

SGX DDK Android OGLES 1.1 & OGLES 2.0 1.8

RC793010

Release Notes

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1. Introduction

This document contains the Release Notes for the SGX DDK Android OGLES 1.1 & OGLES 2.0 1.8 RC793010.

1.1. Executive Summary

The defect levels for the driver meet the quality criteria specified by the IMG Software Quality Process. The maximum level of testing exercised on this release was a Level 3.

The table below displays the defect levels for this release against the SQP standards for maximum defect levels:

Priority	SQP Maximum for RC	1.8 RC793010
1	0	0
2	5	3
3	10	5
4	20	0
Waiver	Unlimited	0
Deferred	Unlimited	0

1.2. Risk

The areas of risk for this release are:

- The TDK is still under development to use the Java Native Interface (JNI) and defects reported are based on what test cases are currently available. The ogles2testkit is the most affected application.
- There is some performance caveats associated with this release, though there is no comparable performance degradation. Please see the “SGX DDK Android OGLES 1.1 & OGLES 2.0 1.8 RC793010.Test Report” for more details.

2. Installation

The instructions for building and installing the DDK are specified in the document “SGX Android OMAP4 Blaze.Platform Guide (1.8 DDK)”.

2.1. Hardware Support

This package supports the following SGX platforms:

- OMAP 4430 Blaze ES2.3 GP (SGX540 1.2.0)

This package supports the following SGX core revisions:

- SGX520 1.1.1
- SGX530 1.2.0, 1.2.1, 1.2.5, 1.3.0
- SGX531 1.0.1, 1.1.0
- SGX535 1.2.1, 1.2.6
- SGX540 1.1.0, 1.2.0, 1.2.1, 1.3.0
- SGX543 1.4.0, 1.4.0.1, 1.4.1, 1.4.2, 3.0.2, 3.0.3
- SGX544 1.0.5, 1.1.2, 1.1.4, 1.1.5, 1.1.6
- SGX545 1.0.14

This package supports the use of System Level Cache (SLC) and multiple core (MP) configurations where appropriate.

3. Features

New features associated with this release are listed below:

- Support for Android 4.0 - Ice Cream Sandwich (ICS)
- Android support for OES_image_external
- ION memory manager support for display surfaces
- Support for EGL_ANDROID_blob_cache extension
- Support for EGL_ANDROID_recordable extension

4. Limitations

Limitations associated with this release are listed below:

- Low Latency Scheduling (LLS) cannot be disabled in ICS, due to SurfaceFlinger using context priority enums in its context attrib_list without checking that the context priority extension is supported.

5. Offline Compiler Compatibility

The offline compiler generates binaries for valid shader files and generates errors for invalid shaders.

6. Known DDK Issues

Item ID	Title	Software Component	Priority	State	Errata/Public Statement
BRN35063	Deadlock seen with SPM	(None)	2 – High	In Development	This issue is under investigation
BRN35287	Queue Processing keeps SGX awake even when there are no SGX tasks	Services	2 – High	In Development	This issue is under investigation
BRN35752	GLBenchmark2.1.1 - Pro Offscreen causes assertion in SGXCleanupRequest	Services	2 – High	In Development	Operation pending count will be incorrect if a command can't be submitted. This is understood and will be fixed in a future DDK release.
BRN34694	Driver may attempt to destroy FBO attachment with mipmap filtering	OpenGL ES	3 – Medium	In Development	The driver may crash if a rendering loop is created, whereby a texture is being rendered to while being textured from. This is understood and will be fixed in a future DDK release.

Item ID	Title	Software Component	Priority	State	Errata/Public Statement
BRN35319	Offline Compiler test hangs when testing vertex shader	Compiler	3 – Medium	In Development	A shader containing an infinite loop can cause the compiler to hang. This issue is under investigation.
BRN35443	SUPPORT_DC_CMDCOMPLETE_WHEN_NO_LONGER_DISPLAYED breaks dc_nohw build	Services	3 – Medium	In Development	This issue is under investigation.
BRN35674	Texture dependency deadlock between renders on different contexts	EGL	3 – Medium	In Development	This is understood and will be fixed in a future DDK release.
BRN35736	OSWaitus() time will be 0 for high SGX clock speeds	Services	3 – Medium	In Development	This is understood and will be fixed in a future DDK release.