TMS320DM368 DVSDK 4_02_00_06 Release Notes

Digital Video Software Development Kit (DVSDK) 4_02_00_06 for the TMS320DM368

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This is a Generally Available (GA) release of the DaVinci Software Development Kit (DVSDK) 4_02_00_06 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 2.6.32.17
  - ♦ 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:

- Decode support at 1080P resolution.
- The DVSDK demos have been updated to provide better performance. They now use closed-loop decoding for faster processing. **Note**: using closed-loop decoding means only video streams produced by TI encoders (ti.sdo.codecs.h264enc and ti.sdo.codecs.mpeg4enc) can be decoded. GStreamer on the other hand continues to use the universal codecs.
- H264 encoder has been updated to a newer revision with better performance.
- Updated PSP and many other components. See software manifest for new component version numbers, and refer to each component's release notes for what's been changed.

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 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.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 here

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

- SDOCM00077978 - Mouse loses power over time when connected to DM368 EVM
- SDOCM00074628 - (Encode demo) First frame of encoded stream is corrupted.
- SDOCM00074625 - Encoded content has a black strip on top (component input). This is visible on the preview as well.
- SDOCM00074604 - (Encode demo) Encoded contents have a black strip on left side (composite input).
- SDOCM00074518 - Distortion is heard in the decode demo during audio (aac) decode after pause and play.
- SDOCM00074485 - Audio decode operation finishes slightly before the end of the stream.
- SDOCM00072912 - Left side crop observed while playing back a stream using GStreamer pipeline or DVSDK demos.
- 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.
- SDOCM00073168 - Installer deletes the entire contents of the install folder when installation is cancelled.

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

This is a Generally Available (GA) release (DVSDK 4_02_00_06) for TMS320DM368.

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.