.smsc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [SSE200](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: `WarningMemory`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: `CMSDK_DualTimer`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cpulcore\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.cpuldbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_e**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_e**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_e**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_e**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: SignalRouter.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).



**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_SSE\_200\_AEMv8M\_pipeline.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.12 FVP\_MPS2\_SSE-200\_Cortex-M33

FVP\_MPS2\_SSE-200\_Cortex-M33 contains the following instances:

### FVP\_MPS2\_SSE-200\_Cortex-M33 instances

**FVP\_MPS2\_SSE\_200\_Cortex\_M33**

Type: [FVP\\_MPS2\\_SSE\\_200\\_Cortex\\_M33](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.cpu0**

ARM CORTEXM33 CT model.

Type: [ARM\\_Cortex-M33](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.cpu1**

ARM CORTEXM33 CT model.

Type: [ARM\\_Cortex-M33](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2**

MPS2 DUT.

Type: [FVP\\_MPS2](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: OrGate.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: OrGate.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: OrGate.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: PL080\_DMAL.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread64.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: SchedulerThread.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: SchedulerThreadEvent.

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0\_idau\_labeller**

Type: LabellerIdauSecurity.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma0\_securitymodifier**

Type: SecurityModifier.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1\_idau\_labeller**

Type: LabellerIdauSecurity.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma1\_securitymodifier**

Type: SecurityModifier.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus

transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).



**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: `PL022_SSP_MPS2`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.signal\_router**

Signal router.

Type: `SignalRouter`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sm91c111**

SMSC 91C111 ethernet controller.

Type: `SMSC_91C111`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `SSE200`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).



**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M33.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.13 FVP\_MPS2\_SSE-200\_Cortex-M55

FVP\_MPS2\_SSE-200\_Cortex-M55 contains the following instances:

### FVP\_MPS2\_SSE-200\_Cortex-M55 instances

**FVP\_MPS2\_SSE\_200\_Cortex\_M55**

Type: [FVP\\_MPS2\\_SSE\\_200\\_Cortex\\_M55](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.cpu0**

ARM Cortex-M55 CT model.

Type: [ARM\\_Cortex-M55](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.cpu1**

ARM Cortex-M55 CT model.

Type: [ARM\\_Cortex-M55](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2**

MPS2 DUT.

Type: [FVP\\_MPS2](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO\_connection\_test**

Type: [GPIO\\_Connection\\_Test](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: [GPIO\\_Port\\_Transfer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: [GPIO1\\_Connection\\_Test](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: IoTSS\_PeripheralProtectionController.



**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.clock50Hz**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: `CMSDK_SysCtrl`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: `PL080_DMAC`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0.timer**

A `ClockTimerThread(64)` is a drop-in replacement for a `ClockTimer(64)` component. The main difference to the `ClockTimer` component is that the `ClockTimerThread` runs the `signal()` callback from a proper scheduler thread. This means that the `signal()` function may directly or indirectly invoke `wait()` functions to wait for time or events. This is not allowed for the `ClockTimer` component which does not use a thread. Components which issue bus transactions from within the timer `signal()` callback must use `ClockTimerThread(64)` rather than `ClockTimer(64)`.

Type: `ClockTimerThread`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sm5c\_91c111**

SM5C 91C111 ethernet controller.

Type: [SM5C\\_91C111](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).



**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `SSE200`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: `WarningMemory`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.clock32kHz**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.clockdivider**

A `ClockDivider` is a library component that takes a `ClockSignal` on its input port (which could come from the output of a `MasterClock`, or from another `ClockDivider`), and generates a new `ClockSignal` on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: PPUv0.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBUSExclusiveSquasher](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer**

Type: [svos\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new



ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

#### **FVP\_MPS2\_SSE\_200\_Cortex\_M55.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.14 FVP\_MPS2\_SecurCore-SC000

FVP\_MPS2\_SecurCore-SC000 contains the following instances:

### FVP\_MPS2\_SecurCore-SC000 instances

#### **FVP\_MPS2\_SecurCore\_SC000**

Type: FVP\_MPS2\_SecurCore\_SC000.

#### **FVP\_MPS2\_SecurCore\_SC000.armsc000ct**

ARM SC000 CT model.

Type: ARM\_SC000.

#### **FVP\_MPS2\_SecurCore\_SC000.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SecurCore\_SC000.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

#### **FVP\_MPS2\_SecurCore\_SC000.dap\_buslogger**

Bus Logger.

Type: [PVBusLogger](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2**

MPS2 DUT.

Type: FVP\_MPS2.

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: [CMSDK\\_SysCtrl](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma0\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.hostbridge**

Host Socket Interface Component.



Type: [HostBridge](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: [MPS2\\_Visualisation](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: [PL022\\_SSP\\_MPS2](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.signal\_router**

Signal router.

Type: `SignalRouter`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: `SMSC_91C111`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: `SSE200`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: `IoTSS_AccessControlGate`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: `IoTSS_PeripheralProtectionController`.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: [IoTSS\\_CPUIdentity](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: [IoTSS\\_SystemControl](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: [IoTSS\\_SystemInfo](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: [IoTSS\\_MessageHandlingUnit](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: [OrGate](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

#### **FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.



Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: MPS2\_SecureCtrl.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: SignalRouter.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUV0](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer**

Type: [SVOS\\_DualTimer](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new

ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_SecurCore\_SC000.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).

## 10.15 FVP\_MPS2\_SecurCore-SC300

FVP\_MPS2\_SecurCore-SC300 contains the following instances:

### FVP\_MPS2\_SecurCore-SC300 instances

**FVP\_MPS2\_SecurCore\_SC300**

Type: [FVP\\_MPS2\\_SecurCore\\_SC300](#).

**FVP\_MPS2\_SecurCore\_SC300.armsc300ct**

ARM SC300 CT model.

Type: [ARM\\_SC300](#).

**FVP\_MPS2\_SecurCore\_SC300.clk25Mhz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.clk25khz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.dap\_buslogger**

Bus Logger.

Type: [PVBusLogger](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2**

MPS2 DUT.

Type: [FVP\\_MPS2](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO0**

ARM PrimeCell General Purpose Input/Output.

Type: [CMSDK\\_GPIO](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO1**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO2**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO3**

ARM PrimeCell General Purpose Input/Output.

Type: CMSDK\_GPIO.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO\_connection\_test**

Type: GPIO\_Connection\_Test.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO\_connection\_test.GPIO0\_port\_trans**

Type: GPIO\_Port\_Transfer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.GPIO\_connection\_test.GPIO1\_port\_test**

Type: GPIO1\_Connection\_Test.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.PSRAM**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.PSRAM\_M7**

RAM device, can be dynamic or static ram.

Type: [RAMDevice](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.UART0**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.UART0.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.UART1**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.UART1.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.UART2**

ARM CMSDK UART Module.

Type: CMSDK\_UART.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.UART2.clk\_divider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.VGA\_interface**

VGA display interface between main bus and visualisation.

Type: MPS2\_VGA.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.ahb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.ahb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.apb\_ppc\_iotss\_expansion0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.apb\_ppc\_iotss\_expansion1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.apb\_ppc\_iotss\_expansion2**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.clock50Hz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.cmsdk\_sysctrl**

Cortex-M Simple System Control.

Type: CMSDK\_SysCtrl.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.cmsdk\_watchdog**

ARM Watchdog Module.

Type: CMSDK\_Watchdog.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.cpu\_wait\_or\_gate\_0**

Or Gate.

Type: OrGate.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.cpu\_wait\_or\_gate\_1**

Or Gate.

Type: OrGate.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dbgen\_or\_gate**

Or Gate.

Type: OrGate.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0**

ARM PrimeCell DMA Controller(PL080/081).

Type: PL080\_DMAMAC.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: ClockTimerThread64.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: SchedulerThread.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: SchedulerThreadEvent.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0\_idau\_labeller**

Type: LabellerIdauSecurity.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma0\_securitymodifier**

Type: SecurityModifier.



**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma1\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma2\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3**

ARM PrimeCell DMA Controller(PL080/081).

Type: [PL080\\_DMAC](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3.timer**

A ClockTimerThread(64) is a drop-in replacement for a ClockTimer(64) component. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3.timer.timer**

A ClockTimerThread64 is a drop-in replacement for ClockTimer64. The main difference to the ClockTimer component is that the ClockTimerThread runs the signal() callback from a proper scheduler thread. This mean that the signal() function may directly or indirectly invoke wait() functions to wait for time or events. This is not allowed for the ClockTimer component which does not use a thread. Components which issue bus transactions from within the timer signal() callback must use ClockTimerThread(64) rather than ClockTimer(64).

Type: [ClockTimerThread64](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3.timer.timer.thread**

A SchedulerThread instance represents a co-routine thread in the simulation.

Type: [SchedulerThread](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3.timer.timer.thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3\_idau\_labeller**

Type: [LabellerIdauSecurity](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.dma3\_securitymodifier**

Type: [SecurityModifier](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_monitor\_psram**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_monitor\_psram\_iotss**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_monitor\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.expansion\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.fpga\_sysctrl**

FPGA SysCtrl timers LEDs and switches.

Type: [FPGA\\_SysCtrl](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.fpga\_sysctrl.callBack100HzCounter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.fpga\_sysctrl.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.gpio\_0\_or\_2**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.gpio\_1\_or\_3**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.hostbridge**

Host Socket Interface Component.

Type: [HostBridge](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mem\_switch\_extra\_psram\_iotss**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mem\_switch\_extra\_psram\_mps2**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mpc\_iotss\_ssram2**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mpc\_iotss\_ssram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mpc\_iotss\_ssram3**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mpc\_iotss\_ssram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_audio**

MPS2 Audio.

Type: [MPS2\\_Audio](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram1**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_exclusive\_monitor\_zbtsram2**

Global exclusive monitor.

Type: [PVBUSExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_lcd**

MPS2 LCD I2C interface.

Type: [MPS2\\_LCD](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_mpc\_iotss\_ssram1**

IoT Subsystem Memory Protection Controller.

Type: [IoTSS\\_MemoryProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_mpc\_iotss\_ssram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: [SchedulerThreadEvent](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: `MPS2_SecureCtrl`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_timer0**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_timer0.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_timer1**

ARM Timer Module.

Type: `CMSDK_Timer`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: `ClockDivider`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_timer1.counter**

Internal component used by SP804 Timer module.

Type: `CounterModule`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.mps2\_visualisation**

Display window for MPS2 using Visualisation library.

Type: `MPS2_Visualisation`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.niden\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.pl022\_ssp\_mps2**

ARM PrimeCell Synchronous Serial Port(PL022).

Type: `PL022_SSP_MPS2`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.pl022\_ssp\_mps2.prescaler**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.platform\_bus\_switch**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.platform\_switch\_dma0**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.platform\_switch\_dma1**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.smc\_91c111**

SMSC 91C111 ethernet controller.

Type: [SMSC\\_91C111](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.spiden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.spniden\_or\_gate**

Or Gate.

Type: [OrGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200**

SSE-200 subsystem.

Type: [SSE200](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.acg\_cpu0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.acg\_cpu1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.acg\_sram0**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.acg\_sram1**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.acg\_sram2**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.acg\_sram3**

IoT Subsystem Access Control Gate.

Type: [IoTSS\\_AccessControlGate](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem0**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.apb\_ppc\_iotss\_subsystem1**

IoT Subsystem Peripheral Protection Controller.

Type: [IoTSS\\_PeripheralProtectionController](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.bus\_error\_warning\_memory**

Memory that prints warnings, and RAZ/WIs or aborts.

Type: [WarningMemory](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.clock32kHz**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.clockdivider**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cmsdk\_dualtimer**

ARM Dual-Timer Module.

Type: [CMSDK\\_DualTimer](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cmsdk\_dualtimer.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cmsdk\_dualtimer.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).



**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cmsdk\_dualtimer.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cordio\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cpu0core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cpu0dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cpu1core\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.cpu1dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.crypto\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.dbg\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram0**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram1**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram2**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.exclusive\_monitor\_iotss\_internal\_sram3**

Global exclusive monitor.

Type: [PVBusExclusiveMonitor](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.exclusive\_squasher**

Squashes the exclusive attribute on bus transactions.

Type: [PVBusExclusiveSquasher](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.idau\_labeller**

Type: `LabellerIdauSecurity`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_cpuidentity**

IoT Subsystem CPU\_IDENTITY registers.

Type: `IoTSS_CPUIdentity`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_internal\_sram0**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_internal\_sram1**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_internal\_sram2**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_internal\_sram3**

RAM device, can be dynamic or static ram.

Type: `RAMDevice`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_systemcontrol**

IoT Subsystem System Control registers.

Type: `IoTSS_SystemControl`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.iotss\_systeminfo**

IoT Subsystem System Information registers.

Type: `IoTSS_SystemInfo`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mem\_switch\_internal\_sram**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mem\_switch\_internal\_sram\_mpc**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mem\_switch\_ppu**

Allow transactions to be routed arbitrarily.

Type: `PVBusRouter`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mhu0**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mhu1**

IoT Subsystem Message Handling Unit.

Type: `IoTSS_MessageHandlingUnit`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram0.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram1.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram2.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3**

IoT Subsystem Memory Protection Controller.

Type: `IoTSS_MemoryProtectionController`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.mpc\_iotss\_internal\_sram3.gating\_disabled\_thread\_event**

A SchedulerThreadEvent instance is an auto-reset boolean condition variable other threads can wait on.

Type: `SchedulerThreadEvent`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.nmi\_or\_gate**

Or Gate.

Type: `OrGate`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.nonsecure\_watchdog**

ARM Watchdog Module.

Type: `CMSDK_Watchdog`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.ram0\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.ram1\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.ram2\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: `PPUv0`.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.ram3\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.s32k\_timer**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.s32k\_timer.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.s32k\_timer.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.s32k\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.secure\_control\_register\_block**

MPS2 Secure Control Register Block.

Type: [MPS2\\_SecureCtrl](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.secure\_watchdog**

ARM Watchdog Module.

Type: [CMSDK\\_Watchdog](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.signal\_router**

Signal router.

Type: [SignalRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.sys\_ppu**

ARM Power Policy Unit (PPU) architectural model.

Type: [PPUv0](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.timer0**

ARM Timer Module.

Type: [CMSDK\\_Timer](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.timer0.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.timer0.counter**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.timer1**

ARM Timer Module.

Type: CMSDK\_Timer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.timer1.clk\_div**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: ClockDivider.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.sse200.timer1.counter**

Internal component used by SP804 Timer module.

Type: CounterModule.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.ssram1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.ssram2**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.stub0**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.stub1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.stub\_i2c1**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.stub\_i2s**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.stub\_spi0**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.stub\_spi2**

RAM device, can be dynamic or static ram.

Type: RAMDevice.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer**

Type: SVOS\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer0.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer1.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer2.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3**

ARM Dual-Timer Module.

Type: CMSDK\_DualTimer.

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div0**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.clk\_div1**

A ClockDivider is a library component that takes a ClockSignal on its input port (which could come from the output of a MasterClock, or from another ClockDivider), and generates a new ClockSignal on its output port, representing a clock frequency that is related to the input clock by the ratio of the multiply and divide parameters.

Type: [ClockDivider](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter0**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.svos\_dualtimer.svos\_dualtimer3.counter1**

Internal component used by SP804 Timer module.

Type: [CounterModule](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.switch\_PSRAM\_M7**

Allow transactions to be routed arbitrarily.

Type: [PVBUSRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.switch\_svos\_dualtimer**

Allow transactions to be routed arbitrarily.

Type: [PVBusRouter](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.telnetterminal0**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.telnetterminal1**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.telnetterminal2**

Telnet terminal interface.

Type: [TelnetTerminal](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.touchscreen\_interface**

MPS2 Touch Screen.

Type: [MPS2\\_TouchScreen](#).

**FVP\_MPS2\_SecurCore\_SC300.fvp\_mps2.uart\_overflows\_or\_gate**

Or Gate.

Type: [OrGate](#).