

ARM® Firmware Suite v1.4

Installation Guide

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Release Information

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1 Directory Structure

The CD-ROM contains all the files needed to install the *ARM Firmware Suite* (AFS) version 1.4 onto a UNIX or IBM-compatible workstation. The CD-ROM conforms to ISO9660 Level 1 standard. This section describes the directories and files copied to your workstation by the CD installation.

1.1 Files in the root directory

The root directory contains files that provide version and release information and also the installation files:

<code>version.txt</code>	Build information.
<code>License.txt</code>	A copy of the licence agreement in text format.
<code>Index.html</code>	The index for the html documentation.
<code>Readme.txt</code>	Additional information for using AFS.
<code>Relnotes.txt</code>	Additional information for installing this release of AFS. This file may also contain troubleshooting information.
<code>install.sh</code>	Installation file for Unix.
<code>Setup.exe</code>	Installation file for Windows.

Other files in the root directory are used by the installation programs.

1.2 Binary image directories

Images	This directory contains the subdirectory that holds the binary image files for AFS components. The name of the directory indicates the development board and processor combination. For example:
Coyanosa	Contains code built for a Intel IQ80310 development kit and Intel XScale processor.
evaluator7t	Contains code built for an Evaluator development board.
P920t	Contains code built for an ARM920T core module.
Integrator	Contains generic code for an Integrator board.
Prospector720T	Contains code built for a Prospector board and an ARM720T core module.

Prospector1100	Contains code built for a Prospector board and a StrongARM core module.
Worcester	Contains code built for a Intel IQ80321 development kit and Intel XScale processor.
Demos	This directory contains the build subdirectories for each development board. Each subdirectory holds image files for the demo programs in various formats. The subdirectories are named in a similar way to those in the <code>Images</code> directory. For example, <code>IntegratorT\semihosted</code> contains code built for semihosted operation on an Integrator board with an ARM 7TDMI core module.
lib	This directory contains the archive subdirectories for each development board. Each directory holds image files for the additional libraries in armar format.

1.3 Source directories

Include	This directory contains generic <code>.h</code> files and subdirectories that contain include files for specific development boards.
Source	This directory contains prebuilt libraries or source and project files for AFS components.
angel	The Angel debug agent.
BoardDemos	Demonstration programs for supported development boards.
bootMonitor	The boot monitor application.
ChainLibrary	The library used to chain exception handlers.
FlashLibrary	The flash library and flash utilities in armar format.
PCI	The library, in armar format, for supporting the PCI bus.
RealMonitor	The library that supports realtime debugging.
uCOS-II	A port of the μ C/OS operating system.
uHAL	The μ HAL libraries.
uHALDemos	The μ HAL demonstration programs.
VFP	The Vector Floating Point library.
zlib	A copy of a public-domain compression library.

0.2 Documentation directories

Boards	Descriptions of the various development boards available and their options.
Components	HTML files that describe the various hardware and software development products available for use with the AFS.
docs	This directory contains reference information. For example, the AFS Reference and User Guides are available in both PDF and Dynatext formats.

3 Installing ARM Firmware Suite

The following sections describe how to install AFS 1.4:

- *Installing on a Sun workstation* on page 14
- *Installing on a Linux workstation* on page 15
- *Installing on an HP workstation* on page 16
- *Installing in a Windows environment* on page 17.

3.1 Installing on a Sun workstation

This section describes how to install AFS 1.4 on a Sun SPARC workstation.

Hardware requirements

The following are the minimum hardware requirements for installing AFS:

- Sun SPARC compatible machine.
- 150MB of disk space (to install all source and image files to your local drive). If you only require the sources and images for a particular processor and development board combination, you can delete the files for other processors and development boards after the installation.
- CD-ROM drive. This can be a networked CD-ROM drive.

Software requirements

You must have Solaris version 2.6 or above to build or run AFS applications.

Installing AFS 1.4

To install AFS 1.4 on a Sun workstation:

1. Insert the CD into the CD-ROM drive.
2. Become superuser by typing the following at the prompt:

```
su  
Password: root_password
```

where *root_password* is the root password of your machine.
3. Insert the CD. The CD typically automounts. If it does not, type:

```
volcheck
```
4. Change directory to the CD:

```
cd /cdrom/afsv1_4
```

5. Run the install script located in the root of the CD-ROM. For example, type:
`./install.sh`
6. The AFS files will be copied to your system.
7. Refer to the instructions in *Installing Dynatext under Unix* on page 10 to install the Dynatext online documentation.

You can view the online documentation in PDF or Dynatext form. See *Viewing the Online Manuals* on page 9.

Note

Important information about this release might be contained in a `Relnotes.txt` file on the CD.

3.2 Installing on a Linux workstation

This section describes how to install AFS 1.4 on a Linux workstation.

Hardware requirements

The following are the minimum hardware requirements for installing AFS:

- 150MB of disk space (to install all source and image files to your local drive). If you only require the sources and images for a particular processor and development board combination, you can delete the files for other processors and development boards after the installation.
- CD-ROM drive. This can be a networked CD-ROM drive.

Software requirements

You must have Redhat 6.2 or 7.1 to build or run AFS applications.

Installing AFS 1.4

To install AFS 1.4 on a Linux workstation:

1. Insert the CD into the CD-ROM drive.
2. Become superuser by typing the following at the prompt:

```
su
Password: root_password
```

where `root_password` is the root password of your machine.

3. To mount the CD-ROM drive, type the following:

```
mount -ro -t iso9660 cdrom-device /mnt/cdrom
```

For example:

```
mount -ro -t iso9660 /dev/cdrom /mnt/cdrom
```

4. Exit superuser mode (unless you intend to install into a directory that requires superuser privileges):

```
exit
```
5. Change to the CD directory and run the install script located in the root of the CD-ROM. For example, type:

```
cd /mnt/cdrom/afsv1_4  
./install.sh
```
6. The AFS files will be copied to your system.
7. Refer to the instructions in *Installing Dynatext under Unix* on page 10 to install the Dynatext online documentation.

You can view the online documentation in PDF or Dynatext form. See *Viewing the Online Manuals* on page 9.

Note

Important information about this release might be contained in a `Relnotes.txt` file on the CD.

3.3 Installing on an HP workstation

This section describes how to install AFS 1.4 on an HP series 9000 model 7xx workstation.

Hardware requirements

The following are the minimum hardware requirements for installing AFS:

- 150MB of disk space (to install all source and image files to your local drive). If you only require the sources and images for a particular processor and development board combination, you can delete the files for other processors and development boards after the installation.
- CD-ROM drive. This can be a networked CD-ROM drive.

Software requirements

You must have HP-UX 10.20 or later to build or run AFS applications.

Installing AFS 1.4

To install AFS 1.4 on an HP workstation:

1. Insert the CD into the CD-ROM drive.
2. Become superuser by typing the following at the prompt:

```
su
Password: root_password
```

 where *root_password* is the root password of your machine.
3. To mount the CD-ROM drive, type the following:

```
mount -r -F cdfs -o cdcase cdrom-device /cdrom
```

 For example:

```
mount -r -F cdfs -o cdcase /dev/dsk/clt2d0 /cdrom
```
4. Exit superuser mode (unless you intend to install into a directory that requires superuser privileges):

```
exit
```
5. Change to the CD directory and run the install script located in the root of the CD-ROM. For example, type:

```
cd /cdrom
./install.sh
```
6. The AFS files will be copied to your system.
7. Refer to the instructions in *Installing Dynatext under Unix* on page 10 to install the Dynatext online documentation.

You can view the online documentation in PDF or Dynatext form. See *Viewing the Online Manuals* on page 9.

Note

Important information about this release might be contained in a `Relnotes.txt` file on the CD.

3.4 Installing in a Windows environment

This section describes how to install AFS 1.4 in a Windows environment.

Hardware and software requirements

The following are the minimum requirements to install, build, and run AFS applications:

- Pentium or higher IBM-compatible workstation running Windows 98, 2000, ME, NT v4 for x86 processors, or XP.

- 150MB of disk space (to install all source and image files to your local drive). If you only use a single processor and development board combination, you can delete the images for the other combinations after the installation.
- 32MB RAM.
- CD-ROM drive (this can be a networked CD-ROM drive).

If you want to view the PDF versions of the online manuals and specifications you must have Adobe Acrobat Reader installed. The Dynatext versions of the online manuals are viewable with the Dynatext viewer provided with ADS.

Installing AFS 1.4

To install AFS 1.4 in a Windows environment:

1. Insert the CD into the CD-ROM drive.
2. Run `setup.exe` in the root directory of the CD-ROM.
3. A welcome screen is displayed. Click **Next**.
4. A prompt displays that asks if you accept the license agreement. If you agree, click **Yes**.
5. The dialog requesting the install location is displayed.
 - To install in the default directory, click **Next**.
 - To install in a different directory, click **Browse** and select the directory. If the directory does not exist, the installer can create it for you. After you have selected the new directory, click **Next**.
6. A dialog displays progress in installing the AFS files. If you want to stop the installation, click **Cancel**.
7. A dialog displays the build information for the installed version of AFS. Click **Next**.
8. A dialog displays that asks if you want to view the `readme.txt` file. Click **Yes** if you want to read the file.
9. If you have ADS and have already installed the Dynatext viewer provided with ADS, the Dynatext files for AFS will be copied and the Dynatext configuration file updated.

If you do not have a Dynatext viewer installed, a prompt displays indicating that the Dynatext files were not installed. Click **OK**.

Installation of the AFS software is now complete.

You can view the online documentation in PDF or Dynatext form. See *Viewing the Online Manuals* on page 9.

Note

Important information about this release might be contained in a `Relnotes.txt` file on the CD.

4 Viewing the Online Manuals

Reference material is provided in several formats.

- Adobe PDF files
- HTML files
- Dynatext online book files

4.1 Adobe Acrobat Reader

The manuals for AFS 1.4 are provided in the `Documents` directory in *Acrobat Portable Document Format* (PDF) files. You must have a copy of Adobe Acrobat Reader (version 4) installed before you can view them. Acrobat Reader is available from the Adobe web site <http://www.adobe.com>.

For more information on using Adobe Acrobat Reader, select **Acrobat Reader Help** from the **Help** menu.

Note

Additional information is provided in the `Boards` directory. These PDF files contain schematics and User Guides for development boards.

4.2 HTML

Additional information is provided in HTML files in the `Boards` and `Components` directories.

Note

The `index.html` file contains pointers to useful information. Use your browser software to view this file.

4.3 Dynatext

The manuals for AFS 1.4 are provided on the CD-ROM in Dynatext online book files.

A viewer for the files is not included on the CD, but you can use the Dynatext viewer supplied with ADS. The viewer can be installed on its own without installing all of ADS.

Installing Dynatext under Windows

The Windows version of the installer copies the Dynatext files to the `docs\OnlineBooks` subdirectory of your AFS installation. If the viewer provided with the Windows version of ADS is already installed, the installation automatically adds the Dynatext files to the list of documents displayed when you open the viewer.

Installing Dynatext under Unix

The Unix installation scripts for Solaris, Linux, and HP-UX do not install the Unix versions of the Dynatext files. The Dynatext viewer and document files must be installed manually.

To install the Dynatext files under Unix:

1. Use the ADS installation CD to install the Dynatext viewer.

2. Change directory to *AFS_Install_directory/docs/OnlineBooks*.

```
cd AFS_Install_directory/docs/OnlineBooks
```

The term *AFS_Install_directory* refers to the path to the AFS installation on your workstation.

3. Unpack the *udtext.io* archive.

For HP-UX, type:

```
cpio -cidvu < AFS_CD/udtext.io
```

For Solaris or Linux, type:

```
cpio -idvu < AFS_CD/udtext.io
```

4. Use a text editor to open the *.ebtrc* file. The location of the *.ebtrc* file can be found by typing:

```
echo $EBTRC
```

5. Add the following line after the ADS entry that gives the location of the AFS Dynatext books:

```
COLLECTION AFS_Install_directory/docs/OnlineBooks/AFS=ARM Firmware Suite
```

6. Save the file and exit the text editor.

7. Type *dtext* at the command line to display the online documentation,

5 Registration and Feedback

This section describes how to obtain updates from ARM and how to provide feedback to ARM on AFS and the AFS documentation.

5.1 Registration

ARM regularly updates the ARM Firmware Suite with support for new ARM cores and evaluation boards, and adds new uHAL applications, demos and example operating system ports. Use the ARM Firmware Suite subscription process to receive these updates. A one year subscription is free to purchasers of ARM toolkits or ARM evaluation boards, otherwise there is a nominal charge.

Follow the [register](#) link on the main page of `index.html` to find registration instructions.

5.2 AFS 1.4

If you have feedback on AFS 1.4, please contact your supplier.

To help us to provide a rapid and useful response, please give:

- details of the release you are using, such as the version number
- details of the platform you are running on, such as your hardware platform, operating system type and version
- a small stand-alone sample of code that reproduces the problem
- a clear explanation of what you expected to happen, and what actually happened
- the commands you used (including any command-line options)
- sample output illustrating the problem
- the version string of the tool (including the version number and date).

5.3 Documentation

If you have problems with this book, please send email to errata@arm.com giving:

- the document title
- the document number
- the page number(s) to which your comments refer
- a concise explanation of the problem.

General suggestions for additions and improvements are also welcome.

