

OMAP3530 DVSDK 4.00 Release Notes



Digital Video Software Development Kit (DVSDK) 4_00_00_22 for the OMAP3530

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This is a Generally Available (GA) release of the DaVinci Software Development Kit (DVSDK) 4.00 for the OMAP3530 platform. This DVSDK Software release gives developers the ability to evaluate the hardware and software capabilities of the OMAP3530 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 OMAP3530 EVM and is located in the *docs/* folder in the DVSDK installation along with other documentation.

Content Overview

The OMAP3530 Linux DVSDK includes the following components:

- Platform Support Package
 - ◆ Linux kernel 2.6.32
 - ◆ Boot loaders (u-boot, x-loader)
- 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
 - ◆ DSPLink Inter Processor Communication
 - ◆ C6Accel - easy access to DSP accelerated function libraries
 - ◆ C6Run - tool to easily run C code on the DSP
- Graphics Package
 - ◆ Neon accelerated Qt/WebKit application framework
 - ◆ 3D Graphics Support

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.
- DSP edge detection demo has been included.
- The DVSDK demos now use a Qt/Embedded based GUI and is driven by touch screen for LCD output, or mouse input for TV or DVI output.

Installation and Usage

The *Software Developer's Guide* contains information on how to start developing software on the OMAP3530 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 OMAP3530 EVM.

Validation Information

This release has been tested with ES 3.1 Silicon with EVM Base board Revision-G and processor card Revision-C.

MMC booting on an EVM with ES2.1 silicon populated with Samsung OneNAND memory requires patching u-boot as described in [Rebuilding U-boot](#). After rebuilding u-boot, copy the new u-boot.bin to the SD Card and configure the DIP switch SW4 to boot from MMC/SD (on EVM with Samsung OneNAND) as described in [Selecting Boot Mode](#)

Upgrade and Compatibility Information

There are no known upgrade or compatibility issues with DVSDK 3.01 beta.

Known Issues and Limitations

- SDOCM00074069 - High ARM load seen with GStreamer pipelines involving the ISP resizer
- SDOCM00073578 - First few frames of the edge detection demo having video frames at 600 and 300 mpurate.
- SDOCM00073445 - OMAP3530 Quality issue with edge detection demo.

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- SDOCM00073347 - DVSDK decode demo application decoding (Mpeg2 + aac) doesn't work with loop (-l)
- SDOCM00073290 - Run time switch from LCD to DVI (and visa versa) the OSD overlap time DVSDK decode demo runs
- SDOCM00073286 - S-video display has noise
- SDOCM00073168 - Installer deletes the entire contents of the install folder when installation is cancelled
- SDOCM00073073 - DVSDK Decode demo application crash with -l option for CIF and QCIF resolution
- SDOCM00073040 - DVSDK encode demo hangs if record and pause is pressed multiple times
- SDOCM00070390 - DVSDK encode demo freezes temporarily after 20-25 s while recording to SD card

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.

Versioning

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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.