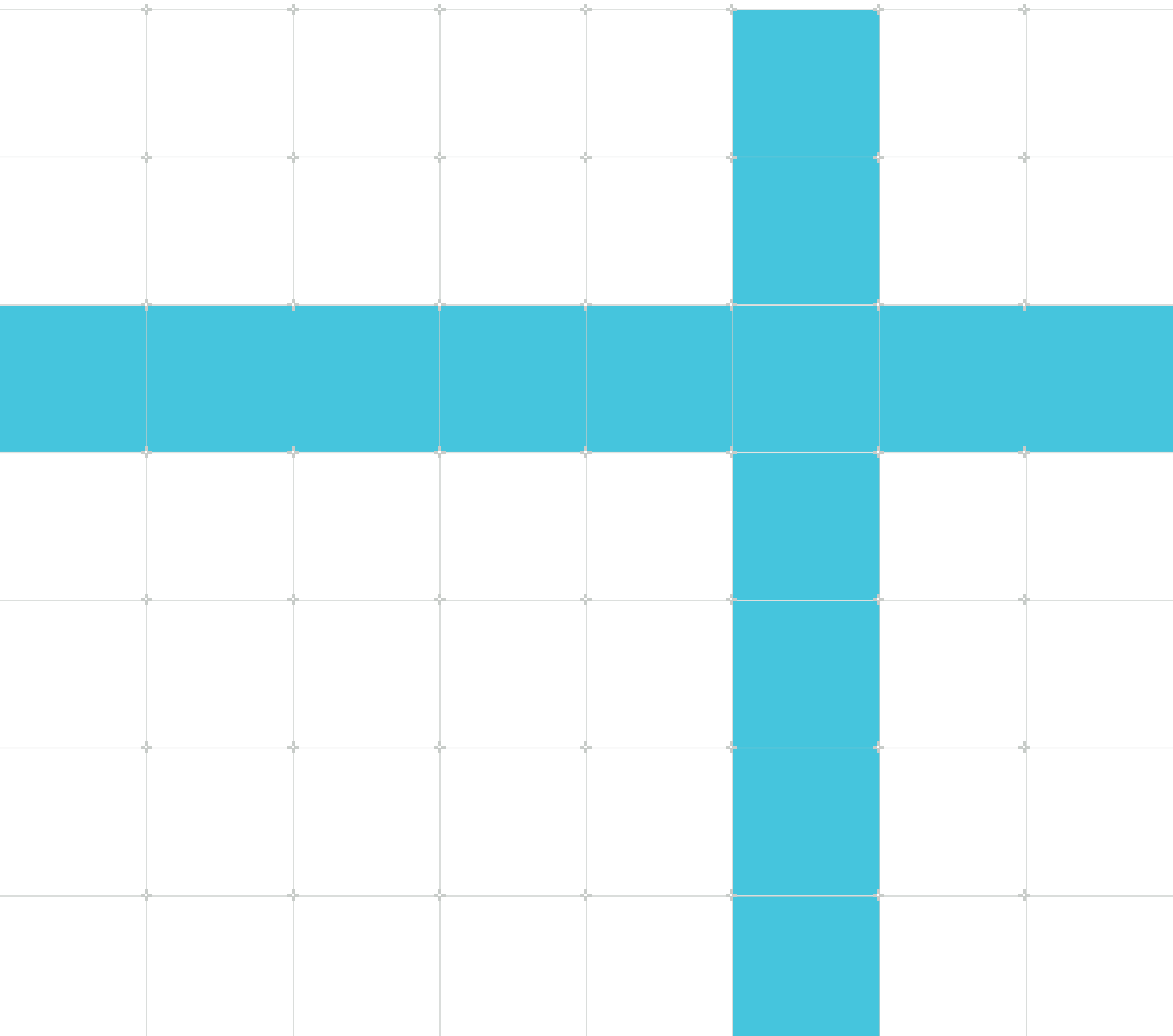
# Arm® Development Studio

Version 2025.0-2

# Release Note



**Issue 02**
107629_2025.0-2_02_en



# Arm® Development Studio Release Note



This document (107629_2025.0-2_02_en) was issued on 2025-11-25. There might be a later issue at https://developer.arm.com/documentation/107629

The product version is 2025.0-2.

See also: Proprietary notice | Product and document information | Useful resources

## Start reading

If you prefer, you can skip to the start of the content.

## Intended audience

This document is for users of Arm Development Studio that want to see details of the latest changes.

## 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.

We believe that this document contains no offensive language. To report offensive language in this document, email terms@arm.com.

## Feedback

Arm welcomes feedback on this product and its documentation. To provide feedback on the product, 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.

# Contents

# 1. Release overview

This is a patch release for Arm® Development Studio 2025.0. This patch release includes an updated version of Arm Debugger. All other components are unchanged.

For more detail on the Arm Debugger issues, see the Arm Debugger 6.7.0 Release Notes.

The following sections describe the product and its quality status at time of release.

## 1.1 Product description

Arm Development Studio helps you build, code, debug, and optimize Arm®-based projects quickly. From device bring-up to application debug to creating highly efficient micro-controller applications, Arm Development Studio enables you to bring better products to market ahead of the competition.

For a complete list of supported processors, see Supported Processor Cores.

## 1.2 Included components

Arm Development Studio contains the following components.

### Arm Development Studio IDE 2025.0

Arm Development Studio IDE is an Eclipse-based graphical framework that allows you to create, configure, build, debug, and optimize Arm-based projects.

### Arm Toolchain for Embedded Professional 20.1.0

Arm® Toolchain for Embedded Professional (ATfEP) is the next-generation Arm embedded C/C++ compilation toolchain. The toolchain is focused on the needs of current and future developers creating high-performance Arm-based embedded products for demanding markets. ATfEP is included in Development Studio alongside Arm Compiler for Embedded 6 (AC6). ATfEP can replace AC6 in many use-cases, but ATfEP has a different optimization focus and different functionality, so will appeal to different projects. ATfEP is likely to appeal to:

- Projects that need maximum performance optimization for Arm 64-bit (AArch64) processors
- Projects that want to use additional functionality from the LLVM project, that is not available in Arm Compiler for Embedded 6
- Projects that need support for Arm architecture and processors launched after 2024
- Projects that benefit from a compiler with a high level of compatibility with the GNU Embedded Toolchain for Arm
- Projects that benefit from 100% compatibility with a performant, free to use, 100% open source compiler (Arm Toolchain for Embedded)

ATfEP is enabled only by User-Based Licensing (UBL) licenses, and is not compatible with the FlexNet Publisher licensing technology used in Arm node-locked and floating licenses.

For more information, see Arm Toolchain for Embedded.

### Arm Compiler for Embedded 6

Arm® Compiler for Embedded 6 is a mature Arm embedded C/C++ compilation toolchain that has now reached end of development. Release 6.24 (April 2025) is the final scheduled release of AC6, outside of maintenance update releases for the 6.16LTS and 6.22LTS Functional Safety branches. AC6 is likely to appeal to:

- Existing projects that are already using AC6, and want to avoid migration to a different compiler.
- Projects that need the best performance or code size optimization for Armv6-M or Armv7-M.
- Projects that benefit from scatter-loading to manage complex memory layouts.
- Projects with a Functional Safety component. Arm Compiler for Embedded FuSa is available as a separate download, and is included in the license for DS Gold (Node locked/Floating) and DS Gold FuSa (UBL).

For more information, see Arm Compiler for Embedded.

### Arm Debugger 6.7.0

Arm Debugger supports software development on Arm processor-based targets and Fast Models such as the Fixed Virtual Platform (FVP) models supplied with Arm Development Studio. Arm Debugger includes support for SoC bring-up with platform configuration utilities using the Arm® ULINK™ and Arm® DSTREAM debug probe families.

For more information, see Arm Debugger.

### Arm Fixed Virtual Platforms 11.29

Fixed Virtual Platforms (FVPs) provide the ideal combination of performance, flexibility and usability for development and debug at all levels of the software stack. Based on Arm® Fast Models, a library of FVPs is supplied with Arm Development Studio for Cortex®-A, Cortex-R, Cortex-M, and Neoverse™ processors. In addition, Arm Development Studio supports custom FVPs created using the Arm Fast Models package, using the Platform Configuration Editor (PCE).

For more information, see Fixed Virtual Platforms.

### Arm Streamline 9.6.1

Arm® Streamline is a system-wide performance profiler which can be used to analyze Linux, Android, RTOS, and bare-metal embedded systems. Streamline's visualization tools make it easy to identify performance bottlenecks in software running on Arm CPUs and data-plane workloads running on Arm® Mali™ GPUs and other Arm IP. This is supplemented by a hot-spot software profiler which can identify the dominant functions and call paths in application software, enabling performance tuning of the entire system platform.

For more information, see Streamline Performance Analyzer

## 1.3 Product quality

These deliverables are being released under the terms of the agreement between Arm and each licensee (the “Agreement”). All planned verification and validation is complete. The release is suitable for volume production under the terms of the Agreement.

# 2. Arm Development Studio 2025.0-2 requirements

The list of supported host platforms is given in the Hardware and host platform requirements section of the Getting Started Guide.

# 3. Differences from previous release

This release of Arm® Development Studio contains the following changes from 2024.1-1.

For additional information and screenshots, see the Arm Development Studio 2025.0 Product Update Blog.

- New features
- Deprecated and removed features
- Known issues

## 3.1 New features

Arm Development Studio 2025.0-2 contains the following new features.

### Processor and architecture support

Support for the following processors is added:

- Cortex-A320

### Arm Toolchain for Embedded Professional

Arm® Toolchain for Embedded Professional (ATfEP) 20.1.0 is now included in this release of Arm Development Studio. For more details, see the Arm Toolchain for Embedded Professional documentation index.

### Arm Compiler for Embedded

The Arm Compiler in this release of Arm Development Studio is updated to Arm Compiler for Embedded 6.24. For more details, see the Arm Compiler 6.24 Release Notes.

AC6 has reached end of development. Release 6.24 (April 2025) is the final scheduled release of AC6, apart from maintenance update releases for the 6.16LTS and 6.22LTS Functional Safety branches.

Arm Compiler 5 is a legacy product that is not provided in Arm Development Studio. It was replaced by AC6 in 2014, and has not been maintained since. AC5 is not recommended for use in new projects, and is not compatible with the UBL licensing technology.

### Arm Debugger

The Arm Debugger in this release of Arm Development Studio is updated to Arm Debugger 6.7.0. For more details, see the Arm Debugger 6.7.0 Release Notes.

### Arm Fixed Virtual Platforms

The Arm FVPs in this release of Arm Development Studio are updated to a selection from Fast Models 11.29. For more details, see the Fast Models 11.29 Release Notes.

Changes include:

- FVP_Base_Cortex-A320 is added
- FVP_Base_Cortex-A72x2-A53x4, FVP_Base_Cortex-A73x2-A53x4, FVP_Base_Neoverse-N3x1-Neoverse-N3x1, and FVP_Base_Neoverse-V2x1-Neoverse-V2x1 are removed
- FVP_Base_Cortex-A32x1/A35x1/A53x1/A57x1/A72x1/A73x1 are replaced by FVP_Base_Cortex-A32/A35/A53/A57/A72/A73
- FVP_BaseR_Cortex-R52x1 is replaced by FVP_BaseR_Cortex-R52
- FVP_Base_Neoverse-V3x1-Neoverse-V3x1 is replaced by FVP_Base_Neoverse-V3, and FVP_Base_Neoverse-V3x1-Neoverse-V3x1 is replaced by FVP_Base_Neoverse-V3AE

### Arm Streamline

Arm Streamline in this release of Arm Development Studio is updated to version 9.6.1. For more details, see the Arm Performance Studio 2025.3 Release Note.

### Examples

Changes include:

- Many examples are now open-sourced under the MIT license
- Added bare-metal examples for Arm Toolchain for Embedded
- Added bare-metal examples for Cortex-A320
- Updated the GCC examples to use GCC 14.2.Rel1
- Removed Arm7-A Linux examples, Arm7-A Linux distribution, and flash examples

### Host platform operating system support

- Support for Ubuntu Desktop Edition 24.04 LTS as a host platform is added, alongside the existing support for Ubuntu Desktop Edition 22.04 LTS. Ubuntu Desktop Edition 20.04 LTS is no longer an officially supported host platform.
- Support for Windows 10 is deprecated in this release, and will be removed from a future release.

## 3.2 Deprecated and removed features

The following functionality is either deprecated or removed:

- The way to obtain an evaluation license for Arm Development Studio has changed. It is no longer possible to obtain an a 30-day evaluation license from within the Arm Development Studio IDE. Prospective customers must now instead contact one of our regional distributors to request an evaluation license. The distributor will be the main point of contact to assist end users in their evaluation of Arm Development Studio and their purchase options.
- Support for Armv7-A architecture CPU models is deprecated in the Arm Fast Models. The following CPU models are deprecated and will be removed after Fast Models 11.29 and the

next release of Arm Development Studio: Cortex-A5, Cortex-A7, Cortex-A8, Cortex-A9, Cortex-A15, Cortex-A17.

- The combination models FVP_Base_Cortex-A55+Cortex-A75, FVP_Base_Cortex-A55+Cortex-A76, FVP_Base_Cortex-A57x2-A53x4, FVP_Base_Neoverse-N2x1-Neoverse-N2x1 are deprecated and will be removed from a future release.
- The Component Architecture Debug Interface (CADI) model connection interface is deprecated. CADI does not work with the FVPs installed with this version of Arm Development Studio. Arm recommends that you use the Iris model interface instead.
- The `--interactive` armdbg command-line option has been removed. An equivalent functionality is available when you use the `--debug-init-script` option with the `--script` option.

## 3.3 Known issues

Arm Development Studio 2025.0-2 has the following known issues:

- This release of Arm Development Studio includes the next-generation Arm Toolchain for Embedded Professional (ATfEP) in addition to Arm Compiler for Embedded 6 (AC6). As a consequence, the Development Studio installation time has significantly increased on Windows. For the convenience of Windows users, we provide two installation packages, one that includes ATfEP and one that does not include ATfEP. We are working to reduce the Windows installation time in future releases.
- There are known compatibility issues with SWT applications on Wayland display servers. For the Arm Development Studio IDE, if using a Wayland display server, it is recommended to force the use of X11 by setting the environment variable `GDK_BACKEND=x11` before launching. Alternatively, if possible on your system, you can disable Wayland for your login session.
- Semihosting allows code running on a target platform to access files and execute system commands on a host machine, potentially allowing sensitive data on the host to be exposed. Before you use semihosting, you must ensure that you assess and mitigate the security implications. For example, a semihosted application running on an FVP model may access files on its host machine, unless semihosting is explicitly disabled in the FVP model. Similarly, a semihosted application running on a hardware target may access files on a debugger host that is connected by a debug agent such as DSTREAM-ST. For the latter case, the debugger has controls to configure the semihosting security policy. By default, if semihosting is enabled in the debugger, the debugger prevents semihosting from accessing files and executing system commands on the debugger host. The policy can be adjusted with the set semihosting policy warn|allow|block command.

# 4. 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.

You can raise queries and support issues relating to Arm Development Studio on the Arm Community website.


**Note**

We provide support for this release of the product only to partners who have a current support and maintenance contract for the product.

A Full release of the Arm Deliverable shall have met the contractual requirement for verification and validation of the deliverable subject to any waivers agreed between Arm and the Customer.

# 5. Release History

Provides a brief overview of the changes in previous versions of Arm® Development Studio.

## Previous versions of Arm Debugger

For details of previous updates to Arm Development Studio, see the Arm Development Studio Release Notes.

# Proprietary Notice

This document is protected by copyright and other related rights and the use 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 Limited ("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 the subject matter of this document infringes any third party patents.

The content of this document is informational only. Any solutions presented herein are subject to changing conditions, information, scope, and data. This document was produced using reasonable efforts based on information available as of the date of issue of this document. The scope of information in this document may exceed that which Arm is required to provide, and such additional information is merely intended to further assist the recipient and does not represent Arm's view of the scope of its obligations. You acknowledge and agree that you possess the necessary expertise in system security and functional safety and that you shall be solely responsible for compliance with all legal, regulatory, safety and security related requirements concerning your products, notwithstanding any information or support that may be provided by Arm herein. In addition, you are responsible for any applications which are used in conjunction with any Arm technology described in this document, and to minimize risks, adequate design and operating safeguards should be provided for by you.

This document may include technical inaccuracies or typographical errors. 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, any patents, copyrights, trade secrets, trademarks, or other rights.

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.

Reference by Arm to any third party's products or services within this document is not an express or implied approval or endorsement of the use thereof.

This document consists solely of commercial items. You shall be responsible for ensuring that any permitted 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.

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 this document shall prevail.

The validity, construction and performance of this notice shall be governed by English Law.



Arm Limited. Company 02557590 registered in England.

110 Fulbourn Road, Cambridge, England CB1 9NJ.

PRE-1121-V1.0

# Product and document information

Read the information in these sections to understand the release status of the product and documentation, and the conventions used in Arm documents.

## Product status

All products and services provided by Arm require deliverables to be prepared and made available at different levels of completeness. The information in this document indicates the appropriate level of completeness for the associated deliverables.

### Product completeness status

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

## Revision history

These sections can help you understand how the document has changed over time.

### Document release information

The Document history table gives the issue number and the released date for each released issue of this document.

**Document history**

| Issue | Date | Confidentiality | Change |
|---|---|---|---|
| 2025.0-02 | 25 November 2025 | Non-Confidential | Updated document for Arm Development Studio 2025.0-2 |
| 2025.0-01 | 13 August 2025 | Non-Confidential | Updated document for Arm Development Studio 2025.0-1 |
| 2025.0-00 | 26 June 2025 | Non-Confidential | Updated document for Arm Development Studio 2025.0 |
| 2024.0-01 | 30 April 2025 | Non-Confidential | Updated document for Arm Development Studio 2024.0-1 |
| 2024.1-00 | 17 December 2024 | Non-Confidential | Updated document for Arm Development Studio 2024.1 |
| 2024.0-00 | 17 May 2024 | Non-Confidential | Updated document for Arm Development Studio 2024.0 |

| Issue | Date | Confidentiality | Change |
|---|---|---|---|
| 2023.1-00 | 25 October 2023 | Non-Confidential | Updated document for Arm Development Studio 2023.1 |
| 2023.0-00 | 13 April 2023 | Non-Confidential | Updated document for Arm Development Studio 2023.0 |
| 2022.2-00 | 17 November 2022 | Non-Confidential | Updated document for Arm Development Studio 2022.2 |
| 2022.1-00 | 21 June 2022 | Non-Confidential | Updated document for Arm Development Studio 2022.1 |
| 2022.0-00 | 27 April 2022 | Non-Confidential | Updated document for Arm Development Studio 2022.0 |
| 2021.2-00 | 10 November 2021 | Non-Confidential | Updated document for Arm Development Studio 2021.2 |
| 2021.1-00 | 9 June 2021 | Non-Confidential | Updated document for Arm Development Studio 2021.1 |
| 2021.0-00 | 19 March 2021 | Non-Confidential | Updated document for Arm Development Studio 2021.0 |
| 2010-00 | 28 October 2020 | Non-Confidential | Updated document for Arm Development Studio 2020.1 |
| 2000-00 | 20 March 2020 | Non-Confidential | Updated document for Arm Development Studio 2020.0 |
| 1910-00 | 1 November 2019 | Non-Confidential | Updated document for Arm Development Studio 2019.1 |
| 1901-00 | 15 July 2019 | Non-Confidential | Updated document for Arm Development Studio 2019.0-1 |
| 1900-00 | 11 April 2019 | Non-Confidential | Updated document for Arm Development Studio 2019.0 |
| 1800-00 | 27 November 2018 | Non-Confidential | First release for Arm Development Studio |

## Change history

For information about the functional changes to Arm Development Studio, see the Release History section.

# 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.

## Typographic conventions

Arm documentation uses typographical conventions to convey specific meaning.

| Convention | Use |
|---|---|
| italic | Citations. |
| **bold** | Interface elements, such as menu names.<br><br>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 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.<br><br>For example:<br><br>`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**. |


We recommend the following. If you do not follow these recommendations your system might not work.


Your system requires the following. If you do not follow these requirements your system will not work.


You are at risk of causing permanent damage to your system or your equipment, or harming yourself.


This information is important and needs your attention.


A useful tip that might make it easier, better or faster to perform a task.


A reminder of something important that relates to the information you are reading.

# Useful resources

This document contains information that is specific to this product. See the following resources for other useful information.

Arm documents are available on developer.arm.com/documentation.

Confidential documents are only available to licensees, when logged in. Each document link in the tables below provides direct access to the online version of the document.

| Arm product resources | Document ID | Confidentiality |
|---|---|---|
| *Arm Development Studio Getting Started Guide* | 101469 | Non-Confidential |
| *Arm Development Studio User Guide* | 101470 | Non-Confidential |