TMS320DM368 DVSDK 4.04 Release Notes

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Digital Video Software Development Kit (DVSDK) 4_04_00_18 for the TMS320DM368

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This is a Generally Available (GA) release of the DaVinci Software Development Kit (DVSDK) 4_04_00_18 for the TMS320DM368 platform. This DVSDK Software release gives developers the ability to evaluate the hardware and software capabilities of the TMS320DM368 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 TMS320DM368 board and is located in the *docs/* folder in the DVSDK installation along with other documentation.

Content Overview

The TMS320DM368 Linux DVSDK includes the following components:

- Platform Support Package
    - Linux kernel 2.6.37
    - Boot loaders (u-boot, UBL) and their 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)
    - H/W accelerated codecs
        - Encoders: H.264, MPEG-4, JPEG, AAC, G711, MPEG-2
        - Decoders: H.264, MPEG-4, MPEG-2, AAC. JPEG, G711, VC1
    - H/W accelerated Gstreamer TI plugin
- Graphics Package
    - Qt/Webkit application framework

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
- Gstreamer capture plugin code is implemented using Media controller framework and DMAI APIs
- H264 decoder, H264 encoder, Mpeg2 decoder, Mpeg2 encoder, Mpeg4 decoder, Mpeg4 encoder, Mpeg4_hdvicp decoder, Mpeg4_hdvicp encoder, JPEG encoder, AAC encoder have been updated to newer revisions.

Installation and Usage

The *Software Developer's Guide* contains information on how to start developing software on the TMS320DM368 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

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 TMS320DM368 EVM

Note that only silicon revision 1.2 or above is supported.

Validation Information

This release has been tested with TMS silicon revision 1.2 on EVM base board revision G, and LI-5M02 Camera board Rev 2.0.

Upgrade and Compatibility Information

There are no known upgrade or compatibility issues with DVSDK 4.01.

Known Issues and Limitations

Known Issues

- SDOCM00074485 - Audio decode operation finishes slightly before the end of the stream.
- SDOCM00074857 - In EncodeDecode demo, white lines are seen at the top edge of image.
- SDOCM00077916 - Audio decode demo failed to decode some high sound bit rate audio streams.
- SDOCM00090388 - line-in and mic input for DMAI audio encode produces an audio output with lot of glitches and sound skips in between.
- SDOCM00092985 - A specific DMAI 1080I MPEG4 decode output is having a green vertical strip in the middle of the display.

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.

Versioning

This is a Generally Available (GA) release (DVSDK 4_04_00_18) for TMS320DM368.

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.