

Multicore Software Development Kit

Release Notes

Applies to Release: 03.00.01
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MCSDK Release 3.0.x

1 Overview

This document is the Release Notes for Release 3.0.x of the Multicore Software Development Kit (MCSDK) for Linux and BIOS operating systems. This software release gives developers the ability to develop software for KeyStone II devices. Please refer to the *Getting Started Guide* chapter in the *User Guide* on how to install the MCSDK packages.

2 Licensing

Please refer to the software manifest which outlines the licensing status for all packages included in this release.

3 Documentation

- [MCSDK 3.0.x Users Guide](#): Provides information on features, functions, delivery package and, compile tools for the MCSDK release. This also provides detailed information regarding software elements and software infrastructure to allow developers to start creating applications. *(NOTE: The latest version of the User Guide can be found on the online link as specified and a snapshot is provided in PDF format in the release at [INSTALL-DIR]/mcsdk_bios_<ver>/docs.)*
- **MCSDK Software Manifest**: Provides license information on software included in the MCSDK release. This document can be found in the release at [INSTALL-DIR]/mcsdk_bios_<ver>/docs.
- **EVM Quick Start Guide**: Provides information on hardware setup and running the demonstration application that is loaded on flash. This document is provided as part of the EVM kit.

4 Platform and Device Support

The device and platforms supported with this release include:

Platform	Supported Devices	Supported EVM
[K2H]	TCI6636K2H , 66AK2H06 , 66AK2H12	XTCIEVMK2X
[K2K]	TCI6634K2K , TCI6638K2K	XTCIEVMK2X

5 Issues List

The list of issues can be found online using this [link](#). The snapshot of this list at the time of list can be found in the Releases section below. For the latest version, use the online list.

6 Technical Support and Product Updates

For technical discussions and issues, please visit:

- [KeyStone Multicore forum](#)
- [BIOS Embedded Software forum](#)
- [Linux Embedded Software forum](#)
- [Code Composer Studio forum](#)
- [TI C/C++ Compiler forum](#)
- [Embedded Processors wiki](#)

For local support in China, please visit

- [China Support forum](#)

7 IS NOT

- Support for BIOS5 or older releases
- Support for CCS 4.x or older releases
- Support for platforms not listed in Section 4
- DSP image format other than ELF (e.g., COFF)
- Big endian DSP with ARM Little endian configuration
- Simulator is tested at the CSL/LLD level only. Higher level features (e.g IPC) may not work with the simulator.

8 Releases

8.1 Maintenance 03.00.01.12

This is a maintenance update of the Multicore SDK.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.8.4.13	MCSDK
U-boot	ARM boot loader	2013_01_13	MCSDK
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux kernel code through SMC calls	13.07	MCSDK
MPM	Multi-processor manager for loading and managing DSP cores, including fault management	2.0.0.0	MCSDK
MPM Transport	Multi-proc-Manager Transport layer	1.0.0.0	MCSDK
Transport Net Lib	Transport Network Library	1.0.0.8	MCSDK
HPLIB	High Performance Library	1.0.0.3	MCSDK
NETAPI	Network API	1.0.0.8	MCSDK
Matrix Apps	Matrix launcher used for out of box demonstrations	1.0.0.2	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (ARM portion)	1.0.2.0	MCSDK
User-Mode LLDs	Subset of LLD that work on ARM user-space	See below	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.35.04.50	MCSDK
NDK	DSP network stack	2.22.02.16	MCSDK
IPC	DSP inter-process communication	3.0.2.26	MCSDK
cToolsLib	Trace debug library	1.0.2.0	MCSDK
UIA	Unified instrumentation architecture	1.3.0.2	CCS
Image Proc	Image processing demo	1.0.0.0	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.1.0.0	MCSDK
MATHLIB	Math functions	3.0.2.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
SYSLIB	Small cell functions	3.0.0.3	MCSDK
Platform Development Kit			
CSL	Chip support library	2.0.0.15	MCSDK
AIF2 LLD	Antenna Interface LLD	1.0.0.16	MCSDK

BCP LLD	Bit Rate Coprocessor LLD	2.0.0.4	MCSDK
CPPI LLD	Packet DMA LLD	2.0.0.12	MCSDK
EDMA3 LLD	Enhanced Direct Memory LLD	2.11.9.8	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.0.0.5	MCSDK
HYPLNK LLD	HyperLink LLD	2.0.0.7	MCSDK
PA LLD	Packet Accelerator LLD.	2.0.1.1	MCSDK
PCIe LLD	Peripheral Component Interconnect Express	2.0.0.4	MCSDK
QMSS LLD	Queue Manager LLD	2.0.0.13	MCSDK
RM LLD	Resource Manager LLD	2.0.0.5	MCSDK
SA LLD	Security Accelerator LLD	2.0.1.4	MCSDK
SRIO LLD	Serial Rapid IO LLD	2.0.0.7	MCSDK
TCP3D LLD	Turbo Coprocessor Decoder LLD	2.0.0.3	MCSDK
Platform Library	DSP EVM drivers and SOC initialization	3.0.1.12	MCSDK
NWAL	Network adaptation layer provides high level driver functionality abstracting NetCP LLDs PA and SA	2.0.0.12	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.0.2.0	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.0.1	MCSDK
PKTLIB	Packet Library	2.0.0.10	MCSDK
NIMU Transport	NDK interface module	3.0.0.2	MCSDK
BMET_Eth	Bare-metal Ethernet transport used by Trace Framework	1.0.0.2	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	2.0	MCSDK
Yocto-Arango	ARM software distribution	1.3	Link
Linux devkit	Development kit that is independent of Arango	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	5.4.0	Link
Linaro Toolchain	ARM toolchain	2013.03	Link
CodeGen	DSP compiler	7.4.2	CCS
CG_XML	Package of Perl scripts used to process the XML files that come from the TI code generation tools. Use it to do things like build a spreadsheet that details the size of all the sections, or figure out how much of the memory map is taken up by specific libraries.	2.30	MCSDK
XDCTools	DSP RTSC packaging and build tools	3.25.2.70	MCSDK
Simulator	Simulator for K2L, K2E	0.9.0	CCS
MCSDK Apps	MCSDK applications (Trace framework, udma,	3.0.1.12	MCSDK

	DSP core parser, etc.)		
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8.1.1 New features and fixes

Identifier	Description
New Feature	User space PA/SA LLDs' Multi-process support update
New feature	Transport net lib enhancements: <ul style="list-style-type: none"> • Inflow IPSEC offload support in kernel • Example IPsec manager application for ARM in Transport Net Lib • Sideband crypto offload support in Kernel
New feature	Ethernet time stamping (CPTS) support for PTP
New feature	User space contiguous memory allocator
New feature	8 GB Memory support

id	Classification	Headline
SDOCM00101670	Defect	u-boot does not set ENSAT bit in the ARMPLLCTL1 register
SDOCM00101709	Defect	IPC ARM –DSP does not work, if MPAX based coherency support is enabled for ARM Contiguous memory
SDOCM00100094	Defect	PKTLIB rebuild fails due to missing file from release package (<i>issue actually closed in R3.0.0</i>)
SDOCM00101450	Defect	u-boot: Not all power on self-tests supported (<i>issue actually closed in R3.0.0</i>)
SDOCM00101665	Defect	QoS performance issues for High priority queues with high throughput (<i>issue actually closed in R3.0.0</i>)
SDOCM00102169	Defect	Kernel n/w driver: netcp_tx_notify() BUG_ON gets asserted occasionally
SDOCM00102515	Defect	Graceful shutdown of netapi ipsecmgr daemon not supported.
SDOCM00102659	Defect	nwal_SaStart is not using passed in virtual address of PA_SS_CFG_CP_ACE_CFG_REGS
SDOCM00100657	Defect	UBIFS kernel from Alpha-9 release images takes over a minute to boot
SDOCM00102498	Defect	Queue Open does not return isAllocated count properly if the queue has been opened multiple times
SDOCM00102553	Defect	Unable to use traceframework shared library - soname wrong in the library
SDOCM00102333	Defect	MCSDK NDK Examples - Client & HelloWorld - DHCP Hangs

SDOCM00101585	Defect	Ping replies for jumbo packets (8000 bytes) from the EVM stop after ~8 replies sent
SDOCM00101976	Defect	XDC does not have the C6636K2H platform.
SDOCM00101730	Defect	IPC demo fails to run on second time
SDOCM00102248	Defect	PKTLIB does not writeback the descriptors
SDOCM00102202	Defect	PA LLD prevLink not assigned correctly
SDOCM00102341	Defect	CSL_CPSW_nGF_getStats returns invalid values
SDOCM00102514	Defect	Linux kernel crash seen in mutex lock
SDOCM00101980	Defect	Host tool dspcoreparse utility needs to be built with 32 bit format
SDOCM00101665	Defect	QoS performance issues
SDOCM00101589	Defect	PA User mode test Application fails to run when compiled with -O2 flags
SDOCM00101885	Defect	Non root user doesn't have permissions to run MPMCL routines on K2H platform
SDOCM00102589	Defect	PDK AIF2: aif2CpriFastCMK2KTestProject gets bad calling context error when run
SDOCM00101450	Defect	Not all power on self tests supported.
SDOCM00101966	Defect	CPSW CSL supports only 4 ports but hardware supports 5 ports
SDOCM00101833	Defect	User mode LLD: nwalTest should be in the test filesystem, not release filesystem
SDOCM00102657	Defect	RM Rm_resourceStatus API is passing Rm_Handle instead of rmInst to the allocatorGetAllocatorList API
SDOCM00102052	Defect	Qmss_start without Qmss_init leads to segmentation fault in arm user space
SDOCM00101871	Defect	qmld: Qmss_insertMemoryRegion() can error exit with open critical section
SDOCM00101749	Defect	Qmss_getStarvationCounts() does not work for QM2
SDOCM00101793	Defect	qmss_device.c only has 6/20 INTC queues defined
SDOCM00101872	Defect	Qmss_insertMemoryRegion can error exit leaking RM allocations
SDOCM00101354	Defect	PA LLD example on arm needs to be restartable
SDOCM00100607	Defect	UDMA loopback unit test fails for general purpose (non-accumulator) queues
SDOCM00100411	Defect	PDK_INSTALL_PATH used in instead of SA_INSTALL_PATH in ti/drv/sa/sa3gppEnabler/makefile_armv7
SDOCM00100410	Defect	Use by LLD makefiles of gcc instead of ld to perform library link fails with certain gcc versions

SDOCM00100981	Defect	PDK_Keystone2 Eclipse plugin does not get detected when TCI6614 PDK is installed
SDOCM00100409	Defect	Building sa3gppEnabler for ARM fails due to makefile error
SDOCM00101897	Enhancement	qmss lld user tests: add RM to all remaining test cases
SDOCM00101898	Enhancement	pa lld: add RM to all pa examples
SDOCM00101900	Enhancement	pa lld: make one DSP example downloadable from ARM with MPM.
SDOCM00101899	Enhancement	cpqi lld: add RM to user mode test+example
SDOCM00101322	Enhancement	RM resource owner reference count must be returned as part of Resource Status request type

8.1.2 Known Issues

Id	Headline
SDOCM00101699	Add Header/Trailer Utility for bootable images
SDOCM00099452	u-boot usb reset hangs if done during boot
SDOCM00101319	Kernel coredump / crash dump not supported
SDOCM00102702	K2 Linux kernel using up 8 High priority accumulator channels
SDOCM00102686	u-boot usb initialization issue: "usb start" fails for the first two times, third time passes
SDOCM00102655	sleeping function called from invalid context at linux/kernel/mutex.c
SDOCM00102647	Linux kernel crashes sporadically when 4 cores are used
SDOCM00102552	USB driver crashes when used with more than 2GB of memory
SDOCM00102400	RBL Ethernet boot is not working on the EVM
SDOCM00102002	Unable to make connection to the gdbserver from ddd client terminal
SDOCM00102775	Kernel IPSEC inflow acceleration sample in Transport Net Lib currently does not enable PA Assisted Reassembly

8.2 Production 03.00.00.11

This is the production release of the Multicore SDK.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.8.4.11	MCSDK
U-boot	ARM boot loader	2013_01_11	MCSDK
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux	3.0.0.11	MCSDK

	kernel code through SMC calls		
MPM	Multi-processor manager for loading and managing DSP cores, including fault management	1.0.0.1	MCSDK
Transport Net Lib	Transport Network Library	1.0.0.7	MCSDK
HPLIB	High Performance Library	1.0.0.2	MCSDK
NETAPI	Network API	1.0.0.7	MCSDK
Matrix Apps	Matrix launcher used for out of box demonstrations	1.0.0.2	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (ARM portion)	1.0.2.0	MCSDK
User-Mode LLDs	Subset of LLD that work on ARM user-space	See below	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.35.01.29	CCS
NDK	DSP network stack	2.22.02.16	MCSDK
IPC	DSP inter-process communication	3.0.0.20	MCSDK
cToolsLib	Trace debug library	1.0.0.2	MCSDK
UIA	Unified instrumentation architecture	1.3.0.2	CCS
Image Proc	Image processing demo	3.0.0.11	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.1.0.0	MCSDK
MATHLIB	Math functions	3.0.2.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
SYSLIB	Small cell functions	3.0.0.1	MCSDK
Platform Development Kit			
CSL	Chip support library	2.0.0.14	MCSDK
AIF2 LLD	Antenna Interface LLD	1.0.0.15	MCSDK
BCP LLD	Bit Rate Coprocessor LLD	2.0.0.3	MCSDK
CPPI LLD	Packet DMA LLD	2.0.0.12	MCSDK
EDMA3 LLD	Enhanced Direct Memory LLD	2.11.7.4	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.0.0.4	MCSDK
HYPLNK LLD	HyperLink LLD	2.0.0.7	MCSDK
PA LLD	Packet Accelerator LLD.	2.0.0.10	MCSDK
PCIe LLD	Peripheral Component Interconnect Express	2.0.0.4	MCSDK
QMSS LLD	Queue Manager LLD	2.0.0.12	MCSDK
RM LLD	Resource Manager LLD	2.0.0.4	MCSDK
SA LLD	Security Accelerator LLD	2.0.0.6	MCSDK
SRIO LLD	Serial Rapid IO LLD	2.0.0.7	MCSDK

TCP3D LLD	Turbo Coprocessor Decoder LLD	2.0.0.3	MCSDK
Platform Library	DSP EVM drivers and SOC initialization	3.0.0.8	MCSDK
NWAL	Network adaptation layer provides high level driver functionality abstracting NetCP LLDs PA and SA	2.0.0.11	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.0.2.0	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.0.1	MCSDK
PKTLIB	Packet Library	2.0.0.9	MCSDK
NIMU Transport	NDK interface module	3.0.0.2	MCSDK
BMET_Eth	Bare-metal Ethernet transport used by Trace Framework	1.0.0.2	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	2.0	MCSDK
Yocto-Arango	ARM software distribution	1.3	Link
Linux devkit	Development kit that is independent of Arango	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	5.4.0	Link
Linaro Toolchain	ARM toolchain	2013.03	Link
CodeGen	DSP compiler	7.4.2	CCS
CG_XML	Package of Perl scripts used to process the XML files that come from the TI code generation tools. Use it to do things like build a spreadsheet that details the size of all the sections, or figure out how much of the memory map is taken up by specific libraries.	2.30	MCSDK
XDCTools	DSP RTSC packaging and build tools	3.25.0.48	CCS
Simulator	Simulator for K2L, K2E	0.9.0	CCS
MCSDK Apps	MCSDK applications (Trace framework, udma, DSP core parser, etc.)	3.0.0.11	MCSDK

8.2.1 New features and fixes

Identifier	Description
New feature	Real Time pre-empt patch for Linux kernel
New feature	CPSW configuration support through sysfs

New feature	Transport Net Lib demo
New feature	Image processing demo in Matrix apps
New feature	Multi task examples support in user mode QMSS/CPPI LLD
New feature	IPC demo in Matrix apps

id	Classification	Severity	Headline
SDOCM00101662	Defect	S2 - Major	mpm: dsp reset/reload does not work
SDOCM00101633	Defect	S2 - Major	Qmss_queueOpenInRange broken w/ RM
SDOCM00101663	Defect	S2 - Major	mpm: remove 10bit alignment constraint of start address on dsp images
SDOCM00092459	Enhancement	S2 - Major	QMSS LLD/Sample: Support for restarting a program running in user space w/o restart
SDOCM00101570	Defect	S2 - Major	aif2LteCheckRf, aif2WcdmaCheckRf and aif2LteTddCheckRf test projects get linking errors for byte ordering for BE only
SDOCM00101623	Defect	S2 - Major	srio_drv.c incorrectly sends value of handle and not address to Semaphore_delete
SDOCM00098735	Defect	S3 - Minor	tcp3dK2HC66BiosExampleProject_Kepler-BE & tcp3dK2KC66BiosExampleProject_Kepler-BE projects do not complete on simulator
SDOCM00099599	Work Item	S2 - Major	Fastpath IPC support on KS II devices
SDOCM00100398	Defect	S3 - Minor	Can't update .dtb file in ubifs image
SDOCM00101566	Defect	S2 - Major	PA_emacExample_K2KC66BiosExampleProject compiles but does not run to completion
SDOCM00101379	Defect	S2 - Major	Reboot command from Linux does not work; it gets errors or does not boot to the Linux prompt
SDOCM00101323	Work Item	S2 - Major	RM: DSP+ARM Linux Test Application
SDOCM00101321	Enhancement	S2 - Major	RM allocators must track reference counts for allocated/freed resources
SDOCM00101269	Defect	S2 - Major	Unconfigure NETCP rules for exception packet handling in netapi_shutdown.
SDOCM00101297	Defect	S2 - Major	POST in U-boot is not supported
SDOCM00091099	Defect	S2 - Major	PDK Keystone2: cppiSimtci6634C66BiosExampleProject (LE & BE) compiles but test does not pass when run
SDOCM00100987	Enhancement	S2 - Major	QM/CPPI Multi-Task Example Required
SDOCM00101114	Defect	S2 - Major	RM LLD user space library is not found under devkit
SDOCM00101252	Defect	S2 - Major	Linux traffic control feature is not enabled in Beta release.

SDOCM00101411	Defect	S2 - Major	ESP module should be enabled for IPSEC testing in the absense of IPSEC Manager
SDOCM00101231	Defect	S2 - Major	SRIO_MulticoreLpbkK2KC66BiosExampleProject BE compiles but does not complete when run on the EVM
SDOCM00101046	Enhancement	S2 - Major	PA LLD unit test on arm needs to be restartable
SDOCM00101413	Defect	S2 - Major	SCTP protocol support is not there in MCSDK.
SDOCM00101431	Defect	S2 - Major	Linux QoS does not send traffic through configured queues
SDOCM00101353	Defect	S2 - Major	Matrix Launcher: Unable to save EEPROM read data to a local file.
SDOCM00101293	Defect	S2 - Major	gpio irq driver crash
SDOCM00101249	Defect	S2 - Major	Linux USB driver does not work
SDOCM00101318	Defect	S2 - Major	UART1 is not enabled in Linux kernel
SDOCM00101053	Defect	S2 - Major	lspci command not part of sdk rootfs.
SDOCM00101552	Defect	S2 - Major	Reserved register used in u-boot arch/arm/cpu/armv7/keystone/clock.c
SDOCM00095678	Defect	S2 - Major	Keystone 2: User mode A15 drivers don't have any DMB/DSB barriers
SDOCM00100799	Defect	S2 - Major	Kernel Panic occurs when using secondary buffer with keystone_net_core.c
SDOCM00101558	Defect	S2 - Major	gpio driver acks pending interrupts without calling lenders
SDOCM00098816	Defect	S2 - Major	Need to add SMP IRQ affinity and routing support.
SDOCM00091094	Defect	S2 - Major	PDK Keystone2: PA_emacExample_SimtcI6634BiosExampleProject (LE & BE) compiles but test does not pass when run
SDOCM00088707	Defect	S2 - Major	QMSS (Keystone2) infrastructure examples don't work when both QMs are enabled in qmss_device.c
SDOCM00099583	Defect	S2 - Major	hypInk_K2KC66BiosExampleProject_Kepler project does not compile
SDOCM00100870	Defect	S2 - Major	cppiK2KC66BiosTestProject is getting PS data length mismatch failures
SDOCM00100868	Defect	S2 - Major	PA_emacExample project does not complete
SDOCM00100892	Defect	S2 - Major	syslog does not work in base filesystem
SDOCM00100992	Defect	S2 - Major	MCSDK installer installs SA LLD directly to c:\ti it should install to directory c:\ti\salld_keystone2_02_00_00_05 or similar
SDOCM00100988	Defect	S2 - Major	CCS can not connect to the DSP cores once Linux boots up on the ARM side
SDOCM00100730	Defect	S2 - Major	All Aif2 projects are not linking due to memory range not found: DDR2
SDOCM00099887	Defect	S2 - Major	MCSDK 3.x: Phy link goes on and off

SDOCM00100983	Defect	S2 - Major	UBI image has limited free space available in the rootfs
SDOCM00100826	Defect	S2 - Major	Building RM for Linux not supported
SDOCM00099072	Defect	S2 - Major	Yocto build issues
SDOCM00100576	Defect	S2 - Major	ctools mc_pc_trace_edma_drn unit test fails to initialize dsp trace function
SDOCM00100312	Enhancement	S2 - Major	Need support for 10G in the latest revision of cppi_device.c and csl_cppi.h
SDOCM00100293	Defect	S2 - Major	Linux User Mode LLD Test in PA Fails to run to completion
SDOCM00100455	Defect	S2 - Major	NFS rootfs doesn't work over eth1
SDOCM00101003	Defect	S2 - Major	k2 csr_device.h, qmss device.c has unsupported regions defined for QM
SDOCM00100930	Defect	S2 - Major	mount debugfs by default in the filesystem
SDOCM00100989	Defect	S2 - Major	Qmss_insertMemoryRegion() should use rm to allocate (instead of just check) link ram indices.
SDOCM00100986	Enhancement	S2 - Major	qmss lld: Qmss_removeMemoryRegion needs to be added to RM.
SDOCM00100937	Defect	S2 - Major	Revisit DTB file name to reflect the correct naming : k2h/k2k
SDOCM00101018	Defect	S2 - Major	Linux Bridge Control add bridge package was not installed.
SDOCM00101016	Enhancement	S2 - Major	Cppi_initDescriptor() API can returns incorrect queue for descriptor return queue
SDOCM00100871	Defect	S2 - Major	fftMCK2KC66BiosTestProject does not complete
SDOCM00100117	Defect	S2 - Major	pktdma driver - the descriptor type field is hardcoded - wrong value
SDOCM00100872	Defect	S2 - Major	fftSimpleK2KC66BiosTestProject does not complete
SDOCM00100869	Defect	S2 - Major	bcpK2KC66BiosExampleProject and bcpK2KC66BiosTestProject projects do not complete
SDOCM00100759	Defect	S2 - Major	Packets received from Netcp have an unexpected extra VLAN header with VLAN Id 0 causing Netfp receive to fail
SDOCM00100758	Defect	S2 - Major	K2 Kernel doesnt configure the MPUs. Unable to use queue thresholds from DSP
SDOCM00100677	Defect	S2 - Major	Warnings in U-boot boot log
SDOCM00099159	Defect	S2 - Major	SRIO LLD Type9/11 Message configuration currently does not handle second QM instance in the case of Keystone-2 Devices
SDOCM00099090	Defect	S2 - Major	SRIO_MulticoreLpbkK2KC66BiosExampleProject Type11 latency and through tests do not run
SDOCM00098856	Defect	S2 - Major	SRIO_LoopbackTestProject Multicore test does not run into completion
SDOCM00100654	Enhancement	S2 - Major	K2 uboot should take Ethernet MAC address from environment variable

SDOCM00101346	Defect	S2 - Major	Matrix Launcher: Read UBI image corrupts file system.
SDOCM00101230	Defect	S2 - Major	SRIO_LpbkDiolsrK2KC66BiosExampleProject BE compiles but does not complete when run on the EVM
SDOCM00100777	Defect	S3 - Minor	Warning about unused parameters in inline function - cppi_desc.h in pdk/keystone2_1_00_00_09
SDOCM00101315	Defect	S3 - Minor	system shutdowned, but not clean.
SDOCM00101420	Defect	S3 - Minor	CSL Update needed for handling additional SGMII ports in K2H/K2K
SDOCM00101496	Defect	S3 - Minor	The kstrtol API improperly used
SDOCM00101330	Defect	S3 - Minor	Image Processing is not available in current Matrix
SDOCM00094658	Defect	S3 - Minor	PDK 6638 BE: qmInfraMCSimtc6634C66BiosExampleProject does not run to completion for Big Endian (when using the simulator)
SDOCM00101023	Defect	S3 - Minor	Loading Linux Kernel using CCS scripts issues
SDOCM00100910	Defect	S3 - Minor	Root filesystem doesn't boot cleanly
SDOCM00100909	Defect	S3 - Minor	linux "reboot" doesn't work
SDOCM00100995	Defect	S3 - Minor	Need a minimal filesystem in the release for basic testing
SDOCM00100785	Defect	S3 - Minor	Virt_to_idmap always assumes base address of Linux at 0x80000000 in MCSDK 3.0 alpha 9
SDOCM00100111	Defect	S3 - Minor	reboot command causes kernel panic when using NFS rootfs
SDOCM00100406	Defect	S3 - Minor	Customer request: Qmss_IsQueueOpen() API
SDOCM00100051	Defect	S3 - Minor	uboot hangs with wrong file name using dhcp
SDOCM00101328	Defect	S3 - Minor	IPC demo is not available on the Matrix
SDOCM00101080	Defect	S3 - Minor	u-boot tftpboot speed increase

8.2.2 Known Issues

Id	Headline
SDOCM00101670	u-boot does not set ENSAT bit in the ARMPLLCTL1 register
SDOCM00101699	Add Header/Trailer Utility for bootable images
SDOCM00101709	IPC ARM –DSP does not work, if MPAX based coherency support is enabled for ARM Contiguous memory
SDOCM00100094	PKTLIB rebuild fails due to missing file from release package
SDOCM00099452	u-boot usb reset hangs if done during boot

SDOCM00101450	u-boot: Not all power on self-tests supported.
SDOCM00101319	Kernel coredump / crash dump not supported
SDOCM00101665	QoS performance issues for High priority queues with high throughput

8.3 Beta Build 03.00.00.10

This is the beta release of the Multicore SDK.

Component	Version	Installer
NDK	2.22.02.16	MCSDK
IPC	3.00.00.16	MCSDK
SYS/BIOS	6.35.01.29	CCS
DSPLIB	3.1.0.0	MCSDK
MATHLIB	3.0.1.1	MCSDK
IMGLIB	3.1.1.0	MCSDK
Transport Net Lib	1.0.0.6	MCSDK
SYSLIB	3.0.0.1A	MCSDK
HPLIB	01.00.00.01	MCSDK
PKTLIB	02.00.00.09	MCSDK
NETAPI	01.00.00.06	MCSDK
NWAL	02.00.00.10	MCSDK
Multi Proc Manager	03.00.00.08B	MCSDK
Matrix Utility Apps Demo	01.00.00.01	MCSDK
Linux Kernel	03.08.04.10	MCSDK
Uboot	2013_01_10	MCSDK
Boot Monitor	3.0.0.10	MCSDK
SA LLD	02.00.01.02	MCSDK
Trace Framework	1.00.02.00	MCSDK
PDK	3.0.1.12	MCSDK
Platform Library	3.0.0.8	MCSDK
NIMU Transport	3.0.0.2	MCSDK
CSL	2.0.0.13	MCSDK
PA LLD	2.0.0.9	MCSDK
CPPI LLD	2.0.0.10	MCSDK
QMSS LLD	2.0.0.11	MCSDK
PCIe LLD	2.0.0.4	MCSDK
SRIO LLD	2.0.0.5	MCSDK
Hyperlink LLD	2.0.0.6	MCSDK

BCP LLD	2.0.0.2	MCSDK
FFTC LLD	2.0.0.3	MCSDK
TCP3D LLD	2.0.0.3	MCSDK
RM LLD	2.0.0.3	MCSDK
AIF2 LLD	1.0.0.12	MCSDK
EDMA3 LLD	2.11.5.2	MCSDK
Other Tools		
CCS	5.4.0	http://processors.wiki.ti.com/index.php/Download_CCS (see Note1)
CodeGen	7.4.2	CCS
Linaro	2013.03	https://launchpad.net/linaro-toolchain-binaries/trunk/2013.03/+download/gcc-linaro-arm-linux-gnueabi-4.7-2013.03-20130313_linux.tar.bz2
Yocto	1.3	N/A
oe-layerssetup	3.0.0.10	http://arago-project.org/git/people/hzhang/oe-layerssetup-mcsdk.git?p=people/hzhang/oe-layerssetup-mcsdk.git;a=summary
DVT	3.3.0	CCS
XDCTools	3.25.00.48	CCS
Simulator	0.7.1	Contact TI technical support team
CG_XML	2.30	MCSDK
Python	2.7.2	http://www.python.org/download/releases/2.7.2/
minGW	20110316	http://sourceforge.net/projects/mingw/files/Automated%20MinGW%20Installer/mingw-get-inst/mingw-get-inst-20110316/mingw-get-inst-20110316.exe/download

Notes:

1. At the time of this release, the GA version of CCS 5.4.0 was not available. The MCSDK was validated on the Release Candidate (RC) of CCS 5.4.0. If CCS 5.4.0 is not listed on the CCS download page, please download and use the CCS 5.4.0 RC ([windows](#), [Linux](#)).

2. There is a known issue that the ubi rootfs has limited space available on the flash(SDOCM00100983). It is recommended to use NFS mount or init ramfs to test the rootfs. If ubi rootfs has to be used, please keep the log file or load the new file to rootfs /tmp directory, which will not occupy extra flash space. Another workaround is to remove files that are not required (e.g. /boot/vmlinux-3.8.4-rt2, etc.) from rootfs. In the next release, /boot/vmlinux-3.8.4-rt2 will be removed from rootfs.

3. There is known issue that CCS cannot connect to the DSP cores once Linux boots up on the ARM side (SDOCM00100988). By default, when Linux boots up, the MPM server runs as a daemon and powers down the DSP till an DSP image is loaded and run. But, in this state CCS can't connect to DSP. The workaround is to use DSP without MPM by renaming the mpmsrv binary (e.g.: `mv /usr/bin/mpmsrv /usr/bin/mpmsrv.1`) so that it does not start next time the board is rebooted. In the next release, MPM will have an command/option for not powering down slave cores in idle state.

8.3.1 New features and fixes

Identifier	Description
New feature	Upgrade Linaro tool chains version to v2013.03 with GCC 4.7 hardfp
New feature	Upgrade CCS tools version to v5.4
New feature	Switched upstream Linux kernel release from 3.6.6 to 3.8.4. Location of DTB is changed to arch/arm/boot/dts in 3.8.4, Linux DTB file name is changed to ulmage-tci6638-evm.dtb
New feature	Software work around in kernel and u-boot to make Ethernet stable on EVM
New feature	Disabled 10G by default. Customer needs to enable it through defconfig if want to use 10G
New feature	Add ARM errata 763126 support in Boot Monitor
New feature	Added Matrix utility demos
New feature	Added SA LLD into MCSDK package
New feature	Added PDK user mode LLD libs
New feature	Add support for Syslib Netfp send/receive plain text data and Msgcom ARM-DSP IPC
SDOCM00100906	Osal_qmssConvertDescPhyToVirt and Osal_qmssConvertDescPhyToVirt not returning converted addresses
SDOCM00100758	K2 Kernel doesn't configure the MPUs. Unable to use queue thresholds from DSP Workaround: <ul style="list-style-type: none"> - MPU setting is being overwritten through the kernel module. Following steps would need to be followed before running any user mode examples - Insert Kernel module from the file system (/lib/modules/\$KERNEL_VER/extra/hplibmod.ko, where \$KERNEL_VER=\$(uname -r)) - insmod hplibmod.ko - cat /proc/netapi
SDOCM00100753	Transport Network OOB clear text and IPSEC demo program and its test scripts are not working
SDOCM00100715	Transport Network OOB IPSEC and test example information is not available on User Guide
SDOCM00100482	HPLIB: hplib_VM_MemMap doesn't seem to be mapping memory properly
SDOCM00100481	Function hplib_vmMemAlloc: Critical section lock not being released
SDOCM00100432	Problem in cslr_tac2_cfg.h
SDOCM00100375	PDF version of User Guide in Alpha-9 does not contain all sections
SDOCM00100245	Elapsed time calculated using NETCP PA timer counter is ~20-25% less
SDOCM00099848	GDB Debugging for user Mode applications triggers SIGILL
SDOCM00099613	tisd-rootfs.cpio filesystem asks for password for root login

SDOCM00099589	Installer GPLv3 instructions refers to non-existent "Software Developer's Guide"
SDOCM00099538	mcsdk-3.0 needs devkit
SDOCM00099484	Linux rootfs NFS mount is very unstable
SDOCM00099461	Resource Manager exhibits memory leaks when allocating and freeing resources
SDOCM00099245	TAC FEI definitions missing in MCSDK3.0
SDOCM00099095	aif2WcdmaK2KTestProject_Kepler does not run to completion on the EVM
SDOCM00099094	aif2LteK2KTestProject_Kepler does not run to completion on the EVM
SDOCM00098581	Linux dtb/Image/vmlinux are not copied to build images directory in Yocto
SDOCM00093749	USB support in U-boot
SDOCM00100432	Problem in cslr_tac2_cfg.h
SDOCM00100245	Elapsed time calculated using NETCP PA timer counter is ~20-25% less

8.3.2 Known Issues

Identifier	Description
SDOCM00100988	CCS cannot connect to the DSP cores once Linux boots up on the ARM side
SDOCM00100983	UBI image has limited free space available in the rootfs
SDOCM00100785	Virt_to_idmap always assumes base address of Linux at 0x80000000 in MCSDK 3.0 alpha 9
SDOCM00100432	Problem in cslr_tac2_cfg.h
SDOCM00100318	CPPI/QMSS PDK test cases do not work
SDOCM00100293	Linux User Mode LLD Test in PA Fails to run to completion
SDOCM00100245	Elapsed time calculated using NETCP PA timer counter is ~20-25% less
SDOCM00100154	Add DSP unit test example for MPM server
SDOCM00100111	reboot command causes kernel panic when using NFS rootfs
SDOCM00100051	uboot hangs with wrong file name using dhcp
SDOCM00099599	Fastpath IPC support on KS II devices
SDOCM00099583	hyplnk_K2KC66BiosExampleProject_Kepler project does not compile

SDOCM00099489	Linux kernel USB driver fails in reading 1GB file
SDOCM00099488	u-boot and kernel fail to detect USB devices
SDOCM00099484	Linux rootfs NFS mount is very unstable
SDOCM00099461	Resource Manager exhibits memory leaks when allocating and freeing resources
SDOCM00099452	u-boot usb reset hangs
SDOCM00099245	TAC FEI definitions missing in MCSDK3.0
SDOCM00099161	k2k u-boot dhcp timeout
SDOCM00099159	SRIO LLD Type9/11 Message configuration currently does not handle second QM instance in the case of Keystone-2 Devices
SDOCM00099136	KeyStone II: Linux kernel need to take care of LPAE address translation for vring descriptor
SDOCM00099095	aif2WcdmaK2KTestProject_Kepler does not run to completion on the EVM
SDOCM00099094	aif2LteK2KTestProject_Kepler does not run to completion on the EVM
SDOCM00099090	SRIO_MulticoreLpbkK2KC66BiosExampleProject Type11 latency and through tests do not run
SDOCM00098942	Linux SPI driver: extend support to all three SPI ports
SDOCM00098856	SRIO_LoopbackTestProject Multicore test does not run into completion
SDOCM00098816	Need to add SMP IRQ affinity and routing support.
SDOCM00098735	tcp3dK2HC66BiosExampleProject_Kepler-BE & tcp3dK2KC66BiosExampleProject_Kepler-BE projects do not complete on simulator
SDOCM00098703	DSP IBL and boot examples do not work
SDOCM00098389	loadlin/keystone-sim.ccxml file should be renamed loadlin/tci6638-sim.ccxml
SDOCM00097548	TCP3d driver needs external interleaver support
SDOCM00096895	qmSched*BiosTestProject is not passing on the simulator, gets model order doesn't match firmware error.
SDOCM00095678	Keystone 2: User mode A15 drivers don't have any DMB/DSB barriers
SDOCM00093503	PDK 6638 Simulator: BCP Big Endian projects fail
SDOCM00091852	Stepping on kernel code, takes interrupt
SDOCM00091099	PDK Keystone2: cppiSimtci6634C66BiosExampleProject (LE & BE) compiles but test does not pass when run
SDOCM00100933	hplibkernel module: CMA (supposedly cache coherent) memory for user space transport does not seem to be cached.