



Mali GPU Shader Development Studio Release Note

© Copyright ARM Limited 2010. All rights reserved.

Abstract

This document contains notes relating to the EAC release (v1.2.0) of the Mali GPU Shader Development Studio.

Release Information

Proprietary Notice

Words and logos marked with ® or ™ are registered trademarks or trademarks of ARM Limited in the EU and other countries, except as otherwise stated below in this proprietary notice. Other brands and names mentioned herein may be the trademarks of their respective owners.

Neither the whole nor any part of the information contained in, or the product described in, this document may be adapted or reproduced in any material form except with the prior written permission of the copyright holder.

The product described in this document is subject to continuous developments and improvements. All particulars of the product and its use contained in this document are given by ARM Limited in good faith. However, all warranties implied or expressed, including but not limited to implied warranties of merchantability, or fitness for purpose, are excluded.

This document is intended only to assist the reader in the use of the product. ARM Limited shall not be liable for any loss or damage arising from the use of any information in this document, or any error or omission in such information, or any incorrect use of the product.

Document 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.

Product Quality Status

The information in this document is information on a EAC release product.

Early Access Release status indicates that a deliverable has satisfactorily achieved all criteria for its promotion to a Mature Release status. It may be delivered in accordance with the contract and be expected to perform as described in the data-sheet or other specification. However, there remain some elements of uncertainty, solely for the reason that it cannot finally be validated until the deliverable has been successfully deployed by customers or partners. Accordingly, the recipient of a deliverable with Early Access Release status may be directly contributing to the final stage of approval of that deliverable.

ARM Web Address

The ARM website is located at the following address: <http://www.arm.com>

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 following:

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

Feedback on this document

If you have any comments on or about this document, please send email to errata@arm.com giving the following:

- The document title.
- The document number.
- The page number(s) to which your comments refer.
- A concise explanation of your comments.

General suggestion for additions and improvements are also welcome.

CONTENTS

1	Preface	5
2	Product Deliverables	6
2.1	Files	6
2.1.1	ShaderServer	6
3	Documentation	7
3.1	Mali GPU Shader Development Studio Errata	7
3.2	Mali GPU Shader Development Studio User Guide	7
3.3	Release Note	7
4	Required Tools	8
4.1	Reference platform	8
4.1.1	Windows	8
4.1.2	Linux	8
4.2	Build platform	8
4.2.1	Eclipse Plug-in	8
4.2.2	ShaderServer	8
5	Installation	9
5.1	Installation Procedure	9
6	Building	10
7	Changes in Functionality From Previous Releases	11
7.1	Changes from v1.1	11
8	Known Issues and Limitations	12
8.1	“Ghost” Eclipse Perspective after un-installation	12
8.2	Automatic Renderer discovery	12

1 PREFACE

This document contains general release information about the Mali GPU Shader Development Studio v1.2.0 deliverables and covers the following topics:

- Deliverables summary.
- Details of external tools required.
- Build instructions.
- Changes and fixes in this release.
- Known issues.
- Details of testing prior to release.

2 PRODUCT DELIVERABLES

2.1 Files

The Mali GPU Shader Development Studio is delivered as a single compressed archive containing a local Eclipse Update Site. The specific filename is dependent on target platform. Table 2-1 describes this.

<i>File Name</i>	<i>Description</i>
Mali_GPU_Shader_Development_Studio_1.2.0. BN _Win32.msi	Microsoft installer for Mali GPU Shader Development Studio.
Mali_GPU_Shader_Development_Studio_1.2.0. BN _Linux.tar.gz	A gzipped UNIX tarball containing the Mali GPU Shader Development Studio for Linux.

Table 2-1 Files making up the Mali GPU Shader Development Studio

Note: **BN** is the Build Number.

2.1.1 ShaderServer

Both the Windows and Linux versions of the Mali GPU Shader Development Studio contain source code to the “ShaderServer”, an executable that wraps an OpenGL ES 2.0 implementation in a Mali Remote Interface layer to allow OpenGL ES 2.0 shaders to be rendered on hardware that would not otherwise be able to utilize the Mali Remote Interface.

The Mali GPU Shader Development Studio User Guide contains more information about the ShaderServer.

3 DOCUMENTATION

All the documents mentioned in this section can be obtained from <http://www.malideveloper.com>

3.1 Mali GPU Shader Development Studio Errata

This document describes the errata discovered in the implementation of the Mali GPU Shader Development Studio, categorised by level of severity. Each description includes:

- a description of where the implementation deviates from the specification,
- the conditions under which erroneous behaviour occurs,
- the implications of the erratum with respect to typical applications,
- the application and limitations of a work-around where possible,
- the status of corrective action.

3.2 Mali GPU Shader Development Studio User Guide

The user guide provides user information for users of the Mali GPU Shader Development Studio. It describes how to install and operate the software.

3.3 Release Note

This document contains general release information about the Mali GPU Shader Development Studio product.

4 REQUIRED TOOLS

ARM Limited recommends the use of the same hardware and software that were used to develop and test the Mali GPU Shader Development Studio. This section lists the additional hardware and software that is required.

4.1 Reference platform

4.1.1 Windows

The reference platform for Windows is a desktop PC running Windows XP Professional Service Pack 3 with Eclipse 3.5.2. In order to perform local shader effect rendering using the built-in ShaderServer renderer, the following additional hardware and software is recommended:

- The OpenGL ES 2.0 Emulator library for Windows. This library should be available on the user's PATH. To download the OpenGL ES 2.0 Emulator library, visit www.malideveloper.com.
- A graphics card capable of rendering OpenGL 2.0 shaders. ARM recommends an NVIDIA-based card.

4.1.2 Linux

The reference platform for Linux is a desktop PC running Ubuntu 10.04 LTS with Eclipse 3.5.2. In order to perform local shader effect rendering using the built-in ShaderServer renderer, the following additional hardware and software is recommended:

- The OpenGL ES 2.0 Emulator library for Linux. This library should be available on a shared library path (eg., `/usr/local/lib`). To download the OpenGL ES 2.0 Emulator library, visit www.malideveloper.com.
- A graphics card capable of rendering OpenGL 2.0 shaders. ARM recommends an NVIDIA-based card.

4.2 Build platform

4.2.1 Eclipse Plug-in

The Mali GPU Shader Development Studio Eclipse plug-in is a binary release and cannot be built from source.

4.2.2 ShaderServer

The source code of the ShaderServer executable is supplied with the Shader Development Studio in order that it can be built on an embedded platform, and as such the reference platform for this source code is a Linux machine with a 2.6 kernel release, GNU Toolchain, Sourcery G++ Lite for ARM GNU/Linux version 2007q1-21 and ARM Mali200 OpenGL ES 2.0 hardware and associated libraries.

5 INSTALLATION

5.1 Installation Procedure

For information on installing the Mali GPU Shader Development Studio, see the Mali GPU Shader Development Studio User Guide.

6 BUILDING

For instructions on building the ShaderServer binary from the supplied source code, consult the Mali GPU Shader Development Studio User Guide.

7 CHANGES IN FUNCTIONALITY FROM PREVIOUS RELEASES

7.1 Changes from v1.1

- The built-in versions of the OpenGL ES 2.0 Emulator library, used by the Shader Development Studio to provide local shader effect rendering (the “Built-In Server”), have been removed. The user should download and install the latest version of the OpenGL ES 2.0 Emulator from <http://www.malideveloper.com> in order to use the built-in rendering capability.

8 KNOWN ISSUES AND LIMITATIONS

Issues related to this release are documented in the Mali GPU Shader Development Studio Errata. Additionally, the following issues are known:

8.1 “Ghost” Eclipse Perspective after un-installation

In some circumstances, a “ghost” Eclipse Perspective remains after uninstalling the Mali GPU Shader Development Studio. This perspective will have the name “<Mali GPU Shader Development Studio>”. Attempting to activate this perspective will result in no activity.

This is believed to be an issue with Eclipse 3.5. The plug-in has successfully uninstalled. The ghost perspective can be removed through the “General” > “Perspectives” preference pane in Eclipse by selecting the ghost perspective and clicking “Delete”.

8.2 Automatic Renderer discovery

Due to technical limitations in the Linux implementation of the Mali GPU Shader Development Studio, automatic discovery of Renderers on the local subnet via UDP broadcast is unreliable. Renderers should be added manually in the “Renderers” preference pane.

Please contact support@arm.com regarding any issues with the installation and content of this release.

It should be noted that Support of the product will only be provided by ARM if such support is covered by a current contract with the recipient.