

# OMAPL138 DVSDK 4.00 Release Notes



## Digital Video Software Development Kit (DVSDK) 4\_00\_00\_22 for the OMAPL138

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This is a Generally Available (GA) release of the DaVinci Software Development Kit (DVSDK) 4.00 for the OMAPL138 platform. This DVSDK Software release gives developers the ability to evaluate the hardware and software capabilities of the OMAPL138 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](#).
- The *Quick Start Guide* contains information on how to set up your EVM 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 OMAPL138 EVM and is located in the *docs/* folder in the DVSDK installation along with other documentation.

## Content Overview

The OMAPL138 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
    - ◇ Framework Components
    - ◇ 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
- Graphics Package
  - ◆ Qt/WebKit application framework

## What's New

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

- GStreamer is updated and integrated in the kit as opposed to being a separate download.
- Qt/Embedded is integrated in the kit for GUI support.
- The Matrix application launcher is provided as part of the kit.
- All software packages, excluding the CodeSourcery GCC toolchain, are integrated in one unified installer.
- The Getting Started Guide has been expanded upon and is now called the Software Developers Guide.
- C6Run package has been included
  - ◆ Qt based DSP Fractal out-of-box demo using C6Run has been included
- DSP Benchmark demo using C6Accel has been included

- Multimedia demo using GStreamer has been included
- Updated PSP version to enable SD boot

## Installation and Usage

The *Software Developer's Guide* contains information on how to start developing software on the OMAPL138 EVM 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

The DVSDK requires the CodeSourcery toolchain, a link is provided on the DVSDK 4.00 Release Page or provided with a CD in your EVM 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 [here](#)

## Device Support

This DVSDK supports the OMAPL138 EVM.

The 128MB and 64MB 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 EVM Development Kit Rev D board.

## Upgrade and Compatibility Information

There are no known upgrade or compatibility issues with SDK 1.00

## Known Issues and Limitations

### Known Issues

## OMAPL138 DVSDK 4.00 Release Notes

- SDOCM00074043 - The PSP Features and Performance Guide pdf contains overlapping and missing table information
- SDOCM00074395 - The H264+AAC QVGA BigBuckBunny video clip's first few frames contain blockiness
- SDOCM00074822 - GStreamer pipeline to encode H.264 video generated from videotestsrc 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

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), the GLCD must be disabled and the VPIF enabled in the kernel. These devices are pin multiplex and can't be used simultaneously on the OMAP-L138 EVM. 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 in the 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\_00\_00\_22) for OMAPL138.

## Technical Support and Product Updates

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