

# Release Notes for 5.01.01.02 release

## Introduction

This release includes the Linux graphics drivers for the SGX530 family of chipsets AM35x/37xx, AM335x, 387x(TI814x)/389x(TI816x). The Graphics SDK contains documentation, demo programs and tools.

Note: Sanity Tested on AM335x EVM & AM43x EVMs only - unit test report not included in the release package

## Installation and Usage

Please look for detailed installation and usage instructions at the below link-  
[http://processors.wiki.ti.com/index.php/Graphics\\_SDK\\_Quick\\_installation\\_and\\_user\\_guide](http://processors.wiki.ti.com/index.php/Graphics_SDK_Quick_installation_and_user_guide)

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## Features

- **NEW** - SGX Display Class Driver Interface with DRM FBdev emulation - AM335x/AM43x only
  - **NEW** - 3.14 kernel support - Sanity tested on AM43x & AM335x GP-EVM only with kernel tree as mentioned in Pre-requisites section below.
  - Based on 1.10 RC DDK (1.10@2359475)
  - PowerVR SDK 3.0
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## Pre-requisites

### Kernel(Linux PSP) versions supported or used for validation

- AM335x & AM43x -
  - Tree: [git://git.ti.com/ti-linux-kernel/ti-linux-kernel.git](http://git://git.ti.com/ti-linux-kernel/ti-linux-kernel.git)
  - Branch: ti-linux-3.14.y

## Toolchain

- Linaro 4.7.3 hardfp toolchain(arm-linux-gnueabi-hf-) was used for creating this release package.

## **What is supported**

### **Khronos API support**

- OpenGL ES 1.1
- OpenGL ES 2.0
- EGL
- Limited 2D acceleration via PVR2D API

### **Window Systems**

- Null Window System

### **Buffer Swap modes**

The following modes of buffer swapping are supported,

- Front (1 buffer)
- Flip (chained buffers)

Selection of these modes is done via entries in /etc/powervr.ini. Please refer to <http://processors.wiki.ti.com/index.php/SGXDbg#WindowSystem>

### **Extensions**

- IMG proprietary Bufferclass texture streaming enabled by default.

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## **What is not supported**

- Kernel (for OMAP35x/AM35x/37xx) configured without DSS2 framework support will not work with the current display class driver.
  - Xorg driver build (SUPPORT\_XORG=1) not supported.
  - Debug build is meant for debug/testing purposes only & should not be used for measuring performance.
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## Debugging SGX driver related issues

For debugging issues with SGX driver and frequently asked questions, please go through

<http://processors.wiki.ti.com/index.php/SGXDbg>

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## Fixed in this Release

- None
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## Limitations/ Known Issues

- Warning when quitting applications using IMG proprietary Bufferclass texture extension - Issue in freeing of physically contiguous dma memory
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## Contents

The folders in the installed package contain binaries for several family of devices containing the SGX530 core. Brief description of these folders is below.

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### Graphics SDK folder contents

	Folder Name	Description	Used by
2	gfx_dbg_es3.x / gfx_rel_es3.x	Debug/Release binaries for platforms having SGX core revision 1.2.1	(AM35xx) <a href="#">How to check?</a>
3	gfx_dbg_es5.x /	Debug/Release binaries for platforms having SGX core	(AM37xx) <a href="#">How to check?</a>

	gfx_rel_es5.x	revision 1.2.5	
4	gfx_dbg_es6.x / gfx_rel_es6.x	Debug/Release binaries for 38xx(387x,389x) devices (SGX core revision 1.2.5)	38xx <a href="#">How to check?</a>
4	gfx_dbg_es8.x / gfx_rel_es8.x	Debug/Release binaries for 335x devices (SGX core revision 1.2.5)	AM335x EVM
4	gfx_dbg_es9.x / gfx_rel_es9.x	Debug/Release binaries for 43xx devices (SGX core revision 1.2.5)	AM43x EVM
5	GFX_Linux_KM	Source for Graphics Kernel Modules	Contains kernel dependent code, changes depending on Linux kernel used
6	GFX_Linux_SDK	Demos, Training courses, PVR Tools, classes and header files	Used for building new applications (Available only in the SDK package, not in the BIN package)
7	include	Contains updated header file for GL extensions, specifically the buffer class streaming extension	Useful for video texturing applications involving bufferclass driver
8	tools	Contains devmem2, and other packages	Useful for running/debugging/benchmarking of Graphics SDK

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