

OMAPL138 DVSDK 4.03 Release Notes

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Digital Video Software Development Kit (DVSDK) 4_03_00_06 for the OMAP-L138

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This is a Generally Available (GA) release of the DaVinci Software Development Kit (DVSDK) 4_03_00_06 for the OMAP-L138 platform. This DVSDK Software release gives developers the ability to evaluate the hardware and software capabilities of the OMAP-L138 platform. Developers will be able to evaluate the ARM Linux programming environment and easily utilize the hardware support for the powerful multimedia codecs.

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Documentation

- Latest up to the minute information and updates may be found on the [Texas Instruments Embedded Processors Wiki](#).

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- The *Quick Start Guide* contains information on how to set up your board for an out of box demo showcase as well as for software development. It is located in the *docs/* folder in the DVSDK along with other documentation.
- The *Software Developer's Guide* contains information on how to start developing software on the OMAP-L138 board and is located in the *docs/* folder in the DVSDK installation along with other documentation.

Content Overview

The OMAP-L138 Linux DVSDK includes the following components:

- Platform Support Package
 - ◆ Linux kernel 2.6.37
 - ◆ Boot loaders (u-boot, UBL) and flashing utilities
- Multimedia Package
 - ◆ Multimedia Framework Product (MFP)
 - ◇ Codec Engine Framework (CE)
 - ◇ Framework Components (FC)
 - ◇ Linux Utils (CMEM)
 - ◇ XDAIS (eXpress DSP Algorithm Interoperability Standard)
 - ◆ Davinci Multimedia Application Interface (DMAI)
 - ◆ DSP Optimized codecs
 - ◇ Encoders: H.264, MPEG-4, JPEG, G711
 - ◇ Decoders: H.264, MPEG-4, MPEG-2, AAC, JPEG, G711
 - ◆ DSP accelerated GStreamer TI plugin
- DSP Package
 - ◆ C6000 code generation tool chain
 - ◆ DSP/BIOS Real Time Operating System
 - ◆ DSP/BIOS Platform Support Package (device drivers)
 - ◆ EDMA3 Low Level Driver(LLD)
 - ◆ DSPLink Inter Processor Communication
 - ◆ C6Accel - easy access to DSP accelerated function libraries
 - ◆ C6Run - tool to easily run C code on the DSP
 - ◆ Audio SOC example - ARM + DSP audio demo
- Graphics Package
 - ◆ Qt/Webkit application framework
- Codec Server built for C674x DSP platform.

What's New

The following high-level features are new from the previous SDKs:

- Linux Kernel 2.6.37
- Migrated to integrated GCC 4.3-based toolchain built from Arago
 - ◆ This SDK has changed from using a stand-alone Code Sourcery Lite toolchain to using an integrated GCC 4.3-based toolchain built from Arago. There is no longer a need to download a separate toolchain as the toolchain and tools can now be found in the linux-devkit directory of the SDK

Installation and Usage

The *Software Developer's Guide* contains information on how to start developing software on the OMAP-L138 device and is located in the *docs/* folder in the DVSDK installation along with other documentation.

Host Support

This release only supports Ubuntu 10.04 LTS 32-bit as your development host.

Dependencies

QualiTI tool requires the Code Generation Tools XML Output Perl Utility Scripts (CG XML) that is not included in the DVSDK. The CG XML component is available [here](#)

Device Support

This DVSDK supports the OMAP-L138 EVM and the OMAP-L138 eXperimenter kits.

The Multi media applications are designed to run with 128MB board. Earlier eXperimenter revision boards were supporting only 64MB. The default configuration and setup assumes a 128MB board via the bootargs. The DVSDK setup.sh script referenced in the DVSDK *Software Developer's Guide* has an option to change these settings. Also to run multi media applications it is required to change the memory map of these applications.

Validation Information

This release has been validated on an OMAP-L138 (Si 2.0) EVM Development Kit board.

Upgrade and Compatibility Information

All the applications migrating to this DVSDK from DVSDK 04.02.00.06 should be ensured to work with kernel 2.6.37

Known Issues and Limitations

Known Issues

- SDOCM00087012 - Audio Soc generates error like "tps6507x 1-0048: TSC mode read failed", this is also reported in below e2e forum.
- SDOCM00086997 - Need to remove the 'QVGA' text from "Multimedia-> H264+AAC QVGA Decode" icon.
- SDOCM00086992 - In the WLAN documentation, there is a mistake in the number represented S7 switch.
- SDOCM00086990 - Multimedia demos can not be run while using switch setting S7:2,3 to ON for running WLAN demos.

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- SDOCM00086944 - make matrix command is giving errors
- SDOCM00086942 - make gstreamer_ti command is giving errors
- SDOCM00086930 - Getting segmenation issue while running C6run sample application 'bench_dsp'
- SDOCM00086876 - Some printed text "dvsdkval@dvsdkval" displayed in 'Matrix GUI->System Info' information.
- SDOCM00086874 - Clicking on 'Matrix GUI ->Settings ->System Shutdown' is not turning off the LCD screen.
- SDOCM00086866 - Getting segmenation issue while running C6run sample application cfft_dsp
- SDOCM00086777 - Decode and Dump using Gstreamer is not working properly.
- SDOCM00086657 - The video output quality for Mpeg2 Decode Display using gstreamer application is very bad.
- SDOCM00086652 - Observed unwanted messages during board boot.
- SDOCM00086651 - during make clean â No platform configured! Nothing cleanedâ message comming from c6run comp
- SDOCM00086650 - After clicking Browser Demo one warning message window appears for the first time click.
- SDOCM00086640 - Under PRU demos from Matrix GUI, â EDMA configâ example failed.
- SDOCM00073168 - Installer deletes the entire contents of the install folder when installation is canceled.
- SDOCM00074043 - The PSP Features and Performance Guide pdf contains overlapping and missing table information
- SDOCM00074822 - GStreamer pipeline to encode H.264 video generated from videoetestsrc element fails after multiple iterations
- SDOCM00074869 - GStreamer pipeline crashes after 3 hours while decoding an mpeg4 video stream
- SDOCM00074904 - GStreamer pipeline for H264 video decode fails after multiple iterations
- SDOCM00077238 - Memory leak is observed for H264 encode operation for long duration (8+ hrs)

More details on the known issues can be found on the [DSP Tools and Software Bug Search page](#). You must be a registered user on my.ti.com before you request a new account for the SDOWP database.

Limitations

- The Graphical LCD (GLCD) is enabled by default in the kernel shipped with the DVSDK. To use the Video Port Interface (VPIF) on the UI card, the GLCD must be disabled and the VPIF enabled in the kernel. These devices are pin multiplexed and can't be used simultaneously on the OMAP-L138 EVM with the UI card. Information on how to enable the VPIF in the kernel can be found in *Community Linux PSP User's Guide* which is provided with the DVSDK, its located in the \$(DVSDK)/psp directory. Refer to the *Configuring Linux Kernel* and the *Linux drivers usage* sections.

Versioning

This is a Generally Available (GA) release (DVSDK 4_03_00_06) for OMAP-L138.

Technical Support and Product Updates

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- The [Embedded Software Linux forum](#) is a forum for discussing the Linux DVSDK development. New versions of the DVSDK are also announced here.
- The [DVSDK download page](#) is a top level page for finding the latest DVSDK releases for all TI platforms.