arm

Arm® Performance Model Library
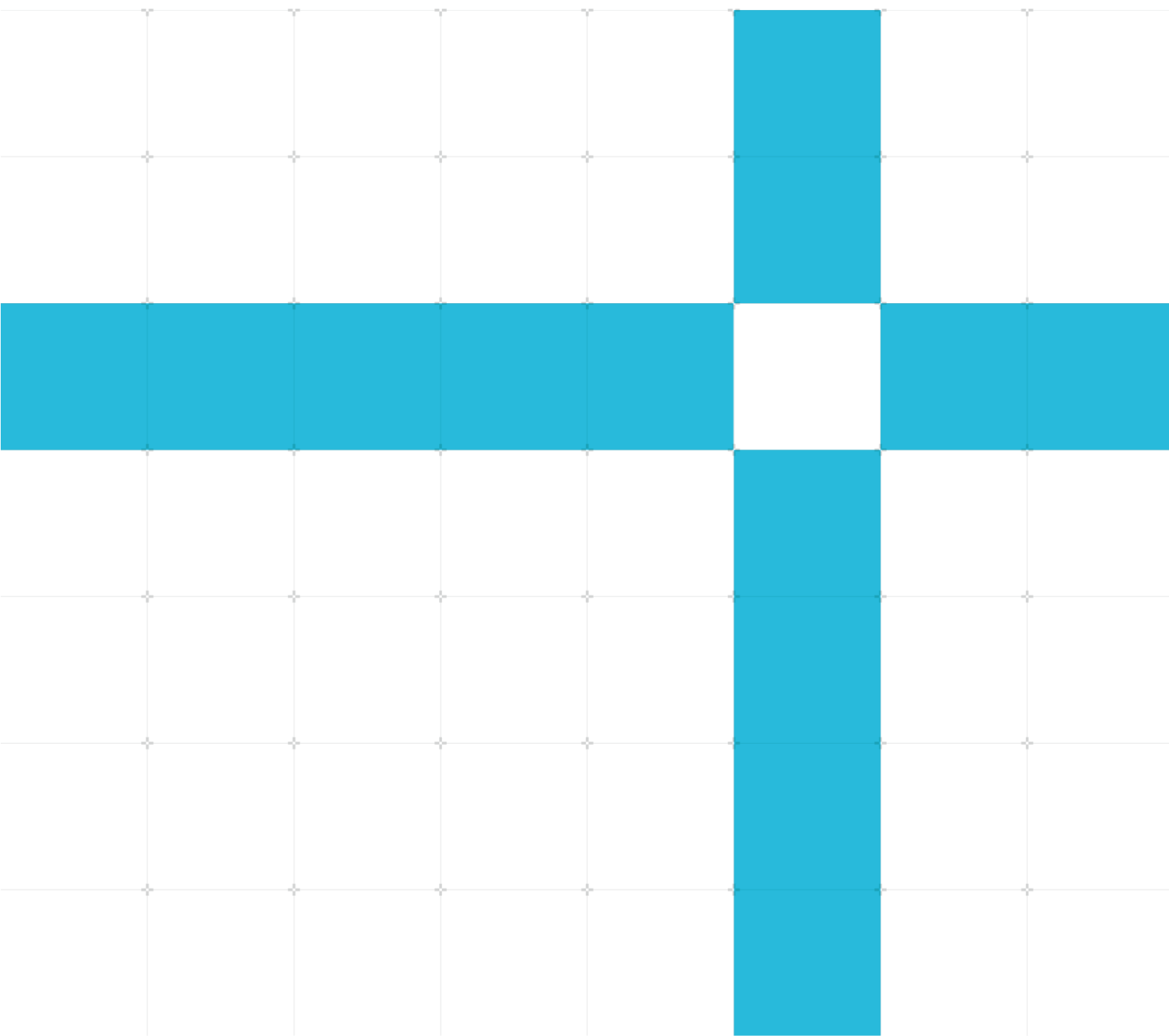
Product revision: 1.0

Release Note

Non-Confidential

Document ID:107623

Arm® Performance Model Library
Release Note

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Non-Confidential Proprietary Notice

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Product status

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

Feedback

Arm welcomes feedback on this product and its documentation. To provide feedback on Arm® Performance Model Library, create a ticket on **https://support.developer.arm.com**.

To provide feedback on the document, fill the following survey: **https://developer.arm.com/documentation-feedback-survey**.

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Contents

1. Release overview

The following sections describe the product that this release note describes and its quality status at time of release.

1.1. Product description

The Arm® Performance Model Library is a package that contains the supported Arm Performance Models to dynamically model and simulate the performance of configured Arm IP. You can adjust your IP configuration based on the model's performance data, thereby improving the performance of the IP in your SoC design.

You can deploy the Performance Models by only associating the Performance Model Library in the Arm© Socrates™ Performance Application in the Arm Socrates™ IP Tooling platform. Socrates enables you to browse, configure, and build Arm IP, including Arm Interconnect IP. For more information about installing and using Socrates, see the Arm Socrates Installation Guide and Arm Socrates User Guide respectively.

This release of the Arm® Performance Model Library contains the Arm CoreLink™ NI-700 Performance Model. You can associate the Performance Model Library in the Performance Application of Socrates v1.7.1. For more information about its association, see the *Arm® Socrates™ for CoreLink™ NI‑700 Network‑on‑Chip Interconnect User Guide* that is provided only with Socrates.

1.2. Release status

This is the REL release of Arm® Performance Model Library 1.0.

2. Release contents

Arm releases can contain documentation and source files such as RTL, testbenches, or software.

The following sections describe:

- Downloading and unpacking the product.

- The contents of this release.

- Any known issues and limitations that exist at the time of this release.

2.1. Downloading and unpacking

The Arm® Performance Model Library is one of the deliverables in the Arm Hardware Success Kit package. You must download the Arm Hardware Success Kit for Linux to obtain the Arm® Performance Model Library deliverables from the Arm delivery server, Product Download Hub (PDH), and then unpack the contents.

Prerequisites

- You must have the necessary access rights for PDH.

- Ensure you have sufficient space in your download area. Check the file size stated in PDH.

Procedure

1. Go to https://developer.arm.com/downloads/view/HWSKT-KS-0002. If you have a 90-day license, you can replace HWSKT-KS-0002 with HWSKT-KS-9002.

2. Check that the revision shown is r1p0-01rel5. If another revision is shown, you can select any release version later than r1p0-01rel5.

3. Click **Download Now** to download the Arm Hardware Success Kit for Linux artifact

4. Choose your preferred download method and click **Download**.

5. Select where to save the artifact and click **Save**.

6. Navigate to the downloaded file.

7. Copy the downloaded file to the directory where the extracted artifacts are to be saved, that is, `<install_dir>`.

8. Extract the downloaded file contents into this location.

   The Performance Model Library is extracted into its own directory, for example:
   `<install_dir>/HWSKT-KS-0002-r1p0-01rel5-pkg1/PMLIB-BN-STD01-r1p0-00rel0`

   Other products in the Arm Hardware Success Kit are extracted to their own directories in:
   `<install_dir>/HWSKT-KS-0002-r1p0-01rel5-pkg1`

For more information on installing, configuring, and rendering, see the product documentation.

2.2. Deliverables and compatibility

The downloaded Arm Hardware Success Kit package includes the Performance Model Library artifact and also the Arm Socrates artifact.

You must ensure that the downloaded release of Socrates is compatible with this release of the Performance Model Library. You must also download the compatible release of the Arm CoreLink NI-700 which is a separate package. For more information about compatible releases, see Table 2-2.

The Performance Model Library Release Note is available as a deliverable in the Performance Model Library artifact. It is also available directly on Arm Developer https://developer.arm.com/documentation/107623/latest and the version of the Release Note can change between PDH releases of the product.

Table 2-1 lists the deliverables of the Performance Model Library artifact in the Arm Hardware Success Kit for Linux artifact.

Table 2-1: Arm® Performance Model Library deliverables in HWSKT-KS-0002-r1p0-01rel5-pkg1

Description	Updated Y/N
PMLIB-BN-STD01-r1p0-00rel0, Arm® Performance Model Library 1.0	First release
arm_performance_model_library_r1p0-00rel0_release_note_107623_01.pdf, Arm® Performance Model Library 1.0 Release Note	First release

Table 2-2 lists the compatible releases of Arm Socrates and Arm CoreLink NI-700 packages for use with this product. The CoreLink NI-700 package must be downloaded as a separate package.

Table 2-2: Required packages for Arm® Performance Model Library

Product	PDH release	Packages
Arm Socrates 1.7.1	r1p7-01rel0	https://developer.arm.com/downloads/view/HWSKT-KS-0002 and its Linux artifact
Arm CoreLink NI-700 r1p0 to r2p1	r1p0-00eac0 to r2p1-00rel2	Depending on your license type: https://developer.arm.com/downloads/view/PL619-TRM or https://developer.arm.com/downloads/view/PL619-PRU

Note

Refer to the Release Note of each required product for full details of their packages. The version of the Release Note may change between PDH releases of a product.

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Adobe PDF reader products can be downloaded at http://www.adobe.com.

2.3. Directory structure

Figure 2-1 shows the principal directory structure of this release that is created after unpacking the Performance Model Library artifact within the Arm Hardware Success Kit for Linux package, `HWSKT-KS-0002-r1p0-01rel5-pkg1.tgz` and where x refers to the Performance Model Library build number, for example 9.

Figure 2-1 Principal directory structure

```
<install_dir>/HWSKT-KS-0002-r1p0-01rel5-pkg1/
  |
  |-- PMLIB-BN-STD01-r1p0-00rel0
    |-- Arm_Performance_Models_Library_1.0.x_HSK
       |-- arm_performance_model_library_r1p0-00rel0_release_note_107623_01.pdf
       |-- linux-x86_64
              |-- .data
              |-- armlm
              |-- license_terms
                     |-- third_party_licenses (sub-folder per application)
                             |-- license_agreement.txt
                             |-- redistributables.txt
                             |-- supplementary_terms.txt
              |-- models
                     |-- NI-700_Performance_Model
```

2.4. Additions for this release

This first release contains early support for User-Based Licensing (UBL). UBL is available only to customers who have UBL licenses. For more information about how to enable UBL licensing or information about legacy licensing, see the User-based licensing User Guide.

2.5. Known limitations

The Release Note version 1 (arm_performance_model_library_r1p0-00rel0_release_note_107623_01.pdf) shipped with Arm® Performance Model Library 1.0 in PMLIB-BN-STD01-r1p0-00rel0 had incorrect numbers for:

- the release version of the Arm Hardware Success Kit on PDH, that is, r1p0-01rel3 instead of the correct release version r1p0-01rel5 in Section 2.1 Downloading and unpacking

- the build number for the product, that is, 4 instead of the correct build number 9 in Section 2.3 Directory structure

The fixes have been applied to this document version 2 of the Release Note, and it will be fixed in the Release Note shipped with the next release version of the product in PDH.

For any limitations known issues on running the Performance Model Library in the Socrates Performance Application, see the *Arm Socrates Release Note*.

3.   Support

If you have any issues with the installation, content or use of this release, create a ticket on **https://support.developer.arm.com**. Arm will respond as soon as possible.

> **Note**
>
> Support for this release of the product is only provided by Arm to partners who have a current support and maintenance contract for the product.

3.1.   Tools

For more information about the tools that Socrates supports, see the *Arm Socrates Release Note*.

3.2.   OS

For more information about the operating systems that Socrates has been developed on, see the *Arm Socrates Release Note*.

4. Conventions

The following subsections describe conventions used in Arm documents.

4.1. Glossary

The Arm Glossary is a list of terms that are 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: **https://developer.arm.com/glossary**.

4.2. Typographical conventions

Convention	Use
italic	Citations.
bold	Interface elements, such as menu names. Signal names. Terms in descriptive lists, where appropriate.
`monospace`	Text that you can enter at the keyboard, such as commands, file and program names, and source code.
`monospace` **bold**	Language keywords when used outside example code.
`monospace` `underline`	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: ``` MRC p15, 0, <Rd>, <CRn>, <CRm>, <Opcode_2> ```
SMALL CAPITALS	Terms that have specific technical meanings as defined in the Arm® Glossary. For example, IMPLEMENTATION DEFINED, IMPLEMENTATION SPECIFIC, UNKNOWN, and UNPREDICTABLE.
⚠️ **Caution**	Recommendations. Not following these recommendations might lead to system failure or damage.
⚠️ **Warning**	Requirements for the system. Not following these requirements might result in system failure or damage.
⚠️ **Danger**	Requirements for the system. Not following these requirements will result in system failure or damage.

Convention	Use
Note	An important piece of information that needs your attention.
Tip	A useful tip that might make it easier, better, or faster to perform a task.
Remember	A reminder of something important that relates to the information you are reading.