OMAPL138 DVSDK 4_02_00_06 Release Notes

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Digital Video Software Development Kit (DVSDK) 4_02_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_02_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.

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 Embedded Processors Wiki.

- 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 2.6.33
    - 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

What's New

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

- Integrated Wireless LAN and Bluetooth Software stack. See WLAN <u>release note</u>.
- Codec Server built for C674x DSP platform.

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 <u>Ubuntu 10.04 LTS 32-bit</u> as your development host.

Dependencies

The DVSDK requires the CodeSourcery toolchain, a link is provided on the DVSDK 4.xx Release Page or provided with a CD in your kit.

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 <u>here</u>

Device Support

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

The 128MB and 64MB (previous eXperimenter revision) boards are supported. The default configuration and setup assumes a 128MB board via the bootargs. The DVSDK setup.sh script referenced in the the DVSDK *Software Developer's Guide* has an option to changing these settings.

Validation Information

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

Upgrade and Compatibility Information

There are no known upgrade or compatibility issues with SDK 1.00

Known Issues and Limitations

Known Issues

- 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)

- For WLAN known issue see <u>release note</u>.

More details on the known issues can be found on the <u>DSP Tools and Software Bug Search page</u>. 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_02_00_06) for OMAP-L138.

Technical Support and Product Updates

- Latest up to the minute information and updates may be found on the <u>Texas Instruments Embedded Processors Wiki</u>.

- The <u>Embedded Software Linux forum</u> is a forum for discussing the Linux DVSDK development. New versions of the DVSDK are also announced here.

- The <u>DVSDK download page</u> is a top level page for finding the latest DVSDK releases for all TI platforms.