

# EDMA3 Driver

Release version 02.11.03.XX

## Release Notes

Nov 15, 2011

The product release notes in this document are for EDMA3 Driver, which is a part of the EDMA3 Low Level Driver package. EDMA3 Driver is a functional library providing APIs for programming, scheduling and synchronizing with EDMA transfers and many more. The EDMA3 Driver is made generic across SoCs and across Operating Systems.

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## **1 In This Release**

This is the 02.11.03.XX release of EDMA3 Driver and contains libraries, sample initialization libraries, standalone sample applications and support documents.

This release contains sample OS adaptation layer for BIOS 6, which could be used by BIOS 6 based applications.

### **❖ New features in the components of release**

- 1) TIDSP00012765 – Addition of M3 support for Centaurus in EDMA3 LLD
- 2) TIDSP00012766 – Addition of A8 support for Netra in EDMA3 LLD

## 2 Out-of-Box Contents

edma3\_ild\_02\_11\_03\_02.tar.gz contains following:

1.
  - Source code for EDMA3 Resource Manager, Driver and other necessary abstractions.
  - Project files (DSP/BIOS™), CCS4 build files, XDC package.bld files (for supporting getlibs function) and all Makerules and Makefiles, to build EDMA3 package in host environment. Please note from this point of time, libraries can be built using Makefiles only. Hence libraries need to be built through command prompt using gmake command (Please refer the user guide available with this release for detailed build instructions).
  - The above mentioned items are located inside the <installation dir>\edma3\_ild\_02\_11\_03\_XX\ directory.
  - Please note that the CCS setup files and GEL files are NOT provided with this release and this would be available with latest CCSv4 releases or from EVM manufacturer.
2. Release Notes (this document) providing an overview of this release.
3. User Guide and data sheets.
4. EDMA3 Driver API (generated) documentation in CHM format.

### 3 Known Issues

<b>1.</b>	<b>Instrumentation (all components)</b>
<b>Release Note</b>	
Instrumentation code is not yet implemented as the XDC/CCSV4 version at the point of development did not support RTA and instrumentation APIs.	
<b>Workaround</b>	
None	

<b>2.</b>	<b>EDMA3 hardware doesn't works properly in FIFO mode with all the controllers.</b>
<b>Release Note</b>	
Very few peripherals support EDMA3 FIFO mode. EMIF controller doesn't support the same. So EDMA3 CANNOT be used in FIFO mode for doing a mem-2-mem data transfers, EDMA3 being configured in the FIFO mode. Applications trying to use EDMA3 in FIFO mode should first check their respective peripheral-controller document for this mode support.	
<b>Workaround</b>	
None	

<b>3.</b>	<b>PingPong Example Fails for certain EDMA instances for some DSP cores in Release mode only.</b>
<b>Release Note</b>	
PingPong example fails for certain EDMA Instances for some DSP cores in Release Mode only. It passes in the Debug mode.	
<b>Workaround</b>	
None	

<b>4.</b>	ARM 9 support for OMAPL138 is not available on Make based build of EDMA3LLD
<b>Workaround</b>	
None	

<b>5.</b>	The following IR is raised on this release.
<b>IR# SDSCM00039169</b> EDMA3 Example fails for following Big Endian Simulators: tci6608-sim/tci6616-sim	
<b>Workaround</b>	
None	

#### **4    Limitations**

None.

## 5 Fixed In This Release

<b>IR</b>	<b>Description</b>
SDOCM00084073	SYS/BIOS version of LLD package should not require ti.sysbios.ipc which is deprecated and will be removed in SYS/BIOS 6.33
SDOCM00086386	getlibs in package.xs should search library based on device name
SDOCM00086391	Thread safety issue with EDMA
SDOCM00084227	Enhancement - provide PLATFORM specific libs: examples: targets
SDOCM00086397	Single default cfg file for multile cores in Netra and Centaurus in drv sample
SDOCM00086492	EMRH access done in edma3CCErrorHandler() for devices not having high register for EMR
SDOCM00086496	In EDMA3_RM_unregisterTccCb() driver tries to update array at invalid position

## 6 Revision history

<b>Date</b>	<b>Author</b>	<b>Comments</b>	<b>Version</b>
Oct 16, 2008	Anuj Aggarwal	First release supporting platform DA830 on BIOS 6.	02.00.00.XX
June 3, 2009	Anuj Aggarwal	Patch release for DA830 platform on BIOS 6.	02.00.01.XX
Dec 7, 2009	Anuj Aggarwal	Migration to BSD license and support added for TCI6498. See section 1 for more details.	02.10.00.XX
Apr 9, 2010	Imtiaz SMA	Support for the C6748 and OMAPL138 (DSP only) is added. See section 1 for more details.	02.10.01.xx
May 12, 2010	Vinay K Nooji	Support for the OMAPL138 ARM has been added.	02.10.02.XX
Sep 6, 2010	Sundaram Raju	Support for the TI816X Simulator & platform, C6472 & TCI6486 platform and TI814X platform have been added.	02.10.03.XX
Oct 12, 2010	Sundaram Raju	Support for C66x(ELF) in Generic library of Resource Manager and bug fixes	02.10.04.XX
Feb 02, 2011	Sundaram Raju	Support for Make based build for all the libraries and sample applications	02.11.00.XX
Feb 15, 2011	Raghu Nambiath  Sundaram Raju	Support for C66x target for all the libraries and sample applications	02.11.01.XX
May 24, 2011	Prasad Konnur	Addition of TI816x-m3vpss and TI816x-m3video platforms to EDMA3LLD	02.11.02.XX
Nov 15, 2011	Prasad Konnur	Addition of M3 support for Centaurus and A8 support for Netra	02.11.03.XX



## 7 Appendix: Changes from last release

### Changes from 02.11.02 Release to 02.11.03 Releases:

- i. New Features in this release
  - 1. TIDSP00012765 – Addition of TI816x-m3vpss and TI816x-m3video platform to EDMA3LLD.
  - 2. TIDSP00012766 – Addition of A8 support for Netra in EDMA3 LLD
- ii. Fixed following IRs:
  - 1. SDOCM00084073: SYS/BIOS version of LLD package should not require ti.sysbios.ipc which is deprecated and will be removed in SYS/BIOS 6.33
  - 2. SDOCM00086386: getlibs in package.xs should search library based on device name
  - 3. SDOCM00086391: Thread safety issue with EDMA
  - 4. SDOCM00084227: Enhancement - provide PLATFORM specific libs: examples: targets
  - 5. SDOCM00086397: Single default cfg file for multile cores in Netra and Centaurus in drv sample
  - 6. SDOCM00086492: EMRH access done in edma3CCErrHandler() for devices not having high register for EMR
  - 7. SDOCM00086496: In EDMA3\_RM\_unregisterTccCb() driver tries to update array at invalid position

### Changes from 02.11.01 Release to 02.11.02 Releases:

- i. New Features in this release
  - 1. TIDSP00012625 – Addition of TI816x-m3vpss and TI816x-m3video platform to EDMA3LLD.
- ii. Fixed following IRs:
  - 1. SDOCM00080618: ti.platforms.evmTI816X and evmTI814X need to be supported
  - 2. SDOCM00080034: CC Base Address in TI814X configuration in ti/sdo/edma3/rm/src/configs is wrong
  - 3. SDOCM00081696: EDMA package gives error while including as XDC package
  - 4. SDOCM00081697: release build of EDMA3LLD build with GENERIC flag defined

### Changes from 02.11.00 Release to 02.11.01 Releases:

- i. New Features in this release

1. TIDSP00012604 – Addition of C66x targets and platforms to EDMA3LLD.
- ii. Fixed following IRs:
  1. SDOCM00078641: C66x support for generic RM library for Make based build of EDMA3LLD
  2. SDOCM00078808: EDMA LLD example fails for multi core run for TCI6486 target
  3. SDOCM00078797: Problems with using Generic RM library on EDMA3LLD

**Changes from 02.10.04 Release to 02.11.00 Releases:**

- i. New Features in this release
  1. TIDSP00012597 – Support for Make based build is implemented.
- ii. Fixed following IRs:
  1. SDOCM00075906: EDMA3LLD release not appearing as option in the eclipse plug-in in CCSv4 when new release is installed
  2. SDOCM00074338: EDMA3 LLD for Centaurus doesn't have pre-built lib for Elf targets
  3. SDOCM00078607: Same library files picked up for both SIM and EVM TI816x by the package.xs

**Changes from 02.10.03 Release to 02.10.04 Releases:**

- i. Implemented the following ECNs:
  1. TIDSP00012597 - Support for Make based build is implemented.
- ii. Fixed the following IRs:
  1. SDOCM00075906 - EDMA3LLD release not appearing as option in the eclipse plug-in in CCSv4 when new release is installed
  2. SDOCM00074338 - EDMA3 LLD for Centaurus doesn't have pre-built lib for Elf targets
  3. SDOCM00078607 - Same library files picked up for both SIM and EVM TI816x by the package.xs

**Changes from 02.10.03 Release to 02.10.04 Releases:**

- i. Fixed the following IRs:
  1. SDOCM00074290 - EDMA3LLD should not ship config.bld in the 'packages\' folder.

**Changes from 02.10.02 Release to 02.10.03 Releases:**

- i. Implemented the following ECNs:
  1. TIDSP00012436 - Support for the TI816X Simulator for BIOS6 has been implemented.
  2. TIDSP00012435 - Support for the TI816X platform for BIOS6 has been implemented.

3. TIDSP00012434 - Support for the C6472 & TCI6486 platform for BIOS6 has been implemented.
  4. TIDSP00012461 - Support for the TI814X platform for BIOS6 has been implemented.
- ii. Fixed the following IRs:
1. SDOCM00074153 - EDMA3LLD libraries for Nyquist are not building with BIOS 6.30.02.42
  2. SDOCM00074184 - Warnings appear while building the libraires and example projects of EDMA3LLD with BIOS 6.30.02.42

**Changes from 02.10.01 Release to 02.10.02 Releases:**

- i. Implemented the following ECNs:
1. TIDSP00012328 - Support for the OMAPL138 ARM platform.

**Changes from 02.10.00 Release to 02.10.01 Releases:**

- i. Implemented the following ECNs:
1. TIDSP00000000 - Support for the C6748 and OMAPL138 platforms.
- ii. Fixed the following IRs:
1. SDOCM00068784 - The package.xs files should get the library extension from the xdc variable and should not be hard coded.

**Changes from 02.00.00 Release to 02.10.00 Releases:**

- i. Implemented the following ECNs:
1. TIDSP00012004 - Migration to new BSD license has been implemented.
  2. TIDSP00012060 - Add TCI6498 support on BIOS6 has been implemented.
  3. TIDSP00012061 - Support for Big Endian platforms has been implemented.
  4. TIDSP00012062 - Specific link channel can be requested using requestChannel API has been implemented.
  5. TIDSP00012063 - Link channels can have TCC code has been implemented.
  6. TIDSP00012064 - New API to register callback function in EDMA3 driver has been implemented.
  7. TIDSP00012065 - New API to check the status of a given DMA/QDMA channel has been implemented.
  8. TIDSP00012079 - Signature change for EDMA3 initialization API present in the sample example has been implemented.
  9. TIDSP00012080 - API required to enable error interrupts for EDMA3 Transfer Controller has been implemented.
  10. TIDSP00012081 - DRAE registers programmed for TCCs while registering callback functions has been implemented.

- 11. TIDSP00012094 - Linux installer of EDMA3 LLD has been implemented.
- ii. Fixed the following IRs:
  - 1. SDOCM00060737 - EDMA3 needs to show up as RTSC product in CCSv4

**Changes from 02.00.00 Release to 02.00.01 Releases:**

Patch release fixing IRs and implementing ECNs in EDMA3 Driver.