Generic Linux Software Development Kit (GLSDK) 6_00_00_07 for OMAP5

April 23, 2013

This is an Alpha release of the Generic Linux Software Development Kit (GLSDK) 6.00 for the OMAP5 ES2.0 platform. This GLSDK Software release gives developers the ability to evaluate the hardware and software capabilities of the OMAP5 ES2.0 platform.

This document is divided into the following sections:

Contents

Documentation

- Latest up to the minute information and updates may be found on the Texas Instruments Processors Wiki.

- The *Quick Start Guide* contains information on how to set up your uEVM for an out of box demo showcase as well as for software development. It is located in the *docs/* folder in the GLSDK along with other documentation.

- The *Software Developer's Guide* contains information on how to start developing software on the OMAP5 uEVM and is located in the *docs/* folder in the GLSDK along with other documentation.

- The *Migration Guide from EZSDK to GLSDK* contains information regarding the changes from EZSDK design to the GLSDK design .

- The *GLSDK Data Sheet* contains the features and performance metrics for the GLSDK on OMAP5 ES2.0 uevm.

Components

The Linux GLSDK for OMAP5 is a single package that includes the following components:

- Platform Support Package
    - Linux kernel 3.8.4
    - Boot loaders (u-boot 2013.01.1.1)
    - SYS/BIOS Real Time Operating System
- Graphics Acceleration
    - 3D Graphics Support
- Multimedia Package
    - H.264 Encode and Decode
    - MPEG4 Encode and Decode
    - MPEG2 Decode
    - VC-1 Decode
    - GStreamer libraries and plugins

The Software Build of Materials can be found in the *docs/* folder in the GLSDK

What's New

This is the first release of the GLSDK 6.00 supporting OMAP5 ES2.0.

Installation and Usage

The *Software Developer's Guide* contains information on how to start developing software on the OMAP5 uEVM and is located in the *docs/* folder in the GLSDK along with other documentation.

Host Support

This release supports Ubuntu 12.04 LTS 32-bit as your development host.

Dependencies

The GLSDK requires the Linaro toolchain, more information is there in the Additional Procedures section in the Software Developers Guide

Device Support

This GLSDK supports the OMAP5 ES2.0 uEVM. This release would not support OMAP5 ES1.0.

Validation Information

This release has been tested with OMAP5 ES2.0 uEVM.
Note: This release has been only sanity tested and should not be taken for production.

Feature	Status	comments
H264 Decoder	PASS	
MPEG4 Decoder	PASS	
MPEG2 Decoder	PASS	
MJPEG Decoder	FAIL	getting "Error Pipeline" error
H263 Decoder	FAIL	ducati decoder is not getting invoked for playback
H264 Encoder	PASS	
MPEG4 Encoder	FAIL	encoded stream is corrupted
Audio playback	PASS	Mp3 files are not playing and getting SIGSEGV error
Audio record	PASS	
3D Graphics	PASS	
X server and DRI/DRM	PASS	
ubuntu desktop	PASS	

Upgrade and Compatibility Information

Known Issues and Limitations

Known Issues:
OMAPS00293304 Got warning when running gst-launch first time
OMAPS00293312 GStreamer error after pipeline is freed
OMAPS00293382 Display on xvimagesink is slow, frames are being dropped.
OMAPS00293389 Getting Could not decode stream error inbetween playing specific stream
OMAPS00293390 For specific files, randomnly getting SIGSEGV error inbetween playing the file
OMAPS00293395 Getting coloured strip(pink or green) at the top of the playing window with specific WMV stream
OMAPS00293396 Frames getting dropped during playback of specific streams
OMAPS00293397 Flickering is there during playback of video with specific stream
OMAPS00293398 MPEG2 AV files cannot be played with GStreamer
OMAPS00293402 Frame drop with kms sink.
OMAPS00293406 H264 Level 1.1 Encode fails if no bitrate is passed to gst pipeline
OMAPS00293447 Ducati H264 Encode : Video is jerky in the begining
OMAPS00293449 MPEG Ducati Encode : gstreamer inter-interval option not available

OMAPS00293454 Ducati hangs when trying to encode and decode a MPEG4 stream simultaneously
OMAPS00293506 Some files get SIGSEGV error always and cannot be played.
OMAPS00293535 Ducati JPEG Decode using Gstreamer Failed (assertion `width > 0 && height > 0' failed)
OMAPS00293587 Video playback is jerky with higher resolution i.e 1080p for WMV files
OMAPS00293591 Cannot unlock when desktop is locked (Incorrect password error)
OMAPS00293648 gnome-terminal fails to start
OMAPS00293651 Video Streaming using RSTP is jerky and frame loss
OMAPS00293652 X11 Crashes using Open Box when opening 2 terminals attached side by side
OMAPS00293656 H264 Ducati Encode Error for some specific parameters
OMAPS00293753 Regularly gets error on the minicom screen "omap_hsmmc 480ad000.mmc: vmmc regulator missing"
OMAPS00293781 Unable to play any file with GStreamer.
OMAPS00293791 Date is not set to the current time on the board, it is set to an older date
OMAPS00293815 Gstreamer does not work after running with a specific stream, also the playback stops inbetween with the stream
OMAPS00293843 reboot command crash after executing ./first-boot.sh script
OMAPS00293846 H264 Encode not working randomly using test videotestsrc
OMAPS00293864 Could not decode MPEG4_WB_AMR file
OMAPS00293865 Buffers being dropped for MPEG4_WB_AMR files
OMAPS00293868 H.263 files not using hardware decode.
OMAPS00293869 GStreamer pipeline is not freed when using pvrvideosink.
OMAPS00293872 Could not decode stream for MPEG4_WB_AMR file
OMAPS00293873 PVRDRMSetFD on particular files with GStreamer using pvrvideosink.
OMAPS00293874 Buffer being dropped for h264 file
OMAPS00293878 Gstreamer playback hangs inbetween during playback of specific MPEG4 files, need to reboot to use gstreamer again

Limitations:

- Power and Thermal management is not implemented
- Camera and ISP features are not supported

Versioning

This is an EA release (GLSDK 6_00_00_07) for OMAP5.

Technical Support and Product Updates

Latest up to the minute information and updates may be found on the [1].
E2E Linux Forum - http://e2e.ti.com/support/embedded/f/354.aspx] can be used for discussing the Linux GLSDK development.