

Multicore Software Development Kit

Release Notes

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MCSDK Release 3.1.4

1 Overview

This document is the Release Notes for [Release 3.1.4](#) 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.x User 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 is on the online link as specified above and a snapshot is provided in PDF format in the release at [INSTALL-DIR]/mcsdk_bios_<ver>/docs.)*
 - [Getting Started Guide](#): This chapter in the User's Guide provides information to run demonstrations out of box. It also contains information to update flash images on EVM and install software.
 - [Migration Guide](#): This chapter in the User's Guide provides information for migrating software from major MCSDK releases.
- **MCSDK Software Manifest**: Provides license information on software included in the MCSDK release. This document is 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 , 66AK2H12	XTCIEVMK2X, EVMK2H
[K2K]	TCI6638K2K	XTCIEVMK2X
[K2L]	TCI6630K2L , 66AK2L06	TCIEVMK2L
[K2E]	66AK2E05 , 66AK2E02 , AM5K2E02 , AM5K2E04	EVMK2E

5 Release Images

The release images are based on

- Supported platform (K2HK, K2L, or K2E)
- Real-time or non-real-time Linux kernel
- Type of image (UBI FS for NAND, Server filesystem, minimal Console filesystem)

UBI images:

- k2hk-evm-ubifs.ubi
- k2l-evm-ubifs.ubi
- k2e-evm-ubifs.ubi
- k2hk-evm-ubifs-rt.ubi
- k2l-evm-ubifs-rt.ubi
- k2e-evm-ubifs-rt.ubi

Server rootfs images:

- tisdk-rootfs-k2hk-evm.tar.gz
- tisdk-rootfs-k2l-evm.tar.gz
- tisdk-rootfs-k2e-evm.tar.gz
- tisdk-rootfs-rt-k2hk-evm.tar.gz
- tisdk-rootfs-rt-k2l-evm.tar.gz
- tisdk-rootfs-rt-k2e-evm.tar.gz

(Minimal) console images:

- arago-console-image-k2hk-evm.tar.gz
- arago-console-image-k2l-evm.tar.gz
- arago-console-image-k2e-evm.tar.gz
- arago-console-image-rt-k2hk-evm.tar.gz
- arago-console-image-rt-k2l-evm.tar.gz
- arago-console-image-rt-k2e-evm.tar.gz

6 Issues List

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

7 Technical Support and Product Updates

For technical discussions and issues, please visit:

- [KeyStone Multicore forum](#)

For local support in China, please visit

- [China Support forum](#)

For product updates, see the [MCSDK Download](#) chapter of the online User Guide.

8 IS NOT

- Support for BIOS5 or older releases
- Support for CCS 5.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

9 Releases

9.1 03.01.04.07

This is a maintenance update to on the R3.1 release stream of the Multicore SDK. The baseline for this release is R3.1.3.

Items marked in **blue** are modifications from R3.1.3.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.10 LTS (TAGS: K2_LINUX_03.10.72_15.08, K2_RT_LINUX_03.10.72_15.08)	MCSDK
U-boot	ARM boot loader	2013.01 (TAG: K2_UBOOT_2013_01_15.07_01)	MCSDK
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux kernel code through SMC calls	15.07 (TAG: K2_BM_15.07)	MCSDK
MPM	Multi-processor manager for loading and managing DSP cores, including fault management	2.0.1.10	MCSDK
MPM Transport	Multi-proc-Manager Transport layer	1.0.8.1	MCSDK
Transport Net Lib	Transport Network Library. Includes HPLIB (High Performance Library) and NetAPI (Network API).	1.1.0.4	MCSDK
IPSecMgr	IPSec Manager	1.1.0.4	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)	1.1.1.7	MCSDK
CMEM	Contiguous memory allocate for ARM user-space	4.10.1.2	MCSDK
UIO	User-space I/O driver for on-chip modules. This driver provides support of mmap interface, interrupt handling and powering up/down of on-chip modules from user space.	1.0.2.3	MCSDK
uDMA	User-space DMA framework that provides zero copy access from user-space to packet DMA channels via Linux kernel uDMA driver.	1.0.0.0	MCSDK
cUIA	C implementation of Unified Instrumentation Architecture for ARM user-space applications	1.0.0.13	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (ARM portion)	3.36.2.13	MCSDK
IPC-Transport	Transports used by IPC (MessageQ). May include Shared Memory, SRIO, Navigator.	2.0.0.0	MCSDK
SRSS-TC	Closed-loop control of the Smart Reflex sub system when temperature control is enabled	1.0.0.1A	MCSDK

Secure Storage	Software implementation of a secure storage; includes ti-softsm-v2, libp11, and engine_pkcs	1.3.0.4	MCSDK
OpenCL	OpenCL (Open Computing Language) is a multi-vendor open standard for general-purpose parallel programming of heterogeneous systems that include CPUs, DSPs and other processors. OpenCL is used to dispatch tasks from A15 to DSP cores	1.1.5.0	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.41.4.54	MCSDK
NDK	DSP network stack	2.24.2.31	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (DSP portion)	3.36.2.13	MCSDK
cToolsLib	Trace debug library	1.1.1.0	MCSDK
UIA	Unified instrumentation architecture	2.0.3.43	MCSDK
OpenMP	OpenMP is the de facto industry standard for shared memory parallel programming. Use OpenMP to achieve parallelism across DSP cores.	2.1.17.1	MCSDK
Image Proc	Image processing demo	1.0.0.2B	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.4.0.0	MCSDK
MATHLIB	Math functions	3.1.1.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
DSP/ARM Platform Development Kit			
CSL	Chip support library	2.1.1.0	MCSDK
AIF2 LLD	Antenna Interface LLD (not in K2L)	1.2.0.0A	MCSDK
BCP LLD	Bit Rate Coprocessor LLD	2.1.0.5A	MCSDK
CPPI LLD ⁽¹⁾	Packet DMA LLD	2.1.010	MCSDK
EDMA3 LLD ⁽¹⁾	Enhanced Direct Memory LLD	2.11.13.17	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.2.0.5	MCSDK
HYPLNK LLD ⁽¹⁾	HyperLink LLD	2.1.0.4C	MCSDK
PA LLD ⁽¹⁾	Packet Accelerator LLD	3.0.1.5A	MCSDK
PCIe LLD	Peripheral Component Interconnect Express	2.1.0.2	MCSDK
QMSS LLD(1)	Queue Manager LLD	2.1.0.11	MCSDK
RM LLD ⁽¹⁾	Resource Manager LLD	2.1.2.0	MCSDK
SA LLD ⁽¹⁾	Security Accelerator LLD	3.0.0.11A	MCSDK
SRIO LLD ⁽¹⁾	Serial Rapid IO LLD	2.0.0.13	MCSDK
TCP3D LLD	Turbo Coprocessor Decoder LLD	2.1.0.3	MCSDK
MMAP LLD	MPAX Map LLD	2.0.0.4	MCSDK
TSIP LLD	Telephony serial interface (K2E only)	1.0.0.1	MCSDK
IQN2 LLD ⁽¹⁾	High speed antenna interface (K2L only)	1.0.0.8F	MCSDK

DFE LLD⁽¹⁾	Digital Front End LLD (K2L only)	1.0.0.5E	MCSDK
Platform Library	DSP EVM drivers and SOC initialization	[MCSDK version]	MCSDK
NWAL	Network adaptation layer provides high level driver functionality abstracting NetCP LLDs PA and SA	2.1.0.8	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.1.1.7	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.1.1	MCSDK
PKTLIB	Packet Library	2.1.0.5	MCSDK
SERDES Diag	Diagnostic tools for SERDES	1.0.0.4	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	[MCSDK version]	MCSDK
Yocto-Arago	ARM software distribution	1.6	Link
Linux devkit	Development kit that is independent of Arago	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	6.1.0	Link
Linaro Toolchain	ARM toolchain	2013.03 (GCC 4.7)	Link
CodeGen	DSP compiler	7.4.12	CCS
DspCoreParse	Utility to parse DSP core dump file generated in ELF format. It can show the debug information and generate CCS loadable file. For more info, see link .	[MCSDK version]	MCSDK
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	3.31.2.38	MCSDK

Notes

- (1) This component can run on either DSP or ARM user-space

9.1.1 New features and fixes

ID	Description
New Feature	Added MCSDK-HPC components, including support for High Performance Compute (OpenCL)
New Feature	Added OpenMP runtime to RTOS package
New Feature	HyperLink transport enhancements: Userspace mapping and read/write to remote memory greater than 32 bits, multiple interrupts from/to DSP cores connected through HyperLink, SERDES Rx ATT and BOOST configuration from ARM
New Feature	Update Linux host support to Ubuntu 14.04
New Feature	Update to Yocto 1.6, certification of KeyStone II, MCSDK recipes pushed to Yocto mainline
New Feature	Update to CCS 6.1.0

New Feature	NetCP 1.5 ACL silicon errata workaround in PA low level driver
New Feature	IPC enhancements: Intra-device IPC over QM (ARM-DSP), segmentation and reassembly for SRIO transport
New Feature	Resource Management low level driver performance improvements and policy enhancement
SDOC000115335	IPC lad_tci6638 daemon can cause kernel crash if DSP applications using IPC are reset and reloaded
SDOC000115312	PASS: Tx CRC command does not work at K2L/K2E devices
SDOC000115401	SERDES Diag: Unable to get BER diagram tool to create the .bmp files
SDOC000114023	SGMII link up fails at low temperatures when using latest Linux SGMII driver
SDOC000108252	TF: arm_producer_arm_consumer test intermittently failed after 5 or 10 runs
SDOC000108412	Update to SERDES PHY-B Linux Driver to include support for AN/LT firmware
SDOC000108468	Hyperlink 6.25 GBaud configuration
SDOC000112036	Need to add atomic 64 queue push function to qmss so user space can push ptr+sz to shaper input queues
SDOC000113183	Add configurable 10ge SERDES equalizer attenuation and boost value
SDOC000114091	linux pktdma channels need to have size (# of descriptors) reconfigured at run time
SDOC000114179	K2E Network bonding support
SDOC000114338	mpm transport initiate64 crash if called more than 4 times
SDOC000114416	GTP-U End Marker message handling
SDOC000114773	Engine_pkcs11 reports all object ID:s as zero
SDOC000114775	SoftHSM RSA decrypt fails.
SDOC000114958	softhsm-daemon crashes during multipart sign operation
SDOC000114960	IPC does not recognize TMS320C66AK2H12 device
SDOC000114982	PA LLD support Packet Capture along with Ethernet OAM feature
SDOC000114983	PA LLD: Support for IPSec NAT-T detector enable feature along with EOAM feature
SDOC000115009	mpm_transport_write and similar functions do not check the length parameter
SDOC000115088	PA/SA user space shared object libraries to have same shared object lib name (SONAME) across devices supported
SDOC000115133	U-boot needs to shut down PA/CPGMAC in RBL Ethernet boot
SDOC000115148	Definition of PLLC registers in CSL: wrong offset for EMUCNT0/1
SDOC000115150	Linux kernel Oops if netrx complete-queue value misconfigured
SDOC000115180	Kernel Crash if UIO module is stress tested
SDOC000115181	K2E, K2L and K2HK have the same MAC address for eth1 and this is causing network issues when more than one EVM has eth1 up
SDOC000115209	transportIpcSrio & transportQMSS DSP projects should be mpm downloadable by default since they require the ARM to be running
SDOC000115212	Cppi_open Overwrites registers without RM gating
SDOC000115219	U-boot update prevents carving out high-mem and give it to CMEM (needed for HPC use case)
SDOC000115334	PA LLD: Eoam Mode Target flow classification statistics does not reflect the correct statistics
SDOC000115343	SASS hangs due to invalid security context
SDOC000115345	PASS: IP reassembly timeout at the inner RA causes the RA engine to hang

SDOCM00115444	PA LLD: PASS sub system address NULL checks in the LLD are missing
SDOCM00115449	PASS does not process GRE packets on NSS Gen2 device correctly
SDOCM00115456	Softism-daemon leaks memory when certificate is stored
SDOCM00115593	nwal_emaPortCfg returns -6 version when a buffer is requested
SDOCM00115657	Qmss_rmService execution time is too long
SDOCM00115675	HwQueue QoS Driver creating undersized weights for firmware
SDOCM00115728	PASS: Support IP forwarding with more than two layer of IPs
SDOCM00115772	RM function "rm_servicehandler" does not call Rm_osalMtCsExit if semaphore is configured and incorrect parameters are used
SDOCM00116001	Calling MPM transport API causes DSP crash
SDOCM00116010	SASS: Firmware should use constant IV size for 3GPP CMAC operation
SDOCM00116029	DSP SYS/BIOS TransportSrio: SRIO addresses copied into a data structure internal to the transport instance object
SDOCM00116065	Linux Kernel to integrate 3.0.1.5 PA fw supporting GTPU/Full ACL LUT size utilization enhancements along with few bug fixes
SDOCM00116163	mpm-transport always hangs during mpm_transport_open with serdes_init = 1
SDOCM00116369	Bug in AIF2 example code
SDOCM00116390	MPM transport fails to set Hyperlink lane power management register
SDOCM00116459	IPSEC Automation test getting failed on all platforms because of missing ipsecmgr_mod.ko in testfs.
SDOCM00116465	QOS Host automation test is failing for all the platforms because of missing tc package
SDOCM00116499	PA 1.5 firmware locks up for MTU size = 46 packets
SDOCM00116570	Kernel crash recovery feature is not supported on K2L and K2E
SDOCM00116684	Kernel soft reboot causes board to hang
SDOCM00116685	Instrumentation uTestCpsw.c needs to be updated to latest SERDES init sequence
SDOCM00116689	evmc66x_phy.c in the Platform package needs to be updated to a newer SERDES init sequence
SDOCM00116785	hplib memallocator free function doesn't handle non-page size aligned allocations properly
SDOCM00116813	Hyperlink LLD example failed when hyperlink port 1 is used
SDOCM00116833	PA LLD: needs protection for bad Tx Cmd entering the PASS, which can potentially hang the system
SDOCM00116889	kernel ipsec offload: ingress of fragmented NATT packets for offloaded context is not detected properly in keystone_net_sa
SDOCM00116898	PA: SPI with Link does not work
SDOCM00116912	Issue with mpm download to other DSP cores, after running cic hyperlink lld example
SDOCM00117188	Missing BCP Correlator CSL field updates
SDOCM00117216	SA 3GPP Enabler: Gap discovered to use sa3GPPenabler using linux devkit
SDOCM00117285	PA FW does not send WCDMA FP fragmented packets on K2L
SDOCM00117286	PA FW mishandles WCDMA CRC on K2L
SDOCM00117392	MPM transport hyperlink open/close always hang when open the second time
SDOCM00117465	MPM Transport QMSS/SRIO: Send/Rcv improperly handling buffer memcopy into and out of descriptor buffers
SDOCM00117533	ipk build: ti-fftw failure in yocto daisy config

SDOCM00117710	PA LLD: Needs enhancement to support ethernet Traffic forwarding through QoS use case
SDOCM00117768	QoS Shaper in packet unit mode requires packet length information
SDOCM00117772	IPC Transport linux testcase"TransportIpcQmssBenchmark " is getting failed for k2l platform
SDOCM00117775	Kernel crash recovery manual test hangs for k2l/k2l-rt.
SDOCM00117820	TCI6638K2K_SW PCIe Vendor ID and Device ID fields swapped in PDK for Keystone I and II processors
SDOCM00117881	SA firmware support error detect feature
SDOCM00117941	CPSW_LOOPBACK_NONE configuration sequence does not work
SDOCM00117943	Change mpmsrv daemon default logging to syslog instead of mpmsrv.log
SDOCM00117975	KS2 u-boot: Don't use global variables at ddr3 initialization
SDOCM00118200	Serdes_diag_test-Project compilation failed in CCSv6 for 3.1.4.7D for all platforms.
SDOCM00113600	Add SERDES FEP internal loopback support for high speed serdes operation
SDOCM00114580	Customize SERDES diagnostic package to have more flexible parameters
SDOCM00115286	Need 3.125Gbps rate initialization for SGMII SERDES interface in PDK for Edison
SDOCM00115403	SERDES Diag: Unable to get SGMII interface to work with EYE test
SDOCM00115567	RM Server sets root-only permissions to /tmp/var/run/rm directory
SDOCM00115572	Current CSL_SerdesLaneEnable() does not support per lane configuration
SDOCM00115767	CSL_SerdesAttBoostPatch doesn't support lane mask for CSL_SerdesBoostPhyAPerLanePatch API
SDOCM00115815	Serdes Diag PRBS calibration fails when lane 0 is not initialized
SDOCM00115818	Update Serdes Diag Eye diagram, PRBS calibration and FEP Loopback setup to add high speed patches
SDOCM00115932	Update CSL Serdes sequence for setting ATT/BOOST start value and ATT threshold
SDOCM00116860	CSL_Serdes_DFE_OffsetCalibration should support lane mask for lane operations
SDOCM00116875	Serdes Diag needs to support lane mask for BER and EYE tests
SDOCM00117275	CSL_SERDES_CONFIG_ATT_BOOST data type fix and CSL_Serdes_Att_Boost_Calibration APIs lane mask fix
SDOCM00117393	Enable AttBoost Patch for CSL Serdes PRBS calibration API
SDOCM00117443	Move CSL_Serdes_Att_Boost_Calibration to Serdes_Diag_Att_Boost_Calibration (CSL to Diag)
SDOCM00118085	Serdes diag 10g eth test in the output expected NUM LANE should be 2 but it is showing 4
SDOCM00118526	Serdes BER tests doesn't work for AIF2 lanes 4 and 5
SDOCM00118563	Mpmclient leaks memory if socket is not created correctly

9.1.2 Known Issues

ID	Description
SDOCM00112889	DSPLIB - The description of the parameters in DSPF_sp_iir function is not correct
SDOCM00112915	Linux: Enabling rx-error-retry on parx channel results in unusable internet
SDOCM00116489	HyperLink LLD examples fail with ARM running Linux (works with no-boot)
EVM Issue	XTIEVMK2X Rev 2.0: NAND flash and USB occasionally fails
EVM Issue	EVMK2H (PG1.1) Rev 3.0: NAND flash and USB occasionally fails

EVM Issue	TCIEVMK2L Rev 1.0: NAND flash and USB occasionally fails
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9.2 03.01.03.06

This is a maintenance update to on the R3.1 release stream of the Multicore SDK. The baseline for this release is R3.1.2.

Items marked in **blue** are modifications from R3.1.2.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.10 LTS (TAGS: K2_LINUX_03.10.61_15.02, K2_RT_LINUX_03.10.61_15.02)	MCSDK
U-boot	ARM boot loader	2013.01 (TAG: K2_UBOOT_2013_01_15.02_02)	MCSDK
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux kernel code through SMC calls	K2_BM_14.09	MCSDK
MPM	Multi-processor manager for loading and managing DSP cores, including fault management	2.0.1.8	MCSDK
MPM Transport	Multi-proc-Manager Transport layer	1.0.7.0A	MCSDK
Transport Net Lib	Transport Network Library. Includes HPLIB (High Performance Library) and NetAPI (Network API).	1.1.0.4	MCSDK
IPSecMgr	IPSec Manager	1.1.0.2	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)	1.1.1.6A	MCSDK
CMEM	Contiguous memory allocate for ARM user-space	4.10.0.1	MCSDK
UIO	User-space I/O driver for on-chip modules. This driver provides support of mmap interface, interrupt handling and powering up/down of on-chip modules from user space.	1.0.2.1	MCSDK
cUIA	C implementation of Unified Instrumentation Architecture for ARM user-space applications	1.0.0.13	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (ARM portion)	3.35.1.7	MCSDK
IPC-Transport	Transports used by IPC (MessageQ). May include Shared Memory, SRIO,	1.0.0.0	MCSDK

	Navigator.		
SRSS-TC	Closed-loop control of the Smart Reflex sub system when temperature control is enabled	1.0.0.1A	MCSDK
Secure Storage	Software implementation of a secure storage; includes ti-softhsm-v2, libp11, and engine_pkcs	1.3.0.0	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.41.0.26	MCSDK
NDK	DSP network stack	2.24.1.18	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (DSP portion)	3.35.1.7	MCSDK
cToolsLib	Trace debug library	1.1.1.0	MCSDK
UIA	Unified instrumentation architecture	2.0.2.39	MCSDK
Image Proc	Image processing demo	1.0.0.2B	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.4.0.0	MCSDK
MATHLIB	Math functions	3.1.0.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
DSP/ARM Platform Development Kit			
CSL	Chip support library	2.1.0.7A	MCSDK
AIF2 LLD	Antenna Interface LLD (not in K2L)	1.1.0.5	MCSDK
BCP LLD	Bit Rate Coprocessor LLD	2.1.0.5A	MCSDK
CPPI LLD ⁽¹⁾	Packet DMA LLD	2.1.0.9	MCSDK
EDMA3 LLD ⁽¹⁾	Enhanced Direct Memory LLD	2.11.13.17	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.2.0.5	MCSDK
HYPLNK LLD ⁽¹⁾	HyperLink LLD	2.1.0.2	MCSDK
PA LLD ⁽¹⁾	Packet Accelerator LLD	3.0.1.4	MCSDK
PCle LLD	Peripheral Component Interconnect Express	2.1.0.1	MCSDK
QMSS LLD ⁽¹⁾	Queue Manager LLD	2.1.0.10	MCSDK
RM LLD ⁽¹⁾	Resource Manager LLD	2.1.0.8	MCSDK
SA LLD ⁽¹⁾	Security Accelerator LLD	3.0.0.10	MCSDK
SRIO LLD ⁽¹⁾	Serial Rapid IO LLD	2.0.0.12	MCSDK
TCP3D LLD	Turbo Coprocessor Decoder LLD	2.1.0.3	MCSDK
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IQN2 LLD ⁽¹⁾	High speed antenna interface (K2L only)	1.0.0.7A	MCSDK
DFE LLD ⁽¹⁾	Digital Front End LLD (K2L only)	1.0.0.4C	MCSDK

Platform Library	DSP EVM drivers and SOC initialization	[MCSDK version]	MCSDK
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Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.1.1.6A	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.1.1	MCSDK
PKTLIB	Packet Library	2.1.0.4	MCSDK
SERDES Diag	Diagnostic tools for SERDES	1.0.0.2	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	[MCSDK version]	MCSDK
Yocto-Arago	ARM software distribution	1.4	Link
Linux devkit	Development kit that is independent of Arago	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	6.0.1	Link
Linaro Toolchain	ARM toolchain	2013.03 (GCC 4.7)	Link
CodeGen	DSP compiler	7.4.8	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	3.30.5.60	MCSDK

Notes

- (2) This component can run on either DSP or ARM user-space

9.2.1 New features and fixes

ID	Description
New Feature	IPC MessageQ support for inter-device Linux-to-Linux/DSP IPC over SRIO transport
New Feature	IPC MessageQ support for intra-device Linux-to-Linux IPC over Navigator transport
New Feature	Y.1731 protocol acceleration in NetCP PA DSP
New Feature	Linux kernel 3.10 LTS baseline update with v3.10.61
New Feature	Updated CSL SERDES APIs; see ti\cs\csl_serdes.h for full list of changes. <i>Note new CSL_SerdesLaneEnable() will deprecate individual interface LaneEnable() APIs (e.g., CSL_EthernetSerdesLaneEnable() in future release).</i>
SDOCM00101319	Kernel coredump / crash dump not supported
SDOCM00108113	K2E: ctools: mc_pc_trace_edma_drn unit test failed to generate traces using edma

SDOCM00112391	K2L: Image processing only works with two cores
SDOCM00112396	build kexec and makedumpfile utilities for using with KS2 kernel
SDOCM00113860	The LKSCTP stack needs to be upgraded to latest version
SDOCM00114249	SRIO LLD example configuration for one 4x port
SDOCM00114836	SRIO LLD: Need rawRxFreeDrvBuffer callout function that takes an application argument
SDOCM00115077	CSL_SerdesLaneEnable API has incorrect termination value
SDOCM00115078	NDK: both helloWorld and web client examples not working
SDOCM00115089	SA LLD: Enhance IPSEC Post-Processing functions to handle RA-based Inner IP reassembled packets
SDOCM00115091	SRIO LLD needs to be updated to new CSL Serdes Init Sequence
SDOCM00115185	PDK usermode LLDs build with devkit fails
SDOCM00115314	DSP side transportIpcSrioMultiBoardConsumer/Producer Example Project unittest does not run to completion
SDOCM00115319	Transport IPC Srio Linux Host to Host unit test gets "Failed to create TransportSrio Type 9 handle" error message when run
SDOCM00103888	ipsec inflow mode through kernel does not support egress, inner fragmented icmp packets
SDOCM00107903	mpmsrv crashes when loading DSP image compiled using CGT 7.6 with --dynamic option
SDOCM00112405	devkit: does not package static libraries of LoggerStreamer and LogSnapShot
SDOCM00112916	mpm-transport: change hyperlink examples' defaults to use mpmcl for peripheral control
SDOCM00113048	For IPv4 over IPv6 IPSEC tunnel & IPv6 over IPv4 IPSEC tunnel, egress traffic does not pass for packets greater than MTU size
SDOCM00113224	Secure store: strongswan.conf does not point to the proper library file.
SDOCM00113348	AES-GCM not enabled by default on KS2 Linux kernel
SDOCM00113439	KEYSTONE-MMAP: Error when attempting to allocate buffer larger than heap
SDOCM00113517	Secure storage description and usage information needs to be added to UG
SDOCM00113882	Taskset utility in MCSDK
SDOCM00113986	Requires K2E to support 2 USB host ports at the same time
SDOCM00114063	SGMII and PCIe serdes config issues found in Linux Kernel for Lamarr
SDOCM00114081	MPM transport 36-bit W/R doesn't work when remote side is KS I
SDOCM00114131	SRSS Class 0 temperature support on K2E
SDOCM00114184	Add support for authenc(hmac(sha1),ecb(cipher_null)) algorithm in keystone driver for SA Sideband mode
SDOCM00114189	PA LLD Example needs to be updated to new CSL Serdes Init Sequence
SDOCM00114250	K2L, K2E: PA usermode LLD unittest failure
SDOCM00114264	DLEV patch/workaround for PhyB
SDOCM00114272	Kernel PA2 driver needs to use the latest PASS constant register tables for Default Route and EQoS support
SDOCM00114332	Update the SERDES configuration with the latest in MCSDK
SDOCM00114357	SA LLD: Enhance IPSEC Firmware tx processing to handle PASS Long Info
SDOCM00114358	PASS: User stats should be incremented at the IP forwarding path as well
SDOCM00114359	PASS should be able to remove the outer IP header and trailer of forwarding IP packet

SDOCM00114360	PASS: ACL byte count should include the associated IP length only
SDOCM00114361	PASS: Enhance Egress Flow L2 processing to be able to forward packet to QoS queue with emac port number
SDOCM00114362	PASS: Support Post-classification L2 packet capture on K2L/E devices
SDOCM00114366	Support for parameters in ipsec.conf The strongswan version in MCSDK package needs to be upgraded to 5.2.0
SDOCM00114374	PASS:The ACL entry with DSCP does not work
SDOCM00114375	MPM load/reset failure
SDOCM00114406	Kernel Ethernet driver should set physical interface state in cpsw to DOWN on "ifconfig ethX down"
SDOCM00114468	Add single DSP core, BIOS multi-task test to RM
SDOCM00114506	Update bash version in the MCSDK filesystem
SDOCM00114514	PASS: CRC calculation for large-size packet doesn't work on K2E/K2L devices
SDOCM00114515	PASS: Fail to match default (catch-up) IP rule
SDOCM00114517	Kernel PA(2) driver should pick up the latest (3.0.1.3) PASS firmware images
SDOCM00114533	RM: Incorrect instance referenced in multi threaded critical section exit
SDOCM00114543	PASS can not handle some illegal IP packets
SDOCM00114576	PASS: Illegal Tx commands may cause infinite loop
SDOCM00114584	L04-448: Linux - Make FORCE_MAX_ZONEORDER configurable
SDOCM00114585	L04-448: Linux : fix BUG: key c5a71410 not in .data!
SDOCM00114613	K2E : 4G DDR memory configuration is not right
SDOCM00114659	BCP LLD: Extra memory register writes may lead to incorrect configuration
SDOCM00114668	PASS: Provide LUT1 workaround for ACL operation
SDOCM00114669	PASS: Support SCTP port filter in ACL function
SDOCM00114689	Race conditions on last interface close
SDOCM00114690	Memory leak in network drivers on repeated ifconfig down and up.
SDOCM00114718	user-mode LLD update for cmem module
SDOCM00114846	CSL: tistdtypes.h conflicts with <ipc_version>/linux/include/ti/IPC/STD.h when building on ARM
SDOCM00114854	Hawking porting: enumerated type is not allowed.
SDOCM00114893	netapi init needs to be parameterized as to whether msmc memory pool should be created & initialized
SDOCM00114919	Fault management generates incorrect event for ARM causing MPMCL to report DSP status wrongly
SDOCM00114940	Serdes Lane Enable RX valid check doesn't work with SGMII
SDOCM00114942	Update csl_serdes_aif2.h to support new CSL Serdes Init Sequence
SDOCM00114972	Linux to sync to PA netcp 1.5 and NetCP 1.0 firmware as attached
SDOCM00115006	PA LLD to support EOAM feature
SDOCM00115079	mpm-transport: shared memory map mpm-transport unit test fails
SDOCM00115095	mpm-transport mailbox: error (-104) loading test DSP image
SDOCM00115113	POST I2C test failure
SDOCM00115151	BCP example and unit tests not executing: require enable of TSC

SDOCM00115152	BCP LLD: initialize queueType to known value in Bcp_rxOpen() function
SDOCM00115175	K2HK: u-boot fails to boot images when tftp server is on a different subnet than EVM
SDOCM00115176	post fails if 10G BOC is connected to the EVM and do post
SDOCM00115189	(Child) TCP3D LLD: Spurious EDMA transactions lead to driver stoppage, caused by premature LLD state updates
SDOCM00112391	(K2L) Image Processing Demo: Demo only works on two cores
SDOCM00115342	Ctools version: Mismatched ctools installed folder version 1.1.1.0 vs RSTC version 1.1.0.0
SDOCM00115395	SERDES Diag code will currently fail if any interface is specified other than AIF2
SDOCM00115396	SERDES Diag K2H projects have initialization line for AIF2 but this interfaces is not supported on K2H
SDOCM00115402	SERDES Diag: Unable to get AIF2 interface to work for either BER or EYE

9.2.2 Known Issues

ID	Description
SDOCM00115439	SGMII lockup issue seen on K2E/K2L only if you bring up/down the interface
SDOCM00115335	IPC lad_tci6638 daemon can cause kernel crash if DSP applications using IPC are reset and reloaded
SDOCM00115312	PASS: Tx CRC command does not work at K2L/K2E devices
SDOCM00115401	SERDES Diag: Unable to get BER diagram tool to create the .bmp files
SDOCM00114023	SGMII link up fails at low temperatures when using latest Linux SGMII driver
EVM Issue	XTIEVMK2X Rev 2.0: NAND flash and USB occasionally fails
EVM Issue	EVMK2H (PG1.1) Rev 3.0: NAND flash and USB occasionally fails
EVM Issue	TCIEVMK2L Rev 1.0: NAND flash and USB occasionally fails

9.3 03.01.02.05

This is a maintenance update to on the R3.1 release stream of the Multicore SDK. The baseline for this release is R3.1.1.

Items marked in **blue** are modifications from R3.1.1.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.10 LTS (TAGS: K2_LINUX_03.10.10_14.12, K2_RT_LINUX_03.10.10_14.12)	MCSDK
U-boot	ARM boot loader	2013.01 (TAG: K2_UBOOT_2013_01_14.12_02)	MCSDK
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux kernel code through SMC calls	K2_BM_14.09	MCSDK

MPM	Multi-processor manager for loading and managing DSP cores, including fault management	2.0.1.7	MCSDK
MPM Transport	Multi-proc-Manager Transport layer	1.0.6.0	MCSDK
Transport Net Lib	Transport Network Library including: HPLIB (High Performance Library) NetAPI (Network API)	1.1.0.3	MCSDK
IPSecMgr	IPSec Manager	1.1.0.2	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)	1.1.1.6	MCSDK
CMEM	Contiguous memory allocate for ARM user-space	4.0.3.14	MCSDK
UIO	User-space I/O driver for on-chip modules. This driver provides support of mmap interface, interrupt handling and powering up/down of on-chip modules from user space.	1.0.2.0	MCSDK
cUIA	C implementation of Unified Instrumentation Architecture for ARM user-space applications	1.0.0.13	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (ARM portion)	3.30.01.12	MCSDK
SRSS-TC	Closed-loop control of the Smart Reflex sub system when temperature control is enabled	1.0.0.0	MCSDK
Secure Storage	Software implementation of a secure storage; includes ti-softhsm-v2, libp11, and engine_pkcs	1.3.0.0	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.40.4.47	MCSDK
NDK	DSP network stack	2.24.0.11	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (DSP portion)	3.30.01.12	MCSDK
cToolsLib	Trace debug library	1.1.1.0	MCSDK
UIA	Unified instrumentation architecture	2.0.1.34	MCSDK
Image Proc	Image processing demo	1.0.0.1	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.4.0.0	MCSDK
MATHLIB	Math functions	3.1.0.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
DSP/ARM Platform Development Kit			

CSL	Chip support library	2.1.0.6A	MCSDK
AIF2 LLD	Antenna Interface LLD (not in K2L)	1.1.0.5	MCSDK
BCP LLD	Bit Rate Coprocessor LLD	2.1.0.4	MCSDK
CPPI LLD ⁽¹⁾	Packet DMA LLD	2.1.0.8	MCSDK
EDMA3 LLD ⁽¹⁾	Enhanced Direct Memory LLD	2.11.13.17	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.2.0.5	MCSDK
HYPLNK LLD ⁽¹⁾	HyperLink LLD	2.1.0.1	MCSDK
PA LLD ⁽¹⁾	Packet Accelerator LLD	3.0.1.1	MCSDK
PCIe LLD	Peripheral Component Interconnect Express	2.1.0.1	MCSDK
QMSS LLD ⁽¹⁾	Queue Manager LLD	2.1.0.9	MCSDK
RM LLD ⁽¹⁾	Resource Manager LLD	2.1.0.7	MCSDK
SA LLD ⁽¹⁾	Security Accelerator LLD	3.0.0.8	MCSDK
SRIO LLD ⁽¹⁾	Serial Rapid IO LLD	2.0.0.11	MCSDK
TCP3D LLD	Turbo Coprocessor Decoder LLD	2.1.0.2A	MCSDK
MMAP LLD	MPAX Map LLD	2.0.0.3	MCSDK
TSIP LLD	Telephony serial interface (K2E only)	1.0.0.1	MCSDK
IQN2 LLD ⁽¹⁾	High speed antenna interface (K2L only)	1.0.0.5B	MCSDK
DFE LLD ⁽¹⁾	Digital Front End LLD (K2L only)	1.0.0.3C	MCSDK
Platform Library	DSP EVM drivers and SOC initialization	[MCSDK version]	MCSDK
NWAL	Network adaptation layer provides high level driver functionality abstracting NetCP LLDs PA and SA	2.1.0.4A	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.1.1.6	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.1.1	MCSDK
PKTLIB	Packet Library	2.1.0.4	MCSDK
SERDES Diag	Diagnostic tools for SERDES	1.0.0.1	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	[MCSDK version]	MCSDK
Yocto-Arago	ARM software distribution	1.4	Link
Linux devkit	Development kit that is independent of Arago	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	6.0.1	Link
Linaro Toolchain	ARM toolchain	2013.03 (GCC 4.7)	Link
CodeGen	DSP compiler	7.4.8	CCS
CG_XML	Package of Perl scripts used to process	2.30	MCSDK

	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.		
XDCTools	DSP RTSC packaging and build tools	3.30.4.52	MCSDK

Notes

- (3) This component can run on either DSP or ARM user-space

9.3.1 New features and fixes

ID	Description
New Feature	ARM user space component SRIO low level driver
New Feature	DSP IPC SRIO transport
New Feature	SERDES Diagnostics package
New Feature	IPSecMgr enhancement for multi-instance support
New Feature	IPSecMgr enhancement for multiple Policy support for single tunnel
New Feature	ARM user space component for K2L SmartReflex with temperature compensation
New Feature	ARM HyperLink interrupt support
New Feature	64-bit timestamp support (affects CPSW and PA)
New Feature	Secure Storage enhancement for secure devices
SDOCM00106226	Add support for 10GbE in K2 u-boot
SDOCM00106809	Trace framework Coverity issue fixes
SDOCM00108048	K2L & K2E: UBOOT DHCP works intermittently when Eth0 and Eth1 are connected at the same time
SDOCM00111714	aif2LteMultiCoreK2HTestProject and aif2LteMultiCoreK2KTestProject are not building under Linux due to file name case mismatch
SDOCM00112200	Making NetAPI tuneable parameters configurable in code
SDOCM00112354	(Child) IPSecMgr: Require support for start/stop offloading of policies sharing single CHILD_SA
SDOCM00112368	QM LLD: qmInsRegion unit test fails
SDOCM00112403	(Child) IPC ping rpmsg unit-test hangs when run on K2L
SDOCM00112404	IPC MessageQMulti unit-test gets an out of heap memory error when run on K2E or K2L
SDOCM00112658	All SERDES Configs need to be updated
SDOCM00112696	mpm error checking against invalid use case: mpmcl run, followed by a run causes MPM to crash
SDOCM00112879	There needs to be a definitive way to determine if you are using IPSEC inflow mode for the ipsec manager/kernel module
SDOCM00112894	Multi-cast TFTP in u-boot
SDOCM00112897	Egress 1588 packet timestamp missing on occasion (delay request message)
SDOCM00113044	DSP IPC_start occasionally causes system to halt, may cause LLD unit test failures
SDOCM00113085	With CONFIG_DEBUG_MUTEXES enabled, Linux kernel issues WARNs

SDOCM00113097	(Child) softsm-util return value 0 even if the securedb is corrupted
SDOCM00113110	SECDEV: rmK2HArmv7LinuxDspClient does not build when modified to run on a secure device
SDOCM00113125	PA LLD: Pa_addAcl does not support the same entry at both outer and inner ACL
SDOCM00113142	(Child) Ingress packet sideband access can be to prior packet on PA
SDOCM00113187	ipsec inflow in kernel fails with inner fragmented packets
SDOCM00113204	CSL Serdes Reset doesn't support AIF2 B4 macro in csI_serdes.h
SDOCM00113205	Serdes Attenuation and Boost Calibration support in csI_serdes.h
SDOCM00113252	transportnetlib queue clean up logic does not work when RM is used
SDOCM00113322	kernel RX UDP/TCP checksum offload to NETCP breaks user space transportnetlib sample applications
SDOCM00113360	CSL Serdes Restore Default Top Level API needed
SDOCM00113361	CSL_Serdes_Assert_Reset API in csI_serdes.h incorrect
SDOCM00113362	MultiProcMgr, wrong DSP state after run_withpreload
SDOCM00113371	sync up PCIE Linux SerDes code to CSL tag DEV.CSL_KEYSTONE2.02.01.00.05A
SDOCM00113518	Add serdes FEP internal loopback support for high speed serdes operation
SDOCM00113578	Retain value of ALE_BYPASS if programmed on multi-interface
SDOCM00113610	Serdes High Speed Patch for PHY-A
SDOCM00113622	qmss accumulator: all apis in qmss_acc.c which access firmware have return code race
SDOCM00113624	"wide multigroup QoS" - 1 port, 17 groups, 8 queues each feature
SDOCM00113664	The default exception handler setup inside netapi_init should be made configurable
SDOCM00113755	SA firmware reading timestamp value at incorrect location ctrlInfo instead of ctrlInfo2- K2L
SDOCM00113873	Need to add support for IPV6 gso hook in ipsecmgr kernel module.
SDOCM00113969	rmK2XArmv7LinuxDspClientTestProject unittest failure
SDOCM00113971	Linux sideband crypto driver. sideband security context 64+N doesn't work properly
SDOCM00113977	Cppi_channelClose should only disable hardware if RM agrees that all users stopped.
SDOCM00113978	Change QM usermode examples to use UIO and CMA instead of /dev/mem and hardcoded msmc
SDOCM00113980	QMSS: add API to open a region inserted by another task that doesn't share same global object
SDOCM00113981	New QMSS firmware to route SRIO type 11 packets needed
SDOCM00113996	(Child) Modify PA firmware to return 64 bit timestamp counter values
SDOCM00113998	(Child) Update SA LLD to be compatible with PASS which supports 64-bit timestamp
SDOCM00114078	Add lseek in uio driver request
SDOCM00114086	An RM instance run from multiple threads can corrupt itself
SDOCM00114088	Bcp_rxOpen fails
SDOCM00114098	u-boot: max arm and dev speed bit fields are swapped
SDOCM00114155	fftSimpleK2x test projects get linker error message: program will not fit into available memory

9.3.2 Known Issues

ID	Description
SDOCM00113048	When using an IPSEC inflow IPv6 tunnel, traffic will not pass across the established tunnel
SDOCM00112391	(K2L) Image Processing Demo: Demo only works on two cores
SDOCM00114250	K2L, K2E: PA user mode LLD unittest failure
SDOCM00113439	MMAP: Error when attempting to allocate buffer larger than heap
SDOCM00114023	SGMII link up fails at low temperatures when using latest Linux SGMII driver
EVM Issue	XTIEVMK2X Rev 2.0: NAND flash and USB occasionally fails
EVM Issue	EVMK2H (PG1.1) Rev 3.0: NAND flash and USB occasionally fails
EVM Issue	TCIEVMK2L Rev 1.0: NAND flash and USB occasionally fails

9.4 03.01.01.04

This is a maintenance update to on the R3.1 release stream of the Multicore SDK. The baseline for this release is R3.1.0.

Items marked in **blue** are modifications from R3.1.0.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.10 LTS (TAGS: K2_LINUX_03.10.10_14.09_01, K2_RT_LINUX_03.10.10_14.09_01)	MCSDK
U-boot	ARM boot loader	2013.01 (TAG: K2_UBOOT_2013_01_14.09)	MCSDK
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux kernel code through SMC calls	K2_BM_14.09	MCSDK
MPM	Multi-processor manager for loading and managing DSP cores, including fault management	2.0.1.4	MCSDK
MPM Transport	Multi-proc-Manager Transport layer	1.0.5.2E	MCSDK
Transport Net Lib	Transport Network Library including: HPLIB (High Performance Library) NetAPI (Network API)	1.1.0.2	MCSDK
IPSecMgr	IPSec Manager	1.1.0.2	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	1.1.1.5	MCSDK

	portion)		
User-Mode LLDs	Subset of LLD that work on ARM user-space	See below	MCSDK
CMEM	Contiguous memory allocate for ARM user-space	4.0.3.14	MCSDK
UIO	User-space I/O driver for on-chip modules. This driver provides support of mmap interface, interrupt handling and powering up/down of on-chip modules from user space.	1.0.1.0	MCSDK
cUIA	C implementation of Unified Instrumentation Architecture for ARM user-space applications	1.0.0.13	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (ARM portion)	3.22.2.11	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.37.3.30	MCSDK
NDK	DSP network stack	2.22.2.16	MCSDK
IPC	Inter-process communication between DSP-DSP and ARM-DSP (DSP portion)	3.22.2.11	MCSDK
cToolsLib	Trace debug library	1.1.1.0	MCSDK
UIA	Unified instrumentation architecture	1.3.2.10	MCSDK
Image Proc	Image processing demo	1.0.0.1	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.2.0.1	MCSDK
MATHLIB	Math functions	3.1.0.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
DSP Platform Development Kit			
CSL	Chip support library	2.1.0.5A	MCSDK
AIF2 LLD	Antenna Interface LLD (not in K2L)	1.1.0.3	MCSDK
BCP LLD	Bit Rate Coprocessor LLD	2.1.0.2	MCSDK
CPPI LLD	Packet DMA LLD	2.1.0.6	MCSDK
EDMA3 LLD	Enhanced Direct Memory LLD	2.11.13.17	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.2.0.4	MCSDK
HYPLNK LLD	HyperLink LLD	2.1.0.1	MCSDK
PA LLD	Packet Accelerator LLD	3.0.1.0	MCSDK
PCle LLD	Peripheral Component Interconnect Express	2.1.0.1	MCSDK
QMSS LLD	Queue Manager LLD	2.1.0.6	MCSDK
RM LLD	Resource Manager LLD	2.1.0.6	MCSDK
SA LLD	Security Accelerator LLD	3.0.0.7	MCSDK

SRIO LLD	Serial Rapid IO LLD	2.0.0.10	MCSDK
TCP3D LLD	Turbo Coprocessor Decoder LLD	2.1.0.2A	MCSDK
MMAP LLD	MPAX Map LLD	2.0.0.3	MCSDK
TSIP LLD	Telephony serial interface (K2E only)	1.0.0.1	MCSDK
IQN2 LLD	High speed antenna interface (K2L only)	1.0.0.3A	MCSDK
DFE LLD	Digital Front End LLD (K2L only)	1.0.0.2A	MCSDK
Platform Library	DSP EVM drivers and SOC initialization	[MCSDK version]	MCSDK
NWAL	Network adaptation layer provides high level driver functionality abstracting NetCP LLDs PA and SA	2.1.0.3A	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.1.1.5	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.1.1	MCSDK
PKTLIB	Packet Library	2.1.0.3	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	[MCSDK version]	MCSDK
Yocto-Arago	ARM software distribution	1.4	Link
Linux devkit	Development kit that is independent of Arago	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	5.5.0	Link
Linaro Toolchain	ARM toolchain	2013.03 (GCC 4.7)	Link
CodeGen	DSP compiler	7.4.4	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	3.25.6.96	MCSDK
Simulator	Simulator for K2L, K2E	0.9.0	CCS

9.4.1 New features and fixes

ID	Description
New Feature	TransportNetLib: Port mirroring and capture, see PA LLD release notes for details
New Feature	TransportNetLib: QoS dual shaper, see PA LLD release notes for details
New Feature	AETLib: An AET interrupt is generated upon detecting a CPU pipeline stall
New Feature	DSPTraceLib: Add API to setup correct DSP Trace export clock divider

SDOCM00113073	MPM download timeout is not sufficient for loading DSP RAM secure kernel (secure device only)
SDOCM00113227	transportnetlib K2H: nt_bridge_setup application minor bugs
SDOCM00102641	linux doesn't allow DSP to read switch stats since it autonomously clears them
SDOCM00107190	SA pluggin for ethernet driver needs to support K2L/K2E
SDOCM00107394	CTRL-C during Hyperlink transfer driven by ARM (memcpy) is causing K2H to lockup.
SDOCM00108171	(K2E) RM ARM-to-DSP test fails
SDOCM00112218	10000:1 weighted round-robin new support ratio in QoS firmware
SDOCM00112374	(K2E) mpm-transport: HyperLink transport does not work due to missing device tree entries
SDOCM00112708	mpmservice.c is missing in MPM of MCSDK 3.1.0.3 release package
SDOCM00105727	Missing the extern "C" construct in tcp3d_drv.h
SDOCM00105728	Missing the extern "C" construct in bcp_osal.h
SDOCM00106138	DfE test project build failure
SDOCM00106663	packets drop due to virtual and physical view inconsistency
SDOCM00107193	CSL SERDES configuration update
SDOCM00107257	K2L: Linux kernel ethernet driver to turn off FCS in CPSW
SDOCM00107857	Race conditions in keystone_net_core.c causing BUGs/panics
SDOCM00108165	Linux Ethernet driver to expose port number being used
SDOCM00108236	dfeUnitK2LTestProject SUMMER Shift gain test is failing
SDOCM00111710	iqn2DfeDualModeK2LTestProject not all tests are passing
SDOCM00112183	Kernel needs to support Mistral RTM-BOC RevB w/ dual retimer for 10Gb Ethernet
SDOCM00112238	AIF2 4.9G Serdes Configuration File must be updated
SDOCM00112273	PA LLD: Support optional EMAC Interface Ingress Packet Default Routes
SDOCM00112304	spi: remove call to gpio_request() for GPIO chip selects
SDOCM00112339	PA LLD: Egress Flow exception causes internal PASS buffer leak
SDOCM00112340	PA LLD: Deletion of the pair of IP/IPSEC entry may miss the IPSEC (SPI) entry due to firmware timing issue
SDOCM00112406	TF ARM: unit test does not compile with LoggerStreamer and LogSnapshot dynamic libraries
SDOCM00112441	RM: Incorrectly allows DSP to open CPPI flows reserved for kernel on K2H
SDOCM00112559	FFTC LLD cannot be used for more than 2 instances of FFTC and 3rd instance operation causes memory spill
SDOCM00112563	linux misconfigures low qos rates
SDOCM00112612	RM-LLD: Heap memory is leaked when extracting resource usage data from Linux DTB
SDOCM00112645	Update CSLR files for TAC2.2 in K2L
SDOCM00112660	PCIE driver causes kernel crash when EP driver call pci_disable_msi()
SDOCM00112706	TCP3D LLD not built for K2K, K2H platforms
SDOCM00112751	(Child) TCP3D LLD: Check for number of instances is not correct
SDOCM00112754	FFTC LLD: K2H LLD should be limited to 4 instances
SDOCM00112818	TCP3D LLD: Incorrect chain to next code block notification link for PONG side exists

SDOCM00112895	(Child) Incorrect Implementation of osalDeleteSem functions in FFTC and BCP PDK examples and tests causes small memory leak
SDOCM00112963	(Child) Qmss_insertMemoryRegion needs to set MEMORY_REGION_BASE_ADDR_REG last
SDOCM00112975	Update equalizer settings with programmable attenuation and boost values
SDOCM00112994	PA LLD: Eflow route to CPSW (pa_DEST_EMAC) does not work
SDOCM00113003	Missing the extern "C" construct in fftc_osal.h
SDOCM00113040	on-board LCD not showing IP address after kernel boots up
SDOCM00113257	Enable 2G NAND on K2L EVM (NOTE: This change increases the boot time if using UBIFS/NAND.)
SDOCM00113278	Enable MDIO in DT bindings for network driver for K2L/E

9.4.2 Known Issues

ID	Description
SDOCM00112897	Egress 1588 packet timestamp missing on occasion (delay request message)
SDOCM00113044	DSP IPC_start occasionally causes system to halt, may cause LLD unit test failures
SDOCM00113048	When using an IPSEC inflow IPv6 tunnel, traffic will not pass across the established tunnel
SDOCM00113187	IPSec inflow in Linux kernel fails with inner fragmented packets
SDOCM00112268	(K2H/E/L) mpm-sync: Unit test does not complete
SDOCM00112269	(K2E) mpm-mailbox: Unit test for memory copy fails
SDOCM00112368	QM LLD: qmInsRegion unit test fails
SDOCM00112391	(K2L) Image Processing Demo: Demo only works on two cores
EVM Issue	XTIEVMK2X Rev 2.0: NAND flash and USB occassionaly fails
EVM Issue	EVMK2H (PG1.1) Rev 3.0: NAND flash and USB occassionaly fails
EVM Issue	TCIEVMK2L Rev 1.0: NAND flash and USB occassionaly fails

9.5 03.01.00.03

This is a R3.1.0 production release of the Multicore SDK. The baseline for this release is R3.0.4.

Items marked in **blue** are modifications from R3.0.4.

Component	Description	Version	Installer
ARM Target Software			
Linux Kernel	ARM high-level operating system, network stack	3.10 LTS (TAGS: K2_LINUX_03.10.10_14.07, K2_RT_LINUX_03.10.10_14.07)	MCSDK
U-boot	ARM boot loader	2013.01 (TAG:)	MCSDK

		K2_UBOOT_2013_01_14.07	
Boot Monitor	Boot Monitor software provides secure privilege level execution service for Linux kernel code through SMC calls	K2_BM_14.07	MCSDK
MPM	Multi-processor manager for loading and managing DSP cores, including fault management	2.0.1.3	MCSDK
MPM Transport	Multi-proc-Manager Transport layer	1.0.5.2	MCSDK
Transport Net Lib	Transport Network Library including: HPLIB (High Performance Library) NetAPI (Network API)	1.1.0.1	MCSDK
IPSecMgr	IPSec Manager	1.1.0.2	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)	1.1.1.4A	MCSDK
User-Mode LLDs	Subset of LLD that work on ARM user-space	See below	MCSDK
CMEM	Contiguous memory allocate for ARM user-space	4.0.3.14	MCSDK
UIO	User-space I/O driver for on-chip modules. This driver provides support of mmap interface, interrupt handling and powering up/down of on-chip modules from user space.	1.0.1.0	MCSDK
cUIA [corrected]	C implementation of Unified Instrumentation Architecture for ARM user-space applications	1.0.0.13	MCSDK
DSP Target Software			
SYS/BIOS	DSP real-time operating system	6.37.3.30	MCSDK
NDK	DSP network stack	2.22.2.16	MCSDK
IPC	DSP inter-process communication	3.22.2.11	MCSDK
cToolsLib	Trace debug library	1.1.0.0	MCSDK
UIA	Unified instrumentation architecture	1.3.2.10	MCSDK
Image Proc	Image processing demo	1.0.0.1	MCSDK
DSP Optimized Libraries			
DSPLIB	Generic DSP functions	3.2.0.1	MCSDK
MATHLIB	Math functions	3.1.0.0	MCSDK
IMGLIB	Image functions	3.1.1.0	MCSDK
DSP Platform Development Kit			
CSL	Chip support library	2.1.0.5	MCSDK
AIF2 LLD	Antenna Interface LLD (not in K2L)	1.1.0.3	MCSDK

BCP LLD	Bit Rate Coprocessor LLD	2.1.0.2	MCSDK
CPPI LLD	Packet DMA LLD	2.1.0.6	MCSDK
EDMA3 LLD	Enhanced Direct Memory LLD	2.11.13.17	MCSDK
FFTC LLD	FFT Accelerator Coprocessor LLD	2.2.0.3B	MCSDK
HYPLNK LLD	HyperLink LLD	2.1.0.1	MCSDK
PA LLD	Packet Accelerator LLD	3.0.0.10	MCSDK
PCIe LLD	Peripheral Component Interconnect Express	2.1.0.1	MCSDK
QMSS LLD	Queue Manager LLD	2.1.0.5	MCSDK
RM LLD	Resource Manager LLD	2.1.0.5	MCSDK
SA LLD	Security Accelerator LLD	3.0.0.6	MCSDK
SRIO LLD	Serial Rapid IO LLD	2.0.0.10	MCSDK
TCP3D LLD	Turbo Coprocessor Decoder LLD	2.1.0.1	MCSDK
MMAP LLD	MPAX Map LLD	2.0.0.3	MCSDK
TSIP LLD	Telephony serial interface (K2E only)	1.0.0.0	MCSDK
IQN2 LLD	High speed antenna interface (K2L only)	1.0.0.1	MCSDK
DFE LLD	Digital Front End LLD (K2L only)	1.0.0.1	MCSDK
Platform Library	DSP EVM drivers and SOC initialization	[MCSDK version]	MCSDK
NWAL	Network adaptation layer provides high level driver functionality abstracting NetCP LLDs PA and SA	2.1.0.2	MCSDK
Trace Framework	Trace framework for collecting and distributing log/event messages (DSP portion)	1.1.1.4A	MCSDK
Fault Management	Library for core dump, watchdog timer	1.0.1.1	MCSDK
PKTLIB	Packet Library	2.1.0.3	MCSDK
Host Development Tools			
Program_evm	Utility to update EVM flash with software images	[MCSDK version]	MCSDK
Yocto-Arago	ARM software distribution	1.4	Link
Linux devkit	Development kit that is independent of Arago	N/A	MCSDK
CCS	Code Composer Studio integrated development environment	5.5.0	Link
Linaro Toolchain	ARM toolchain	2013.03 (GCC 4.7)	Link
CodeGen	DSP compiler	7.4.4	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	2.30	MCSDK

	much of the memory map is taken up by specific libraries.		
XDCTools	DSP RTSC packaging and build tools	3.25.6.96	MCSDK
Simulator	Simulator for K2L, K2E	0.9.0	CCS
MCSDK Apps	MCSDK applications (udma, DSP core parser, etc.)	[MCSDK version]	MCSDK

9.5.1 New features and fixes

ID	Description
New Feature	Added support for K2E and K2L devices
SDOC00104163	TAC2 CSL register layer file cslr_tac2_cfg.h has error
SDOC00105040	Portions of MCSDK 3.0.x User Guide still in draft state
SDOC00105864	UDMA unit test fails with rt-kernel and rt-nfs combination.
SDOC00105884	cToolsLib: Warning messages when compiling examples and demo
SDOC00106007	UDMA unit test fails almost 20% of time if run multiple times with regular kernel
SDOC00106427	Needs to add a script to build Uboot image for NAND boot in the MCSDK 3.0.4 builds
SDOC00106564	Linux kernel does not boot when manually load kernel/rootfs images to DDR via CCS
SDOC00107129	Linux Kernel for K2L should initialize external linking ram of 1MB to OSR
SDOC00107152	a libnl-xfrm compatible with libnl-3.2.24
SDOC00107359	[Wireless LLD] Need to build and test the wireless LLD to enable the call stack trace
SDOC00107473	Fix needed for disparity between how U-Boot writes to NAND and boot ROM reads NAND
SDOC00107829	Add L1D memory segment in MPM configuration file
SDOC00107943	NAND OOB mtdtest failing
SDOC00107974	Add support for hmac-sha2-256 in netapi ipsecmgr daemon
SDOC00108066	add RM to pa unit test on dsp
SDOC00108171	rmserver crash after loading dsp0 with MPM for rmK2HArmv7LinuxDspClientTestProject test
SDOC00108172	rmserver crash when testing rmLinuxClientTest
SDOC00108212	PA unit tests should have the "All tests have passed" message when tests have passed to assure the proper automation result
SDOC00108231	IPSEC Inflow: stop offload only works for one channel. Error (-8) is returned for second channel
SDOC00108256	traceframework and dat do not compile on more strict rules
SDOC00108262	In macros.ini file variable IQN_INSTALL_PATH should be IQN2_INSTALL_PATH
SDOC00108271	All fftc unit tests do not finish when run
SDOC00108305	ARP and ARPING utilities missing from MCSDK 3.x file system
SDOC00108306	matrix demo: demo_ipc.sh script to support loading and running number of DSPs based on EVM under test
SDOC00108315	After machine name changes in Yocto, DUT kernel prompts are mixed up
SDOC00108333	FFTC: Fftc_getDeviceAccumulatorConfig API parameter pAccRxQNum has wrong type

SDOCM00108335	Four SA projects do not compile for simulator due to undefined indentifiers
SDOCM00108348	SRIO_LoopbackK2KC66BiosTestProject does not compile due to undefined identifier
SDOCM00108349	aif2LteCheckRfK2KTestProject does not complete when run on EVM
SDOCM00108363	usermode LLD test nwal fails on k2hk platform
SDOCM00108364	Usermode LLD paUnit Test fails on k2hk platform
SDOCM00108365	RMLinuxdsp client test fails for all three platforms(k2e,k2l,k2hk)
SDOCM00108377	PA LLD: IPv4 reassembly test failed due to stats mismatch in software-reassembly mode
SDOCM00108380	SRIO_LoopbackK2KC66BiosTestProject compiles but does not complete when run on EVM
SDOCM00108409	Default Uboot environment variables for secure storage initialization are missing
SDOCM00108451	Enable busybox timeout command
SDOCM00108469	wireless LLDs: Use DSP compiler options for debuggability with optimization
SDOCM00108480	Bringing eth interface up after taking it down causes EVM to hang
SDOCM00108507	pdkProjectCreate.bat file left trace framework test projects out
SDOCM00108533	Transport netlib loopback test fails because of policy dtb file problem on K2H.
SDOCM00108539	Top level "make all" using devkit fails for SA, while executing the rule "tests"
SDOCM00108591	Keystone II AIF2 CSL header file bug
SDOCM00111667	Kernel timestamping test failures on K2HK
SDOCM00111669	bringing interface up / down repeatedly causes kernel crash
SDOCM00111707	traceframework projects do not build due to error #20: identifier "i" is undefined
SDOCM00111716	Three PA unit test projects are not building under Linux due to a directory name case mismatch
SDOCM00111718	Fourteen SA projects are not building under Linux due to a file name case mismatch
SDOCM00111719	Eight SA unit test projects are not building under Linux due to a directory name case mismatch
SDOCM00111720	tfw unittest projects are not building under Linux/Windows due to can't locate the package 'ti.uia.events' along the path
SDOCM00111750	Keystone II AIF2 CSL bug
SDOCM00112090	CPPI LLD: Merge Cppi_txChannelOpenWithHwCfg API from Appleton to support FM IO Halt port to K2
SDOCM00112091	FM: Merge IO halt feature to K2 from Appleton
SDOCM00112117	Resolve Coverity warnings for HPLIB
SDOCM00112119	Stop then start offload not working when using setkey
SDOCM00112127	hplib library without osal doesnt compile in bm_alloc.c
SDOCM00112138	Resolve issue with NETAPI ipsecmgr delete Sa interface API.
SDOCM00112181	RM LLD: There are some Rm_osalFree() calls with incorrect size
SDOCM00112182	PA LLD: Pa_delHandle() does not remove the root IP entry associated with an IPSEC entry
SDOCM00112222	Qmss_queueOpen fails with -151 when queue is > 8192 and queueType=QMSS_PARAM_NOT_SPECIFIED
SDOCM00112237	QMSS_exit() return error if both global and PASS QMSS are opened
SDOCM00112249	not able to build PDK on 3.01.00.02 & 3.0.4.18
SDOCM00102872	Issues on program EVM for MCSDK 3.0

SDOCM00106973	Getting "Internal error: Oops: a07 [#1] SMP ARM" dump when running performance test for sideband crypto on non-rt & rt kernel
SDOCM00107675	Supply Hyperlink SERDES configuration via DTS (instead of JSON file)
SDOCM00107876	Packet fail route handling in NetCP
SDOCM00107927	K2 NAND boot errata needs workaround in flash writer
SDOCM00107933	Default Hyperlink configuration (6p25/full) is not reliable on Slayton (VP1, VP2 cartridges..)
SDOCM00107949	MCSDK installer does not indicate MPM version number
SDOCM00108126	lperf performance test does not complete when run for IPSEC inflow egress.
SDOCM00108399	IPSEC with aes128/192/256 encryption and aesxcbc integrity causes EVM to stop responding during performance test
SDOCM00112294	PASS: IPSEC transport mode non-UDP/TCP packets dropped by PASS silently
SDOCM00107677	Keystone2 XGE driver SERDES configuration update
SDOCM00108064	Yocto build failed du to invalid URL in meta-mcsdk/recipes-core/rhino/rhino_1.7r4.bbappend
SDOCM00107159	Fix to XGE CDR Reset sequence in Linux
SDOCM00106473	Critical Bug in TCP3d driver
SDOCM00107501	Compilation issues observed when compiling with C++
SDOCM00103118	Kernel mtdtests failing on PG1.1 EVM
SDOCM00106426	Linux coherent memory is not mapped as outer shareable. This will cause race conditions with DMA coherency in certain cases
SDOCM00107206	need to disable all ports during initialization in cpsw
SDOCM00107154	K2: use DEVSPPEED frequency value to program PLL
SDOCM00105609	Linux Kernel needs to enable RX UDP/TCP checksum offload to NETCP
SDOCM00107335	Need to enhance ipsecmanager to use linux egress tunnel ESN as starting ESN when offloading a tunnel
SDOCM00107323	"TS_COMP output polarity" [need update on CPTS driver]
SDOCM00105615	Enable Ethernet Port 2,3 support in u-boot
SDOCM00106240	CSL_BootCfgGenerateInterDSPInterrupt is incorrect
SDOCM00106086	PCIe feature was broken in MCSDK 3.0.3 and cannot be tested with EVM while works with Slayton.
SDOCM00106007	UDMA unit test fails almost 20% of time if run multiple times with regular kernel
SDOCM00107695	Linux QoS configuration of OutThrotThresh is incorrect
SDOCM00105864	UDMA unit test fails with rt-kernel and rt-nfs combination.
SDOCM00107694	Linux misconfigures cirMax for QoS
SDOCM00107233	Need to fix Serdes TX coefficients API in Linux Driver
SDOCM00107876	Packet fail route handling in NetCP
SDOCM00107874	Packet exception handling in NetCP
SDOCM00107145	K2H with RT Linux can not handle the load above 20kpps
SDOCM00107049	HWQueue unit test fails with the message "failed to open write queue, errno=-22"
SDOCM00107025	ipsec inflow: (1) issues on egress path with ipsec context stored in skb
SDOCM00107004	PCIe feature was broken in MCSDK 3.0.3 and cannot be tested with EVM while works with Slayton.

SDOC00107781	IPSecMgr: add_sa() failure triggers an del_sa() call with an invalid SA handle
SDOC00107360	[Trace Framework] Need to build and test the Trace Framework to enable the call stack trace
SDOC00106856	Resovle Coverity issues in IPSEC Mgr
SDOC00107799	interrupt line is not assigned properly for timer15
SDOC00096613	Cppi_initDescriptor in cppi_desc.c has some cache coherence issue
SDOC00107237	QMSS with high priority accumulator mixes elements from different queues in the same list
SDOC00106347	hwqueue linking ram 0 size improperly programmed
SDOC00107453	CSL_CPSW_nGF_setAleMcastAddrEntry() doesn't accept 5 bits port mask
SDOC00106809	Trace framework coverity issues
SDOC00107629	pdProjectCreate.bat file has hardcoded platform of ti.platforms.evmTCI6638K2K
SDOC00107194	Traceframework: Warnigns noticed during DSP test application
SDOC00108178	TCP3D: fix coverity issue for logical dead code (choosing between ping/pong buffer)
SDOC00107021	Add support of CPTS HW TIMESTMP PUSH
SDOC00104882	HPLIB needs to provide a memory free API
SDOC00106488	Provide pre-compiled device files in PDK for Keystone-2
SDOC00106203	SA LLD to allow ability to send data without the SA channel handle
SDOC00106202	UIO Driver enhancement
SDOC00107058	QOS FW currently integrated with Linux does not support 5WRR queue ports
SDOC00102646	SA Examples do not use RM
SDOC00107133	QMSS: Initialization of global variables in the .far section leads to large .cinit .far section
SDOC00107645	ipsecmgr sampe application needs to provide option for user to give flow to use for egress offload
SDOC00107292	UART autoflow control needs to be supported in MCSDK-Linux kernel

9.5.2 Known Issues

ID	Description
SDOC00112268	(K2H/E/L) mpm-sync: Unit test does not complete
SDOC00112269	(K2E) mpm-mailbox: Unit test for memory copy fails
SDOC00112340	PA LLD: Deletion of the pair of IP/IPSEC entry may miss the IPSEC (SPI) entry due to firmware timing issue
SDOC00112368	QM LLD: qmInsRegion unit test fails
SDOC00112374	(K2E) mpm-transport: HyperLink transport does not work due to missing device tree entries
SDOC00112391	(K2L) Image Processing Demo: Demo only works on two cores
SDOC00108171	(K2E) RM ARM-to-DSP test fails
EVM Issue	XTIEVMK2X Rev 2.0: NAND flash and USB occassionaly fails
EVM Issue	EVMK2H (PG1.1) Rev 3.0: NAND flash and USB occassionaly fails
EVM Issue	TCIEVMK2L Rev 1.0: NAND flash and USB occassionaly fails

