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**RELEASE NOTES**

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**DSP/BIOS™ LINK****LNK 111 REL****Version 1.65.00.03****JUL 16, 2010**

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**TABLE OF CONTENTS**

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|   |   |    |
|---|---|----|
| 1 | Introduction .....  | 6  |
|   | 1.1 Text Conventions .....                                      | 7  |
| 2 | Out-of-Box Contents .....                                       | 7  |
| 3 | Minimum System Requirements.....                                | 8  |
|   | 3.1 Hardware.....   | 8  |
|   | 3.2 Software.....   | 8  |
| 4 | Functionality Supported.....                                    | 11 |
|   | 4.1 Features .....  | 11 |
|   | 4.2 Feature enhancements from previous release 1.65.00.02.....  | 14 |
|   | 4.3 Generic Defect fixes from previous release 1.65.00.02 ..... | 15 |
|   | 4.4 Platform-specific defect fixes .....                        | 16 |
|   | 4.5 Operating System specific defect fixes.....                 | 18 |
|   | 4.6 Upgrade and compatibility information.....                  | 19 |
| 5 | Validation Status .....   | 20 |
| 6 | Known Issues .....  | 21 |
|   | 6.1 Generic.....  | 21 |
|   | 6.2 Platform Specific Issues.....                               | 21 |
|   | 6.3 Operating System specific Issues.....                       | 24 |
| 7 | Guidelines and Limitations.....                                 | 25 |
| 8 | Technical Support .....   | 26 |
|   | 8.1 Support for DSP/BIOS™ LINK.....                             | 26 |

## 1 Introduction

DSP/BIOS™ LINK is foundation software for the inter-processor communication across the GPP-DSP boundary. It provides a generic API that abstracts the characteristics of the physical link connecting GPP and DSP from the applications. It eliminates the need for customers to develop such link from scratch and allows them to focus more on application development<sup>1</sup>.

As the name suggests, DSP/BIOS operating system is expected to be running on the DSP with all of these platforms.

The platforms in this release are:

- DRX45X
- DRA44x
- DM6437 connected to DRA44x over VLYNQ interface
- DRX416
- DM6446 with WinCE
- OMAP3530 with WinCE
- TNETV107XGEM with WinCE
- DA8XX with WinCE
- OMAPL1XX with WinCE
- DA850 with WinCE
- OMAPL138 with WinCE

Additionally, support for the following platforms is available in the release:

- OMAP3530 EVM
- OMAP370 EVM
- OMAP2530 EVM
- DM6446 (Davinci)
- DM6467 (Davinci HD)
- DM6467T
- DA8XX
- OMAPL1XX
- Linux PC + DM6437 over PCI
- Linux PC + DM648 over PCI
- DM357
- Multi-DSP configuration: Linux PC + two DM6437 over PCI
- OMAPL138
- DA850

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<sup>1</sup> Applications differentiate the products. The application developers would prefer to focus on the application rather than the IPC mechanism.

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## 1.1 Text Conventions

- 
- |   |  |
|---|--|
| ○ | This bullet indicates important information.<br>Please read such text carefully. |
| □ | This bullet indicates additional information.                                    |
- 

## 2 Out-of-Box Contents

This release of DSP/BIOS™ LINK contains the following:

1. Installer package for DSP/BIOS™ LINK containing:
  - TAR.GZ file containing the DSP/BIOS™ LINK installation package.
  - Scripts, tools etc., to use on the debug and development host machines.
2. Release Notes (this document) providing an overview of this release.
3. Installation Guide, Platform Guide, User Guide, Programmer's Guide and other technical documents.

Complete list of the documents is available in the User Guide.

### 3 Minimum System Requirements

#### 3.1 Hardware

Depending on the target platform configuration, DSP/BIOS™ Link sources can be compiled on a PC running either Microsoft Windows or Red Hat Linux.

##### 3.1.1 Development / Debug Host Machine

Please refer to installation guide for the relevant platform.

#### 3.2 Software

##### 3.2.1 Generic Software Requirement

- PERL Installation
- TeraTerm (or any other terminal emulation program)
- One of GNU make version 3.81, 3.81beta1, 3.90 or 3.92.
- On hosts where the above mentioned make versions are not available, DSPLINK users can use gmake (from TI XDC tools) to build DSPLink.
- To build DSPLink using gmake (from TI XDC tools) run gmake as below:  
`<Absolute path of gmake from TI xdc tools>$ gmake -s [debug|release].`  
 For example,
  - 1) `/opt/xdc/<xdctools install path>/gmake -s debug`
  - 2) `/opt/ti-tools/<bios install path>/xdctools/gmake -s debug`
- GNU make 3.81 version can be downloaded and installed from <http://ftp.gnu.org/pub/gnu/make/make-3.81.tar.gz>
- The software listed above is not part of the DSP/BIOS™ LINK release. For all the TI products, please contact your TI representative.
- ActivePerl - a distribution of PERL from Active State - can be obtained from the URL <http://www.activestate.com/Products/ActivePerl/>

##### 3.2.2 Platform Specific Software Requirement

- For all platforms, this release will not work with versions of DSP/BIOS earlier than that specified in the dependencies.

###### 3.2.2.1 For Working with DRA44x

- eBinder version ver 1.7 rev0 with valid licenses.
- JTAGJet emulator driver available from Signum Systems
- J1\_BSP\_v1.6.0beta.zip : Board Support Package(BSP)
- pre-drx40x-psp-rel0.1.0: TI PSP release.
- PrF2\_ver1.3rev1.zip : PrFILE2 (including RAM disk driver) : "Board Support Package" and consists of board dependent modules.
- BGX\_95V\_100\_000.zip : Patch for PrFILE2.

- 3.2.2.2 *For Working with DRX416*
- § eBINDER version ver 1.7 with valid licenses.
  - § JTAGJet emulator driver available from Signum Systems
  - § eSOL Board Support Package(BSP)
  - § DSP/BIOS patch for J2 (TI internal).
  - § TI PSP release REL\_DRX40X\_PSP\_0.6.0.zip (TI internal) supporting eSOL release for DRX41x.
  - § TI EDMA release EDMA3\_LLD\_setupwin32\_1\_05\_00\_01.exe
  - § PrF2\_ver1.3rev1.zip: PrFILE2 (including RAM disk driver): "Board Support Package" and consists of board dependent modules.
  - § BGX\_95V\_100\_000.zip: Patch for PrFILE2.
  - § BGX\_963\_100\_000.zip.
- 3.2.2.3 *For Working with DRX45X*
- For Standalone DSP/BIOS™ 5.33.05
  - CCS 3.3 IDE
  - DSP CG Tools version v6.0.14 or greater
  - PROS Kernel release (REL\_DRX45X\_03.00.00.03.01.zip)
  - Toolchain (MS470 C/C++ CODE GENERATION TOOLS Release 4.1.4)
- 3.2.2.4 *For Working with DM6446*
- DSP/BIOS™ version can be 5.32.04 or 6.20.00.13.2 (one of the below)
  - For Standalone DSP/BIOS™ 5.32.04.
    - § DSP CG Tools version v6.0.18 or greater
    - § CCS 3.3 IDE for debugging purposes.
  - For Standalone DSP/BIOS™ bios 6.20.00.13.2.
  - XDC release version xdc 3.15.00.13
  - CCS 3.3.38.2 for debugging purposes.
  - DSP CG tools version v6.1.5.
  - Windows CE release
  - Visual Studio 2005 with Platform Builder R2.
  - With Davinci BSP for WinCE 6.0.
- 3.2.2.5 *For working with OMAP3530*
- Standalone DSP/BIOS™ 5.32.04.
  - DSP CG Tools version v6.0.18 or greater
  - CCS 3.3 IDE
  - Windows CE release
  - Visual Studio 2005 with Platform Builder R2.
  - With OMAP3530 BSP v 6.11 for WinCE 6.0.
- 3.2.2.6 *For working with TNETV10*
- Standalone DSP/BIOS™ 5.41.00.06
  - DSP CG Tools version v6.0.18 or greater
  - CCS 3.3 IDE
  - Windows CE release
  - Visual Studio 2005 with Platform Builder R2.
  - With TNETV10 BSP for WinCE 6.0.
- 3.2.2.7 *For Working with DA8XX*
- Standalone DSP/BIOS™ version 6.20.00.37
  - XDC version 3.15.00.50

- IPC version 1.00.00.40
- CCS 3.3.38.2 for debugging purposes
- DSP CG tools version v6.1.5
- Visual Studio 2005 with Platform Builder R2
- OMAPL137\_AM17x\_CE6 BSP Release v1.2 for WinCE 6.0

#### 3.2.2.8 *For Working with OMAPL1XX*

- Standalone DSP/BIOS™ 5.33.05
- DSP CG Tools version v6.1.2 or greater
- CCS 3.3 IDE for debugging purposes
- Visual Studio 2005 with Platform Builder R2
- OMAPL137\_AM17x\_CE6 BSP Release v1.2 for WinCE 6.0

#### 3.2.2.9 *For Working with DA850*

- Standalone DSP/BIOS™ version can be 6.20.00.37
- XDC version 3.15.00.50
- IPC version 1.00.00.40
- CCS 3.3.38.2 for debugging purposes
- DSP CG tools version v6.1.5
- Visual Studio 2005 with Platform Builder R2
- OMAPL138\_AM18x\_CE6\_BSP Release v1.2 for WinCE 6.0

#### 3.2.2.10 *For Working with OMAPL138*

- Standalone DSP/BIOS™ 5.33.05
- DSP CG Tools version v6.1.5 or greater
- CCS 3.3 IDE for debugging purposes
- Visual Studio 2005 with Platform Builder R2
- OMAPL138\_AM18x\_CE6\_BSP Release v1.2 for WinCE 6.0

---

## 4 Functionality Supported

### 4.1 Features

#### 4.1.1 Generic Features

##### 4.1.1.1 *Support for multiple platforms*

DSPLink supports multiple platforms in specific configurations as mentioned in this document. The standard features of DSP/BIOS™ LINK are supported with this release. For additional information, please refer to the User Guide and Programmer's Guide documents.

##### 4.1.1.2 *Multi-process and multi-application support*

Multiple applications or processes can directly call DSP/BIOS LINK PROC APIs to setup, control the DSP and destroy the DSPLink driver. They do not need to coordinate between themselves at run-time to access the DSPLink driver. The only thing they need to ensure is:

1. The same DSP executable is used by all applications simultaneously using DSPLink
2. The same dynamic configuration is used by all applications simultaneously using DSPLink

##### 4.1.1.3 *Support for multiple DSPs connected to GPP in star-topology*

DSPLink supports multiple DSPs connected to the master GPP processor in a star-topology. With this feature, it is possible to connect multiple DSPs to the GPP in the system, over heterogeneous physical links. Example reference ports have also be included for multi-DSP configurations:

- o Linux PC connected to two DM6437 devices over PCI
- o DRA44x connected to external DM6437 over VLYNQ

The DSPLink static build configuration supports choosing the desired device and build configuration. The static build configuration supports command-line based usage to enable scripting.

#### 4.1.2 PROC module

##### 4.1.2.1 *DSP boot-load*

This release supports boot-loading the DSP from the ARM. This includes:

- Initializing the DSP & making it available for access from the GPP.
- On OMAP platforms: Configuring the DSP MMU to allow straight-through access for specified memory regions.
- Loading code on the DSP. Multiple types of loaders can be used for this. DSPLink provides a few standard loaders as part of the release package. Additional loaders can be added and plugged into DSPLink.
- Starting execution from the run address specified in the executable.
- Reading from or writing to DSP memory.

- Stopping DSP execution.
- DSP/BIOS LINK for the OMAP platforms does not perform any power management of the DSP. This is expected to be done by u-boot or other power-management utilities.

If PROC-only scalability configuration build is used, DSPLink does not perform driver handshake and interrupts initialization. Due to this, DSPLink can be used in PROC-only configuration to load and start a non-DSPLink DSP executable, i.e. a DSP executable that has no DSPLink content or shared memory usage within it.

#### Support for multiple boot modes

DSPLink supports three different types of DSP boot modes:

- DSPLINK\_BOOT\_MODE: Default
  - GPP boots first
  - Uses DSPLink to load the DSP
  - Uses DSPLink to start the DSP running
- DSPLINK\_NOLOAD\_MODE: External DSP load
  - GPP boots first
  - Application/GPP boot-loader pre-loads the DSP
  - Uses DSPLink to optionally power up the DSP
  - Uses DSPLink to start the DSP running
- DSPLINK\_NOBOOT\_MODE: External DSP start. This supports two scenarios
  - GPP-based load
  - GPP boots first
  - Application/GPP boot-loader pre-loads the DSP
  - Application/GPP boot-loader starts the DSP running
  - Uses DSPLink only for IPC with the DSP

OR

- DSP-based load
- DSP boots first, starts running an application
- GPP comes up later and sets up DSPLink, which initializes shared memory
- DSPLink is not used to load or start the DSP
- Uses DSPLink only for IPC with the DSP

For complete details on the boot modes along with information on configuration and application usage, please refer to the Programmer's Guide document.

#### 4.1.2.2 *Dynamic configuration*

DSP/BIOS™ LINK can be dynamically configured with parameters specific to the system configuration. This can be decided by the system integrator. Usage of a new dynamic configuration does not require re-build of DSPLink libraries.

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### 4.1.3 Inter-processor communication modules

#### 4.1.3.1 POOL

The POOL component supports configuring and using shared memory buffers across processors. This includes

- Configuring the shared memory region through open & close calls.
- Allocating and freeing buffers from the shared memory region.
- Translating address of a buffer allocated to different address spaces (e.g. GPP to DSP)
- Synchronizing contents of memory as seen by the different CPU cores (Not applicable for the OMAP3530 platform)

#### 4.1.3.2 NOTIFY

The NOTIFY component allows applications to register for notification of events occurring on the remote processor and send event notification to the remote processor.

It uses the physical interrupt present between the processors and provides the facility of multiple prioritized events over the same physical interrupt.

#### 4.1.3.3 MPCS

The MPCS component allows applications to achieve mutually exclusive access to shared data structures through a multi-processor critical section (MPCS) between GPP and DSP.

#### 4.1.3.4 MPLIST

The MPLIST component provides a doubly-linked circular linked list based transport mechanism between GPP and DSP.

It provides APIs for pushing and popping buffers from the list, traversing the list, inserting and removing elements and other services. The list is shared between the two processors.

#### 4.1.3.5 CHNL

The CHNL component provides issue-reclaim based data streaming. It is based on the SIO module in DSP/BIOS™.

#### 4.1.3.6 MSGQ

The MSGQ component provides queue based messaging. It is an acronym for 'message queue'.

This component is responsible for exchanging short messages of variable length between the GPP and DSP clients. It is based on the MSGQ module in DSP/BIOS™.

The messages are sent and received through message queues.

This component is based on the MSGQ module in DSP/BIOS™.

#### 4.1.3.7 RING IO

The RingIO component provides circular ring buffer based data streaming. Each ring buffer can be operated on by a single reader and single writer.

## 4.2 Feature enhancements from previous release 1.65.00.02

This release is binary compatible to previous release 1.65.00.02

### 4.2.1 Addition of WinCE support on OMAPL1XX, DA8XX, OMAPL138, DA850

Support for WinCE has been added on OMAPL1XX, DA8XX, OMAPL138, DA850. This has been tested in the default boot mode only.

- DSPLINK\_BOOT\_MODE: Default
  - GPP boots first
  - Uses DSPLink to load the DSP
  - Uses DSPLink to start the DSP running

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### 4.3 Generic Defect fixes from previous release 1.65.00.02

| Identifier   | Headline                                  |
|--------------|---|
| SDOC00070247 | DSPLink creates an un-named task for MSGQ |

Description:

There is a request from one of our customers to add a "DSP/BIOS task name" for DSP Link.

Expected Result:

The customer should not see a high priority un-named task.

Release Note:

The task created for DSPLink in TSK mode has been updated with the name 'DSPLINK\_ZCPYMQT'

## 4.4 Platform-specific defect fixes

### 4.4.1 DM6446 specific

None.

### 4.4.2 DA8xx/OMAPL1XX specific

| Identifier    | Headline  |
|---------------|---|
| SDOCM00072025 | Default compilation flag for OMAPL138 DSP build does not support floating point |

Description:

The build system of DSPLink for C674x based devices did not correctly support compilation for floating point operations.

Expected Result:

DSPLink should support compilation of code for floating point devices for DA8XX, DA850, OMAPL1XX and OMAPL138

Release Note:

The build system of DSPLink for C674x based devices did not correctly support compilation for floating point operations.

This has been corrected. In order to support this, the compile flag for C674x based devices is now updated to mv6740 from mv6400+.

The system integrator/application writer now has to edit below files to update the paths for BIOS, XDC, IPC and CG Tools installations in:

c674x\_6.xx\_linux.mk - To Build for BIOS 6 based devices (DA8XX, DA850) on a Linux host machine.

c674x\_6.xx\_windows.mk- To Build for BIOS 6 based devices (DA8XX, DA850) on a Windows host machine.

c674x\_5.xx\_linux.mk - To Build for BIOS 5 based devices (OMAPL1XX, OMAPL138) on a Linux host machine.

c674x\_5.xx\_windows.mk – To Build for BIOS 5 based devices (OMAPL1XX, OMAPL138) on a Windows host machine.

### 4.4.3 OMAP2530 specific

None.

### 4.4.4 OMAP3530 specific

| Identifier    | Headline   |
|---------------|--|
| SDOCM00068950 | InstallGuide_Linux_OMAP3530.pdf shows incorrect LPM usage sequence |

Description:

In InstallGuide\_Linux\_OMAP3530.pdf section 10.4, the following is mentioned for

running all sample applications:

```
# LPM on  
# LPM off  
# run message sample
```

e.g.

```
$ ./lpmON.x470uc  
$ ./lpmOFF.x470uc  
$ ./messagegpp message.out 10000
```

This is incorrect. It should be lpmOFF followed by lpmON.

Expected Result:

The document should have the correct lpm sequence.

Release Note:

The Installation Guide for WinCE and Linux for OMAP3530 has been updated with the correct lpm sequence.

#### **4.4.5 DM6437 specific**

None.

#### **4.4.6 DM648 specific**

None.

#### **4.4.7 DM357**

None.

#### **4.4.8 DM6467T**

None.

## 4.5 Operating System specific defect fixes

### 4.5.1 WinCE specific

None.

### 4.5.2 ProOS specific

| Identifier    | Headline  |
|---------------|---|
| SDOCM00069477 | The protection mechanism for ZCPYMQT_dpc fails for multiple MSGQ_Locate |

Description:

The protection in ZCPYMQT\_dpc fails for multiple MSGQ\_Locate , as a result the linked list corrupts after update/ Null ack msg are received for MSGQ\_Locate.

Expected Result:

The protection should be complete and should not result into any data corruption.

Release Note:

The protection mechanism in the DPC code has been corrected to allow correct protection for ZCPYMQT\_dpc for multiple MSGQ\_Locate.

| Identifier    | Headline   |
|---------------|--|
| SDOCM00069040 | Missing DSPLink documentation on DspTskMode option |

Description:

Documentation on the DSPLink configure script does not include any useful info on the DspTskMode and DspSwiMode options. We need info about what the options do, what are the consequences of those options, when each should be used.

Expected Result:

The customer should find sufficient documentation to decide which mode to use

Release Note:

The programmer's guide has been updated with details of DspTskMode and DspSwiMode.

## 4.6 Upgrade and compatibility information

### 4.6.1 Addition of WinCE support for OMAPL1XX, DA8XX, OMAPL138, DA850

Support for WinCE has been added on OMAPL1XX, DA8XX, OMAPL138, DA850.

#### 4.6.1.1 To configure DSPLink for DA8XX

```
perl dsplinkcfg.pl --platform=DA8XX --nodsp=1 --dspcfg_0=DA8XXGEMSHMEM --
dspos_0=DSPBIOS6XX --gppos=WINCE --comps=ponslrmc
```

#### 4.6.1.2 To configure DSPLink for DA850

```
perl dsplinkcfg.pl --platform=DA850 --nodsp=1 --dspcfg_0=DA850GEMSHMEM --
dspos_0=DSPBIOS6XX --gppos=WINCE --comps=ponslrmc
```

#### 4.6.1.3 To configure DSPLink for OMAPL1XX

```
perl dsplinkcfg.pl --platform=OMAPL1XX --nodsp=1 --
dspcfg_0=OMAPL1XXGEMSHMEM --dspos_0=DSPBIOS5XX --gppos=WINCE --
comps=ponslrmc
```

#### 4.6.1.4 To configure DSPLink for OMAPL138

```
perl dsplinkcfg.pl --platform=OMAPL138 --nodsp=1 --
dspcfg_0=OMAPL138GEMSHMEM --dspos_0=DSPBIOS5XX --gppos=WINCE --
comps=ponslrmc
```

### 4.6.2 Correction of floating point support for OMAPL1XX, DA8XX, OMAPL138, DA850

The build system of DSPLink for C674x based devices did not correctly support compilation for floating point operations.

This has been corrected. In order to support this, the compile flag for C674x based devices is now updated to mv6740 from mv6400+.

The system integrator/application writer now has to edit below files to update the paths for BIOS, XDC, IPC and CG Tools installations in:

c674x\_6.xx\_linux.mk - To Build for BIOS 6 based devices (DA8XX, DA850) on a Linux host machine.

c674x\_6.xx\_windows.mk- To Build for BIOS 6 based devices (DA8XX, DA850) on a Windows host machine.

c674x\_5.xx\_linux.mk - To Build for BIOS 5 based devices (OMAPL1XX, OMAPL138) on a Linux host machine.

c674x\_5.xx\_windows.mk – To Build for BIOS 5 based devices (OMAPL1XX, OMAPL138) on a Windows host machine.

## 5 Validation Status

This engineering release has been validated for basic sanity using the following configurations:

| Sr. No | Platform | GPP-side  |            |               | DSP-side                             |  |
|--------|----------|---|------------|---------------|--------------------------------------|--|
|        |          | OS distribution                                 | Tool-chain | Base port     | Tool-chain                           | DSP/BIOS   |
| 1      | DA8XX    | OMAPL137_A<br>M17x_CE6_B<br>SP_Release_<br>v1.2 | 6.0        | Visual Studio | CGTOOLS<br>v6.1.15<br>with<br>CCS3.3 | BIOS –<br>6.20.00.<br>37<br><br>IPC<br>1.00.00.<br>40<br><br>XDC<br>3.15.00.<br>50 |
| 2      | OMAPL1XX | OMAPL137_A<br>M17x_CE6_B<br>SP_Release_<br>v1.2 | 6.0        | Visual Studio | CGTOOLS<br>v6.1.15<br>with<br>CCS3.3 | BIOS –<br>5.33.05  |
| 3      | DA850    | OMAPL138_A<br>M18x_CE6_B<br>SP_Release_<br>v1.2 | 6.0        | Visual Studio | CGTOOLS<br>v6.1.15<br>with<br>CCS3.3 | BIOS –<br>6.20.00.<br>37<br><br>IPC<br>1.00.00.<br>40<br><br>XDC<br>3.15.00.<br>50 |
| 4      | OMAPL1XX | OMAPL138_A<br>M18x_CE6_B<br>SP_Release_<br>v1.2 | 6.0        | Visual Studio | CGTOOLS<br>v6.1.15<br>with<br>CCS3.3 | BIOS –<br>5.33.05  |

Distribution files for Uclibc tool-chains are provided for OMAP2530, OMAP3530, DM6446, DM6467, DM6467T, DA850, DA8xx, OMAPL1xx and OMAPL138.

## 6 Known Issues

### 6.1 Generic

| Identifier    | Headline   |
|---------------|--|
| SDOCM00035970 | DSPLINK does not build correctly in CYGWIN environment |

Description :

DSPLink make system does not build DSP-side sample applications correctly in CYGWIN environment. However, DSPLink libraries on DSP-side and GPP-side build can be completed successfully in CYGWIN environment.

Workaround:

Remove CYGWIN from the path on MSDOS prompt and build DSP-side sample applications using gmake.

| Identifier    | Headline   |
|---------------|--|
| SDOCM00056316 | Intermittent crashes are seen when running DSPLink sample applications on Montavista Linux based devices |

Description :

On devices running Montavista Linux on the ARM (DM6446, DM6467, DM357, DA8xx, OMAP-L1xx), intermittent crashes are seen when running the sample applications. Crash is not seen on devices where GIT kernel is used (OMAP3530, OMAP2530, DM6437, DM648).

Observation:

The crash appears to happen when interrupts are sent very frequently to the ARM from the DSP.

Workaround:

None.

### 6.2 Platform Specific Issues

#### 6.2.1 DM6446

| Identifier    | Headline  |
|---------------|---|
| SDOCM00056114 | CE appln fails if user calls the sequence: 1) eng = Engine_open("myEng",.); 2) Engine_close(eng); 3) eng = Engine_open("myEng |

Description :

An application will fail if it tries to do the following:

```
eng = Engine_open("myEngine", ...);
Engine_close(eng);
eng = Engine_open("myEngine", ...);
```

As far as DSPLink is concerned, this boils down to:

```

Engine_open:
    LAD_startupDsp() =====switch-to-LAD-process=====>
PROC_setup(); PROC_attach(); etc.
    PROC_attach()
Engine_close:
    LAD_releaseDsp() =====switch-to-LAD-process=====>
PROC_destroy();
Workaround:
None.
  
```

### 6.2.2 DM6467

| Identifier    | Headline   |
|---------------|--|
| DSPLN00000734 | <PROC> DSP-side configuration mismatch/failure is thrown if a test is run infinite number of times |

Description :

<PROC> DSP-side configuration mismatch/failure is thrown if a test is run infinite number of times

Workaround:

Power cycle the EVM and re-try.

### 6.2.3 DM648

None.

### 6.2.4 DM6437

| Identifier    | Headline   |
|---------------|--|
| SDOCM00044596 | <sample> scale sample hangs in SWI mode on both debug and release modes. |

Description :

Observation :

scale sample hangs only in SWI mode on both debug and release modes.

Same sample works fine on TSK mode.

Workaround:

None.

### 6.2.5 OMAP2530

| Identifier    | Headline  |
|---------------|---|
| SDOCM00035953 | OMAP2530: First run of any application times out in PROC_start. |

Description :

The first run of any DSPLink application times out in PROC\_start. The subsequent application runs without re-booting the board in between work correctly.

Workaround:

The GPP sources have been updated to reset and release the DSP twice as a workaround to ensure that DSP starts correctly in the first run. This workaround is present in the DSPLink release.

### 6.2.6 DM357

None.

### 6.2.7 OMAPL1XX

#### 6.2.7.1 OMAPL1XX

DIO and SIO create calls are not supported in DSPLink SWI Mode for DSP\_BootMode\_NoBoot boot mode because of a DSP/BIOS restriction in calling these API's before main. Sample applications i.e. loop, scale with SWI's will not work in DSP\_BootMode\_NoBoot mode. DSPLink supports SWI based sample applications in the other boot modes DSP\_BootMode\_Boot\_NoPwr, DSP\_BootMode\_Boot\_Pwr, DSP\_BootMode\_NoLoad\_NoPwr, DSP\_BootMode\_NoLoad\_Pwr

#### 6.2.7.2 Defects

| Identifier   | Headline  |
|--------------|---|
| DOCM00051547 | <Samples> Loop sample stops execution in-between on swi release mode. |

Description :

Observation :

Loop sample stops execution in-between on swi release mode on both DA8xx and OMAPL1xx platforms.

The sample works fine on swi debug mode.

The sample won't hang, after ctrl+c able to run other samples without rebooting EVM.

Workaround:

None.

### 6.2.8 DA8XX/DA850/OMAPL138

DIO and SIO create calls are not supported in DSPLink SWI Mode for DSP\_BootMode\_NoBoot boot mode because of a DSP/BIOS restriction in calling these API's before main. Sample applications i.e. loop, scale with SWI's will not work in DSP\_BootMode\_NoBoot mode. DSPLink supports SWI based sample applications in the other boot modes DSP\_BootMode\_Boot\_NoPwr, DSP\_BootMode\_Boot\_Pwr, DSP\_BootMode\_NoLoad\_NoPwr, DSP\_BootMode\_NoLoad\_Pwr

## 6.3 Operating System specific Issues

### 6.3.1 PrOS

None.

### 6.3.2 WinCE

Known issues in the DM6446 Debug package of WinCE BSP prevent us from using Debug build on DM6446.

### 6.3.3 DSP/BIOS

| Identifier | Headline   |
|------------|--|
| CQ17490    | BIOS/XDC conf tool breaks DSP build, if the DSPLink installation directory contains '.' Character. |

Description :

DSP Side build system generates all files in the build folder instead of sample directories. This would cause error if the DSPLink installation directory has '.' Character. For example, if the installation path is

/home/user/dsplink.160/

then DSP Side build will break.

Workaround:

Install DSPLink without a '.' In the path.

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## **7 Guidelines and Limitations**

None.

## **8 Technical Support**

### **8.1 Support for DSP/BIOS™ LINK**

#### **8.1.1 TI External wiki**

A significant amount of information about DSPLink including FAQs and troubleshooting guides are present and the TI external wiki. These can be used as a first-level source of information for DSPLink:

<http://www.tiexpressdsp.com>

#### **8.1.2 Support for TI products**

Procedure to report problems/issues for TI products is available at the TI support page:

External forums at: <http://community.ti.com>

Or: <http://support.ti.com>