Release Notes

C6747 BIOSPSP 01.30.00.06

September 25, 2009

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1 Introduction

This PSP Package serves as fundamental software platform for development, deployment and execution of application software on C6747 based platform. PSP abstracts the functionality provided by the C6747.

This PSP package is intended for the DSP that runs DSP/BIOS™ (user guide that came along with this release details the system requirements)

1.1 Release Category

This PSP release versioned 01.30.00.06 is Beta release with combined support for C6747, OMAPL137, C6748 and OMAPl138. Please refer to section Drivers/Components for this release for details of this release.

1.2 Text Conventions

O	This bullet indicates important information. Please read such text carefully.
q	This bullet indicates additional information.

2 Out-of-Box Contents

BIOSPSP_01_30_xx_xx_Setup.exe contains following:

1.	– Source code for driver and other necessary abstractions. – Project files (DSP/BIOS™), CCS3.3 / CCS 4 build files – The above mentioned items are located inside the <installation dir>\pspdrivers_01_30_xx_xx\packages\ti directory – Please note that the CCS setup files and GEL files are _NOT_ provided with this release and this would be available with latest CCSv3 releases or from EVM manufacturer.
2.	Release Notes (this document) providing an overview of this release.
3.	User Guide that provides information on package usage and each driver's usage.
4.	Datasheet that provides resource usage and performance information of the each driver
5.	Doxygen based driver API (generated) documentation for all the drivers inside package.

3 Dependencies

- CCS 3.3.24 or higher with service release 10
- CCS 4.0.0.16 or higher (optional)
- C6747 EVM
- DSP/BIOS™ 5.41.00.06
- Code Generation Tools 6.1.9
- EDMA3 product version 01.10.00.01
- ERTFS File System - This is required if one wants to use the filesystem on Storage Media. Same can be downloaded from following link:

  http://software-dl.ti.com/dsps/dsps_registered_sw/sdo_sb/targetcontent//bios_file_system/index.html

  (This BIOSPSP version is built against RTFS v1.10.00.27 – Engineering release)

4 Drivers/Components for this release

This section lists the driver / components that are delivered as part of this release.

- DSP/BIOS™ 5.33.xx Drivers
  - Serial (UART, I2C and SPI)
  - Audio (McASP, AUDIO interface and CODEC)
  - Storage (Block media, MMCSD and NAND)
  - LCDC Raster and LIDD drivers
  - GPIO driver
  - PSC (that helps to turn the clock on/off for the modules)
  - rCSL header files and examples for rCSL usage
- Sample applications that demonstrate the use of above drivers

Please note that at this point of time the drivers does not have any abstraction for the OS APIs and they use the OS (DSP/BIOS™ 5.41.xx) inside the drivers.

4.1 Changes from previous release (Version 01.30.00.05)

1) This is Beta release as part of the combined support for C6747, OMAPL137, C6748 and OMAPL138.
2) This release is for support on DSP/BIOS™ version 5.41.00.06.
3) This release contains support for building driver and application via CCSv4.
4) This release contains support for LPSC based clock gating. The PSC driver has undergone changes to support this feature.
5) Please see the “Fixed in this release” for details on IR’s fixed/implemented

4.2 Other changes

None

5 Known Issues

5.1 MISRA C

- MISRA C check has not been run on all the components in this release.

5.2 Instrumentation (all components)

- CQ SDOCM00051988: Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation.

  Workaround: None.

5.3 UART (DSP/BIOS™) Driver

- CQ SDOCM00059982: When the RXFIFO threshold is greater than 4 and the baud rate is greater than or equal to 115200 baud, data received contains repeated characters and does not match the transmitted characters. This issue is being investigated.

  Workaround: Use polled or interrupt mode of operation.

- CQ SDOCM00060680: Loopback read-write test hangs for interrupt mode when tested using multiple task. This issue is being investigated.

  Workaround: None.

5.4 McASP (DSP/BIOS™) Driver

- CQ SDOCM00059897: The driver is not working as expected in non-loop job mode. Data loss is observed in some cases. This issue is being investigated.

  Workaround: None.

5.5 SPI (DSP/BIOS™) Driver

- CQ SDOCM00060205: BIT errors are seen in interrupt and polled modes of operation when the SPI output frequency is greater 30 MHz.

  Workaround: Use DMA mode of operation

- CQ SDOCM00062392: The cancel pending IOCTL fails because it does not update the active IOP and active channel variables appropriately. This will be fixed in the next releases.

  Workaround: None

5.6 MMCSD (DSP/BIOS™) Driver

- CQ SDOCM00062388: The driver does not disable the PSC during de-initialization. This will be fixed in the next release

  Workaround: None.

5.7 NAND (DSP/BIOS™) Driver

- CQ SDOCM00062388: The driver does not disable the PSC during de-initialization. This will be fixed in the next release

Workaround: None.

6 Limitations

6.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)
- I2C driver does not support slave mode of operation in polled mode. Only interrupt and DMA interrupt mode of operation are supported. The slave mode of operation is tested successfully 100,200 and 400 kHz I2C clock frequency.
- (a) I2C slave application need to take care of the data (application level) protocol on when and what to receive and send by/from slave side. (b)This driver provides a generic bus communication path for slave. (c) Application protocol also needs to consider the latency caused by software slave implementation. (d) The driver does not support “0” no of byte transfer and the slave driver would not function properly if master issues a STOP condition immediately after a START condition.

6.2 SPI (DSP/BIOS™) Device Driver

- Slave mode of operation is tested at 2MHz. Because of the wired EVM to EVM connectivity, signal integrity was not good to test on further higher frequencies.
- (a) Application protocol also needs to consider the latency caused by software slave implementation. (b) The driver does not support “0” no of byte transfer.

6.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

6.4 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

6.5 EVM 6747 Limitation

None

7 Fixed in this release

7.1 Error handling

- CQ SDOCM00061546: Drivers were not updating the IOM packet status appropriately before returning the packet to the upper layer. This has been fixed.

7.2 UART (DSP/BIOS™) Driver

- CQ SDOCM00060841: When the RXFIFO threshold was set to 1 at baud rate of 115200 baud RX overrun errors were observed. This was because there were remnant bytes in the FIFO due to previous irrelevant transmits from the transmitter which caused continuous overruns. In cases where there are chances that the RX FIFO might contain remnant bytes from previous transfer, it would be good to start with RX reset via the RXFIFO reset IOCTL provided.

Files modified: None

- CQ SDOCM00058955: The transmission at 2400 baud rate would fail in interrupt mode. This was because of lower values of trial counts in the interrupt handler to check for completion of previous transfer before the write of next character. This count has been increased (Uart_TRANSMITEMPTY_TRIALCOUNT defined in Uart.h).

Files modified: ti\pspiom\uart\Uart.h

7.3 I2C (DSP/BIOS™) Driver

- CQ SDOCM00058961: I2C read/write to the I/O expander on the EVM would fail inconsistently in polled mode of operation. This was because the polled mode transfer function would not wait for the previous transfer to be completed and wait for the bus to be ready for next transfer. This check has been added..

Files modified: ti\pspiom\i2c\src\I2c.c

- CQ SDOCM00060228: Slave mode of operation of I2C drivers are tested on the EVM.

Files modified: ti\pspiom\i2c\src\I2c.c

- CQ SDOCM00060486: Set Bit rate/Set own address IOCTL test cases would fail for interrupt and DMA mode. This was because the pending IO flag was not reset after the completion of the current IOP. This has been fixed.

Files modified: ti\pspiom\i2c\src\I2c.c

- CQ SDOCM00061786: I2C Read-Write test would fail after cancel pending ioctl command is issued for interrupt and DMA modes. This was because the next channel was not scheduled for transfer. This has been fixed.

Files modified: ti\pspiom\i2c\src\I2c.c

7.4 McASP (DSP/BIOS™) Driver

- CQ SDOCM00059895: The IOCTLs for non-loopjob mode have been tested.

Files modified: ti\pspiom\mcasp\src\Mcasp.c

- CQ SDOCM00059968: The start and stop IOCTLs were not working as expected. IOP handling during the state machine STOP condition was not correct. State machine STOP condition was not being considered by the driver.

Files modified: ti\pspiom\mcasp\src\Mcasp.c

- CQ SDOCM00059969: The IOCTLs for MUTE and Un-MUTE were not working as expected. Calculation of the EDMA parameters during the Mute of the channel is not correct. This has been fixed.

Files modified: ti\pspiom\mcasp\src\Mcasp.c

ti\pspiom\mcasp\src\Mcasp_edma.c

7.5 NAND (DSP/BIOS™) Driver

- CQ SDOCM00059984: Data integrity (mismatch) errors are seen when the driver is accessed via file system. This is observed very randomly. This issue is because of wrong ECC calculation method used inside the nand driver.

Files modified: ti\pspiom\nand\src\llc_nand.c

- CQ SDOCM00060750: Throughput numbers are observed to be low on the EVM. This issue is because wrong CS is used inside the driver to update the timing parameter.

Files modified: ti\pspiom\nand\src\llc_nand.c

7.6 MMCSD (DSP/BIOS™) Driver

- CQ SDOCM00060892: During performance measurements on SanDisk™ 4GB card, it is observed that the read may fail. This is because of card timeout, so the timeout is increased.

Files modified: ti\pspiom\mmcsd\src\ddc_mmcsd.c

8 Special notes

- Please refer the user guide for installation, build instructions and tool version information.
- The resource allocation is the responsibility of application (system integrator)

9 Technical Support

To submit questions about issues with this BIOSPSP drivers release please go to the external forums at http://community.ti.com/ or to http://support.ti.com .

10 Release History

10.1 Release 01.30.00.05

This was an EA release

10.1.1 Changes from previous release (Version 01.30.00.05)

1) This is an EA release as part of the combined support for C6747, OMAPL137, C6748 and OMAPL138.
2) This release is for support on DSP/BIOS™ version 5.33.06.
3) A new parameter is added for Character LCD display configuration structure. Please refer to the user guide for more details.
4) Please see the "Fixed in this release" for details on IR's fixed/implemented

10.1.2 Known Issues

10.1.2.1 MISRA C

- MISRA C check has not been run on all the components in this release.

10.1.2.2 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.1.2.3 LCDC Raster Controller (DSP/BIOS™) Driver

- Slight flickering is observed on the display when the image is displayed by the sample application. This issue is being analyzed. CQ SDOCM00055419

  Workaround: None

10.1.2.4 UART (DSP/BIOS™) Driver

- The write from the UART to the serial console fails at 2400 baud in interrupt mode. This issue is being analyzed. CQ SDOCM00058955

  Workaround: Use DMA or polled mode for data transfer

- When the RXFIFO threshold is greater that 4 and the baudrate is greater than or equal to 115200 baud, data received contains repeated characters and does not match the transmitted characters. This issue is being investigated. CQ SDOCM00059982

  Workaround: Use polled or interrupt mode of operation.

10.1.2.5 McASP (DSP/BIOS™) Driver

- The start and stop IOCTLs are not working as expected. The audio does not appropriately stop and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059968

- The IOCTLs for MUTE and Un-MUTE are not working as expected. The audio does not appropriately mute and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059969
- The IOCTL commands are not tested in non-loopjob mode,. This will be taken up in forthcoming releases. CQ SDOCM00059895
- The driver is not working as expected in non-loopjob mode. Data loss is observed in some cases. This issue is being investigated. CQ SDOCM00059897
- The cache settings for audio sample application need changes to improve the performance of audio sample application. Currently, the L2 cache is not being used and the external memory is not placed as cache-able memory. CQ: SDOCM00060198

10.1.2.6 NAND (DSP/BIOS™) Driver

- Data integrity (mismatch) errors are seen when the driver is accessed via file system. This is observed very randomly. This is however not observed when driver is accessed in RAW mode. This issue is being analyzed. CQ SDOCM00059984

  Workaround: None

10.1.3 Limitations

10.1.3.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)
- I2C driver does not support slave mode of operation in polled mode. Only interrupt and DMA interrupt mode of operation are supported. The slave mode of operation is tested successfully 100,200 and 400 kHz I2C clock frequency.
- (a) I2C slave application need to take care of the data (application level) protocol on when and what to receive and send by/from slave side. (b)This driver provides a generic bus communication path for slave. (c) Application protocol also needs to consider the latency caused by software slave implementation. (d) The driver does not support “0” no of byte transfer and the slave driver would not function properly if master issues a STOP condition immediately after a START condition.

10.1.3.2 SPI (DSP/BIOS™) Device Driver

- Slave mode of operation is tested at 2MHz. Because of the wired EVM to EVM connectivity, signal integrity was not good to test on further higher frequencies.
- (a) Application protocol also needs to consider the latency caused by software slave implementation. (b) The driver does not support “0” no of byte transfer.

10.1.3.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.1.3.4 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

10.1.3.5 EVM 6747 Limitation

None

10.1.4 Fixed in this release

None

10.2 Release 01.30.00.04

This was an internal release

10.2.1 Changes from previous release (Version 01.30.00.03)

1) This is an engineering release as part of the combined support for C6747, OMAPL137, C6748 and OMAPL138.
2) This release is for support on DSP/BIOS™ version 5.33.06.
3) Please see the "Fixed in this release" for details on IR's fixed/implemented

10.2.2 Known Issues

10.2.2.1 MISRA C

- MISRA C check has not been run on all the components in this release.

10.2.2.2 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.2.2.3 LCDC Raster Controller (DSP/BIOS™) Driver

- Slight flickering is observed on the display when the image is displayed by the sample application. This issue is being analyzed. CQ SDOCM00055419

  Workaround: None

10.2.2.4 UART (DSP/BIOS™) Driver

- The write from the UART to the serial console fails at 2400 baud in interrupt mode. This issue is being analyzed. CQ SDOCM00058955

  Workaround: Use DMA or polled mode for data transfer

- When the RXFIFO threshold is greater that 4 and the baudrate is greater than or equal to 115200 baud, data received contains repeated characters and does not match the transmitted characters. This issue is being investigated. CQ SDOCM00059982

  Workaround: Use polled or interrupt mode of operation.

10.2.2.5 McASP (DSP/BIOS™) Driver

- The start and stop IOCTLs are not working as expected. The audio does not appropriately stop and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059968
- The IOCTLs for MUTE and Un-MUTE are not working as expected. The audio does not appropriately mute and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059969
- The IOCTL commands are not tested in non-loopjob mode,. This will be taken up in forthcoming releases. CQ SDOCM00059895
- The driver is not working as expected in non-loopjob mode. Data loss is observed in some cases. This issue is being investigated. CQ SDOCM00059897
- The cache settings for audio sample application need changes to improve the performance of audio sample application. Currently, the L2 cache is not being used and the external memory is not placed as cache-able memory. CQ: SDOCM00060198

10.2.2.6 NAND (DSP/BIOS™) Driver

- Data integrity (mismatch) errors are seen when the driver is accessed via file system. This is observed very randomly. This is however not observed when driver is accessed in RAW mode. This issue is being analyzed. CQ SDOCM00059984

  Workaround: None

10.2.3 Limitations

10.2.3.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)
- I2C driver does not support slave mode of operation in polled mode. Only interrupt and DMA interrupt mode of operation are supported. The slave mode of operation is tested successfully 100,200 and 400 kHz I2C clock frequency.
- (a) I2C slave application need to take care of the data (application level) protocol on when and what to receive and send by/from slave side. (b)This driver provides a generic bus communication path for slave. (c) Application protocol also needs to consider the latency caused by software slave implementation. (d) The driver does not support “0” no of byte transfer and the slave driver would not function properly if master issues a STOP condition immediately after a START condition.

10.2.3.2 SPI (DSP/BIOS™) Device Driver

- Slave mode of operation is tested at 2MHz. Because of the wired EVM to EVM connectivity, signal integrity was not good to test on further higher frequencies.
- (a) Application protocol also needs to consider the latency caused by software slave implementation. (b) The driver does not support “0” no of byte transfer.

10.2.3.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.2.3.4 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

10.2.3.5 EVM 6747 Limitation

None

10.2.4 Fixed in this release

10.2.4.1 LCDC LIDD (DSP/BIOS™) Driver

- CQ SDOCM00060837: The LCDC character driver would always configure and initialize the CS0 chip select during channel creation. This has been corrected by adding a parameter to the channel parameters to specify the chip select which needs to be used for the channel and hence appropriately configuring and initializing the device on that chip select.

Files modified: ti\pspiom\lcdclidd\Lidd.h and ti\pspiom\lcdclidd\src\Lidd.c

10.3 Release 01.30.00.03

This was the EA release with support for C6748, C6747, OMAPL137 and OMAPL138.

10.3.1 Changes from previous release (Version 01.20.00 GA)

1) This is an engineering release as part of the combined support for C6747, OMAPL137, C6748 and OMAPL138.
2) The Licensing scheme for BIOSPSP package has been changed from “TI Proprietary” to “new BSD”.
3) Please see the “Fixed in this release” for details on IR’s fixed/implemented

10.3.2 Known Issues

10.3.2.1 MISRA C

- MISRA C check has not been run on all the components in this release.

10.3.2.2 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.3.2.3 LCDC Raster Controller (DSP/BIOS™) Driver

- Slight flickering is observed on the display when the image is displayed by the sample application. This issue is being analyzed. CQ SDOCM00055419

  Workaround: None

10.3.2.4 UART (DSP/BIOS™) Driver

- The write from the UART to the serial console fails at 2400 baud in interrupt mode. This issue is being analyzed. CQ SDOCM00058955

  Workaround: Use DMA or polled mode for data transfer

- When the RXFIFO threshold is greater that 4 and the baudrate is greater than or equal to 115200 baud, data received contains repeated characters and does not match the transmitted characters. This issue is being investigated. CQ SDOCM00059982

  Workaround: Use polled or interrupt mode of operation.

10.3.2.5 McASP (DSP/BIOS™) Driver

- The start and stop IOCTLs are not working as expected. The audio does not appropriately stop and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059968
- The IOCTLs for MUTE and Un-MUTE are not working as expected. The audio does not appropriately mute and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059969
- The IOCTL commands are not tested in non-loopjob mode,. This will be taken up in forthcoming releases. CQ SDOCM00059895
- The driver is not working as expected in non-loopjob mode. Data loss is observed in some cases. This issue is being investigated. CQ SDOCM00059897
- The cache settings for audio sample application need changes to improve the performance of audio sample application. Currently, the L2 cache is not being used and the external memory is not placed as cache-able memory. CQ: SDOCM00060198

10.3.2.6 NAND (DSP/BIOS™) Driver

- Data integrity (mismatch) errors are seen when the driver is accessed via file system. This is observed very randomly.This is however not observed when driver is accessed in RAW mode. This issue is being analyzed. CQ SDOCM00059984

  Workaround: None

10.3.3 Limitations

10.3.3.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)
- I2C driver does not support slave mode of operation in polled mode. Only interrupt and DMA interrupt mode of operation are supported. The slave mode of operation is tested successfully 100,200 and 400 kHz I2C clock frequency.
- (a) I2C slave application need to take care of the data (application level) protocol on when and what to receive and send by/from slave side. (b)This driver provides a generic bus communication path for slave. (c) Application protocol also needs

to consider the latency caused by software slave implementation. (d) The driver does not support “0” no of byte transfer and the slave driver would not function properly if master issues a STOP condition immediately after a START condition.

10.3.3.2 SPI (DSP/BIOS™) Device Driver

- Slave mode of operation is tested at 2MHz. Because of the wired EVM to EVM connectivity, signal integrity was not good to test on further higher frequencies.
- (a) Application protocol also needs to consider the latency caused by software slave implementation. (b) The driver does not support “0” no of byte transfer.

10.3.3.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.3.3.4 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

10.3.3.5 EVM 6747 Limitation

None

10.4 Release 01.30.00.02

This was the first release with combined support for C6748, C6747, OMAPL137 and OMAPL138

10.4.1 Changes from previous release (Version 01.20.00 GA)

1) This is an engineering release as part of the combined support for OMAPL137, OMAPL137, C6748 and OMAPL138.
2) The UART driver EDMA programming has been now changed to AB-Sync mode and as a result a new parameter has been added to the device parameters (instance parameters). Please refer to the UART section of User guide for more details
3) The GPIO Chip Select feature implementation of SPI driver has undergone changes. This is to include provision for using more than on GPIO as Chip selecte. The instance parameters and the I/O request (submit time) parameters have undergone changes. Please refer to the SPI section of User guide for more details.
4) Please see the “Fixed in this release” for details on IR’s fixed/implemented

10.4.2 Known Issues

10.4.2.1 MISRA C

- MISRA C check has not been run on all the components in this release.

10.4.2.2 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

Workaround: None.

10.4.2.3 LCDC Raster Controller (DSP/BIOS™) Driver

- Slight flickering is observed on the display when the image is displayed by the sample application. This issue is being analyzed. CQ SDOCM00055419

  Workaround: None

10.4.2.4 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.4.2.5 UART (DSP/BIOS™) Driver

- The write from the UART to the serial console fails at 2400 baud in interrupt mode. This issue is being analyzed. CQ SDOCM00058955

  Workaround: Use DMA or polled mode for data transfer

- When the RXFIFO threshold is greater that 4 and the baudrate is greater than or equal to 115200 baud, data received contains repeated characters and does not match the transmitted characters. This issue is being investigated. CQ SDOCM00059982

  Workaround: Use polled or interrupt mode of operation.

10.4.2.6 McASP (DSP/BIOS™) Driver

- The start and stop IOCTLs are not working as expected. The audio does not appropriately stop and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059968
- The IOCTLs for MUTE and Un-MUTE are not working as expected. The audio does not appropriately mute and restart at the issue of these commands. This is issue is being investigated. CQ SDOCM00059969
- The IOCTL commands are not tested in non-loopjob mode,. This will be taken up in forthcoming releases. CQ SDOCM00059895
- The driver is not working as expected in non-loopjob mode. Data loss is observed in some cases. This issue is being investigated. CQ SDOCM00059897

10.4.2.7 SPI (DSP/BIOS™) Driver

- Cancel pending IOCTL fails to return to the application in all modes. This issue is being analyzed. CQ SDOCM00059026

10.4.2.8 NAND (DSP/BIOS™) Driver

- Data integrity (mismatch) errors are seen when the driver is accessed via file system. This is observed very randomly.This is however not observed when driver is accessed in RAW mode. This issue is being analyzed. CQ SDOCM00059984

  Workaround: None

10.4.3 Limitations

10.4.3.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)
- I2C driver does not support slave mode of operation in polled mode. Only interrupt and DMA interrupt mode of operation are supported. The slave mode of operation is tested successfully 100,200 and 400 kHz I2C clock frequency.
- (a) I2C slave application need to take care of the data (application level) protocol on when and what to receive and send by/from slave side. (b)This driver provides a generic bus communication path for slave. (c) Application protocol also needs to consider the latency caused by software slave implementation. (d) The driver does not support “0” no of byte transfer and the slave driver would not function properly if master issues a STOP condition immediately after a START condition.

10.4.3.2 SPI (DSP/BIOS™) Device Driver

- Slave mode of operation is tested at 2MHz. Because of the wired EVM to EVM connectivity, signal integrity was not good to test on further higher frequencies.
- (a) Application protocol also needs to consider the latency caused by software slave implementation. (b) The driver does not support “0” no of byte transfer.

10.4.3.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.4.3.4 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

10.4.3.5 EVM 6747 Limitation

None

10.4.4 Fixed in this release

10.4.4.1 BLOCK MEDIA (DSP/BIOS™) Driver

- CQ SDOCM00056769: Block media driver SET_RAW_DEVICE IOCTL would fail if called multiple times. This was because once the RAW device is set, setting it again would return failure values. However, this has been corrected and now it would return success.

10.4.4.2 Audio Interface (DSP/BIOS™) Driver

- CQ SDOCM00057452: Critical section protection was not implemented properly during channel creation and return values we not handled properly during channel deletion. These are corrected.

10.4.4.3 McASP (DSP/BIOS™) Driver

- CQ SDOCM00057459: The interrupt registration in McASP was improper. Wrong combination of event/hwi number and ECM/Interrupt enable APIs were used. This has been corrected.
- CQ SDOCM00057627: The loop job buffer size has been reduced by managing the loop job buffers with better parameter and options for EDMA.

10.4.4.4 McASP (DSP/BIOS™) Driver

- CQ SDOCM00059786: McBSP device deletion was failing because the instance number was wrongly updated to -1 before freeing the instance. This has been corrected.
- CQ SDOCM00059787: McBSP device deletion would fail because the associated channel states were not updated properly. This has been corrected.

10.4.4.5 AIC3106 (DSP/BIOS™) Driver

- CQ SDOCM00057467: The default parameters for codec were was using wrong value for slot width. It was 16 instead if using slotwidth enumeration. This has been corrected.

10.4.4.6 SPI (DSP/BIOS™) Driver

- CQ SDOCM00057735: The NULL condition check was for output buffer only. This has been corrected to include check for both INPUT and OUTPUT buffer NULL condition

10.4.4.7 I2C (DSP/BIOS™) Driver

- CQ SDOCM00057837: The NULL check for packet during submits was made in case of FLUSH and ABORT commands also. However, this will actually be NULL for these commands and hence should not be checked. This has been corrected.
- CQ SDOCM00058010: The user supplied EDMA event queues were being overwritten. This has been corrected.
- CQ SDOCM00058047: The default number of channels for the driver has been increased from 2 to 5.
- CQ SDOCM00059530: The module input clock frequency for I2C 0 instance were wrongly based at 50 MHz. This has been corrected to 24MHz.

10.4.4.8 UART (DSP/BIOS™) Driver

- CQ SDOCM00057984: The NULL condition check for parameters in uart read and writes functions have been corrected.
- CQ SDOCM00058384: The UART FIFO needs to be re-enabled in case of EDMA miss errors to re-generate the missed event. The steps followed were wrong and this has been corrected.

10.4.4.9 Register CSL

- CQ SDOCM00059240: As part of having a common code base for OMAPL137, OMAPL137, C6748 and OMAPL138 following changes have effected:-
    - Macros for number of banks and pins for GPIO has been moved to SoC file from GPIO header file.

- In cslr_edma3cc.h The reserved bytes at the end of EDMA3CC register overlay had been changed
- cslr_spi.h file has included changes for multiple chipselects
- cslr_pllc.h will now be cslr_pllc_<soc>.h

cslr_intc.h will now be cslr_dspintc.h. Also, the macros inside the file will now contain DSPINTC instead of INTC

10.5 Release 01.20.00

This was the GA release for C6747

10.5.1 Known Issues

10.5.1.1 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.5.1.2 LCDC Raster Controller (DSP/BIOS™) Driver

- Slight flickering is observed on the display when the image is displayed by the sample application. This issue is being analyzed. CQ SDOCM00055419

  Workaround: None

10.5.2 Limitations

10.5.2.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)
- I2C driver does not support slave mode of operation in polled mode. Only interrupt and DMA interrupt mode of operation are supported. The slave mode of operation is tested successfully 100,200 and 400 kHz I2C clock frequency.
- (a) I2C slave application need to take care of the data (application level) protocol on when and what to receive and send by/from slave side. (b)This driver provides a generic bus communication path for slave. (c) Application protocol also needs to consider the latency caused by software slave implementation. (d) The driver does not support “0” no of byte transfer and the slave driver would not function properly if master issues a STOP condition immediately after a START condition.

10.5.2.2 SPI (DSP/BIOS™) Device Driver

- Slave mode of operation is tested at 2MHz. Because of the wired EVM to EVM connectivity, signal integrity was not good to test on further higher frequencies.
- (a) Application protocol also needs to consider the latency caused by software slave implementation. (b) The driver does not support “0” no of byte transfer.

10.5.2.3 UART (DSP/BIOS™) Device Driver

- UART Baud rates greater than 115200 are not supported. This is due to high error percentage observed for baud rates greater than 115200. Please refer UART datasheet sprufm6, section 2.1 (Table 1) for more details.

10.5.2.4 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.5.2.5 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

10.5.2.6 evm6747 EVM Limitation

None

10.5.3 Fixed in this release

10.5.3.1 AIC3106 Codec (DSP/BIOS™) Device Driver

- CQ SDOCM00056129 – Codec driver repeated device creation and deletion calls would fail. This was due to a null pointer dereference in the device deletion function of the driver. This has been corrected.

  File modified: Aic31.c

10.5.3.2 McASP (DSP/BIOS™) Device Driver

- CQ SDOCM00055498 – McASP driver had a redundant EDMA3 enable transfer call in the submit path, when the packet was the very first one to be queued to the driver. This would result in the EDMA events being missed and thus result in errors in the McASP in a specific (corner) condition. This has been removed and the issue is fixed.

  File modified: Mcasp.c

10.6 Release 01.20.00.08

The release 01.20.00.08 was an internal release for C6747

10.6.1 Known Issues

10.6.1.1 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.6.1.2 LCDC Raster Controller (DSP/BIOS™) Driver

- Slight flickering is observed on the display when the image is displayed by the sample application. This issue is being analyzed. CQ SDOCM00055419

Workaround: None

10.6.2 Limitations

10.6.2.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)

10.6.2.2 UART (DSP/BIOS™) Device Driver

- UART Baud rates greater than 115200 are not supported. This is due to high error percentage observed for baud rates greater than 115200. Please refer UART datasheet sprufm6, section 2.1 (Table 1) for more details.

10.6.2.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.6.2.4 Aic3106 Codec driver (DSP/BIOS™)

- The Aic31 driver currently supports only one codec instance.

10.6.2.5 evm6747 EVM Limitation

- None

10.6.3 Fixed in this release

10.6.3.1 MISRA C

MISRA C compliance has been checked in all the driver modules. The violations/errors have been fixed, with some waivers and exceptions.

10.6.3.2 Message logging

- CQ: SDOCM00053558 – The sample applications did not have a uniform method of logging. This has been now made uniform across all sample applications to use DSP/BIOS™ message logging, using log trace objects.

10.6.3.3 CSL functions

- CQ: SDOCM00054890 – The CSL function macros (like CSL_Fxxx) are replaced with direct operations using CSL macros in order to increase the clarity and ready readability of the operation.

10.6.3.4 IOM_FLUSH handling

- CQ: SDOCM00050527 – IOM_FLUSH command handling in submit function has been implemented in all the drivers

10.6.3.5 SPI (DSP/BIOS™) Device Driver

- CQ: SDOCM00052636 – The SPI sample application failed when the SDRAM was configured be used for heap memory allocations. This issue was due to wrong pinmuxing, where the EMIF pinmux settings were masked out (EMIF and SPI share same pinmux register). This has been corrected.

  Files Modified: spi_evmInit.c

- CQ: SDOCM00053810 - The pin configuration register is used to configure the functionality if the CS0 pin to be either GPIO or a chip select. However, care was not taken to check the pin mode (3/4/5) while setting this and the driver would always configure CS0 pin as CS. This would cause inter-operability issues when the driver is in 3-pin mode where CS0 is not used and hence the user could not use it as a GPIO. This has been corrected.

  Files Modified: Spi.c

- CQ: SDOCM00054146 – The SPI sample application would fail at frequencies lower than 5MHz in EDMA mode of operation. This was due to a race condition in EDMA callback handling. This has been corrected.

  Files Modified: Spi_edma.c

- CQ: SDOCM00050609 – The sample application failed in release mode for data comparison. This was due to a race condition from improper handling of CS logic. This has been corrected.

  Files Modified: Spi.c

- CQ: SDOCM00053787– The SPI sample application would fail for some sectors of the flash. This was due to a race condition in from the improper handling of CS logic. This has been corrected.

  Files Modified: Spi.c

10.6.3.6 I2C (DSP/BIOS™) Device Driver

- CQ: SDOCM00050948 – The requirement for I2C sample application stated that it would interact with on board codec. However, the sample application is interacting with the on board EEPROM. The requirement document has been corrected.

  Files Modified: None.

- CQ: SDOCM00052224 – During instance deletion, delete function would not check if all the channels opened on it are closed and would directly delete the instance. This would result in unpredictable behavior. This has been corrected. Also, in during channel creation, in channel create function, interrupts were disabled during channel initialization, however were not restored before return in case of an error. This would result in a system hang. This has been corrected

  Files Modified: I2c.c.

10.6.3.7 UART (DSP/BIOS™) Device Driver

- CQ: SDOCM00053642 – The instance state was changed to “deleted” in channel close function. This was an error since the instance could have multiple channels and also, the instance state should only be changed in instance create/delete

functions, after checking if the channels are all closed in this instance. This has been corrected

Files Modified: Uart.c

- CQ: SDOCM00053643 – The status variable in instance delete function of the UART driver was not handled properly and hence the instance deletion would be notified as failed, though no error had actually occurred. This has been corrected.

  Files Modified: Uart.c

- CQ: SDOCM00053645 – After the power and emulation bits in the UART are changed in the PWREMU register, during instance creation, a small delay is given for the changes to take effect. This delay was provided by means of putting the task, calling the creation, to sleep (TSK_sleep(…)). However, during the dynamic creation call (DEV_createDevice(…)) the interrupts are disabled and hence the task would never return from sleep (as the scheduler does not run). This would cause a hang. This has been circumvented now by including a busy while-wait loop.

  Files Modified: Uart.c

10.6.3.8 GPIO (DSP/BIOS™) Driver

- CQ: SDOCM00048745 – Though the rising or falling edge only interrupt is enabled, the interrupts would arrive at both the edges from the pin. This was not a pin/bank configuration problem, but due to significant signal bounce at the pin when the switches are toggled. Thus to circumvent this, a “delay loop and read state” is employed in the application registered GPIO ISR to ward-off the spurious interrupts.

  Files Modified: gpio_Sampleio.c

- CQ: SDOCM00054889 – The pin number supplied by the application for any pin operation starts from “1”, going by the GPIO User’s Guide. However, the GPIO driver maintains the information of the pins/banks in array and hence the index would start from “0”. Thus the driver should decrement the pin number by one and update the array of information internally. This has been implemented.

  Files Modified: Gpio.c

10.6.3.9 McASP (DSP/BIOS™) Driver

- CQ: SDOCM00055007 – The McASP IOCTL for mute on was not taking effect since the IOCTL command value comparison in the IOCTL function was incorrect. This has been corrected.

  Files Modified: Mcasp.c

- CQ: SDOCM00055011– The interrupts were not disabled in the channel delete function before the state change causing flood of underflow error interrupts and the driver would hang. This has been corrected.

  Files Modified: Mcasp.c

- CQ: SDOCM00052890– The sample rate change IOCTL was not supported in previous releases. The support has been added in this release.

  Files Modified: Mcasp.c

10.6.3.10 AIC31 Codec (DSP/BIOS™) Driver

- CQ SDOCM00055008 – Codec channel deletion would fail since the channel state comparison in channel delete function was incorrect. This has been corrected.

  Files Modified: Aic31.c

10.7 Release 01.20.00.07

The release 01.20.00.07 was the BETA release for C6747

10.7.1 Known Issues

10.7.1.1 MISRA C (All components)

- MISRA C check was not run on the code base as we had issues in running MisraC tools on this package. Tool had issues to scan the xdc based header files and we are currently working on it). CQ SDOCM00052184

  Workaround: None.

10.7.1.2 Instrumentation (all components)

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.7.1.3 SPI (DSP/BIOSTM)

- IOM_FLUSH packet command is not supported by IOM drivers.CQ: SDOCM00050527.

  Workaround:None.

- Slave mode is not tested, due to absence of on-board SPI master. The plan is to test the slave mode using board to board communication in future releases. CQ SDOCM00048829

  Workaround: None.

- The SPI Sample application does not work when built in release profile. CQ: SDOCM00050609

  Workaround: None

- Use of GPIO pin as SPI Chip select is not tested, due to absence of on-board test point for SPI CS pin. CQ: SDOCM00048831

  Workaround: None

10.7.1.4 I2C (DSP/BIOSTM)

- Slave mode is not tested, due to absence of on-board I2C master. The plan is to test the slave mode using board to board communication in future releases. CQ SDOCM00048829

  Workaround: None.

- I2C Driver Deviation from RDD. The RDD mentions that the I2C sample application will read/write to the AIC31 codec, however it is now working with the on board EEPROM. At the time of writing of the RDD the schematics did not show EEPROM on the board and hence the scenario of AIC31 was used. Since, now it contains the EEPROM the sample application has been changed to use EEPROM, as it makes the sample application easier to understand. The RDD therefore needs to be modified to reflect the change in the sample application. CQ: SDOCM00050948

  Workaround: None

- Code review comments. The I2c_Init () function needs to check for multiple calls. CQ: SDOCM00052224.

  Workaround: None

10.7.1.5 UART (DSP/BIOSTM)

- UART Hardware flow control is not tested. This test is planned for future release. CQ SDOCM00048830

  Workaround: None.

10.7.1.6 McASP (DSP/BIOS™)

- The audio output contains noise at increased input (to the board) audio volume levels. CQ SDOCM00053555

  Workaround: Adjust input volume to the board to optimum levels

- Audio Sample Rate selection IOCTL is not implemented for McASP in Master mode. CQ SDOCM00052890.

  Workaround: None.

10.7.1.7 MMCSD (DSP/BIOS™)

- The instrumentation for MMCSD is not working. The code inside the instrumentation macro “MMCSD_INSTRUMENTATION_ENABLED” is just a place holder for the code being there but is not implemented and is not working. User should not enable this macro.

10.7.1.8 NAND (DSP/BIOS™)

- The instrumentation for NAND is not working. The code inside the instrumentation macro “NAND_INSTRUMENTATION_ENABLED” is just a place holder for the code being there but is not implemented and is not working. User should not enable this macro.

10.7.1.9 Block Media (DSP/BIOS™)

- The instrumentation for Block media is not working. The code inside the instrumentation macro “BLKMEDIA_INSTRUMENTATION_ENABLED” is just a place holder for the code being there but is not implemented and is not working.

10.7.1.10 LCDC Raster Controller Driver (DSP/BIOSTM)

- It is sometimes observed that the I2C Expander setting function in the evmInit library for LCDC hangs intermittently CQ SDOCM00053541

Workaround: Power off the board. Plug out the UI board and plug in the UI board and power on the board

10.7.2 Limitations

10.7.2.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)

10.7.2.2 UART (DSP/BIOS™) Device Driver

- UART Baud rates greater than 115200 are not supported. This is due to high error percentage observed for baud rates greater than 115200. Please refer UART datasheet sprufm6, section 2.1 (Table 1) for more details.

10.7.2.3 McASP (DSP/BIOS™) Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.7.2.4 Aic3106 Codec driver (DSP/BIOS™)

- The Aic31 driver currently supports only one codec instance.

10.7.2.5 evm6747 EVM Limitation

- None

10.7.3 Fixed in this release

- The artifacts observed in the image displayed by the LCDC raster sample application were corrected. CQ SDOCM00053539

10.8 Release 01.20.00.06

The release 01.20.00.06 was consumed internally and was not an external release.

10.9 Release 01.20.00.05

This was the BETA release for C6747.

10.9.1 Known Issues

10.9.1.1 MISRA C (All components)

- MISRA C check was not run on the code base as we had issues in running MisraC tools on this package. Tool had issues to scan the xdc based header files and we are currently working on it). CQ SDOCM00052184

  Workaround: None.

10.9.1.2 *Instrumentation (all components)*

- Instrumentation code is not yet implemented. However, the project files for iDebug and iRelease (instrumentation enabled libraries) contain xxx_ DEBUGPRINT_ENABLE macro, which is just a place holder for further implementation. CQ SDOCM00051988

  Workaround: None.

10.9.1.3 *SPI (DSP/BIOS™)*

- IOM_FLUSH packet command is not supported by IOM drivers.CQ: SDOCM00050527.

  Workaround:None.

- Slave mode is not tested, due to absence of on-board SPI master. The plan is to test the slave mode using board to board communication in future releases. CQ SDOCM00048829

  Workaround: None.

- The SPI Sample application does not work when built in release profile. CQ: SDOCM00050609

  Workaround: None

- Use of GPIO pin as SPI Chip select is not tested, due to absence of on-board test point for SPI CS pin. CQ: SDOCM00048831

  Workaround: None

10.9.1.4 *I2C (DSP/BIOS™)*

- Slave mode is not tested, due to absence of on-board I2C master. The plan is to test the slave mode using board to board communication in future releases. CQ SDOCM00048829

  Workaround: None.

- I2C Driver Deviation from RDD. The RDD mentions that the I2C sample application will read/write to the AIC31 codec, however it is now working with the on board EEPROM. At the time of writing of the RDD the schematics did not show EEPROM on the board and hence the scenario of AIC31 was used. Since, now it contains the EEPROM the sample application has been changed to use EEPROM, as it makes the sample application easier to understand. The RDD therefore needs to be modified to reflect the change in the sample application. CQ: SDOCM00050948

  Workaround: None

- Code review comments. The I2c_Init () function needs to check for multiple calls. CQ: SDOCM00052224.

  Workaround: None

10.9.1.5 *UART (DSP/BIOS™)*

- UART Hardware flow control is not tested. This test is planned for future release. CQ SDOCM00048830

Workaround: None.

10.9.1.6 McASP (DSP/BIOS™)

- The audio output contains noise at increased input (to the board) audio volume levels. CQ SDOCM00053555

  Workaround: Adjust input volume to the board to optimum levels

- Audio Sample Rate selection IOCTL is not implemented for McASP in Master mode. CQ SDOCM00052890.

  Workaround: None.

10.9.1.7 MMCSD (DSP/BIOS™)

- The instrumentation for MMCSD is not working. The code inside the instrumentation macro "MMCSD_INSTRUMENTATION_ENABLED" is just a place holder for the code being there but is not implemented and is not working. User should not enable this macro.

10.9.1.8 NAND (DSP/BIOS™)

- The instrumentation for NAND is not working. The code inside the instrumentation macro "NAND_INSTRUMENTATION_ENABLED" is just a place holder for the code being there but is not implemented and is not working. User should not enable this macro.

10.9.1.9 Block Media (DSP/BIOS™)

- The instrumentation for Block media is not working. The code inside the instrumentation macro "BLKMEDIA_INSTRUMENTATION_ENABLED" is just a place holder for the code being there but is not implemented and is not working.

10.9.1.10 LCDC Raster Controller Driver (DSP/BIOS™)

- It is sometimes observed that the I2C Expander setting function in the evmInit library for LCDC hangs intermittently CQ SDOCM00053541

  Workaround: Power off the board. Plug out the UI board and plug in the UI board and power on the board.

10.9.2 Limitations

10.9.2.1 I2C (DSP/BIOS™) Device Driver

- Loopback is not supported in interrupt mode
- In case of time bound IO requests, on timeout the driver is not able to perform any operations on the peripheral. (This peripheral limitation is documented in the technical reference manual of I2C under ICMDR register)

10.9.2.2 BIOS™) Device Driver

- UART Baud rates greater than 115200 are not supported. This is due to high error percentage observed for baud rates greater than 115200. Please refer UART datasheet sprufm6, section 2.1 (Table 1) for more details.

10.9.2.3 McASP (DSP/BIOS™)Device Driver

- Mcasp Driver does not support switching from DIT mode to TDM mode dynamically.

10.9.2.4 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

10.9.2.5 evm6747 EVM Limitation

None

10.9.3 Fixed in this release

10.9.3.1 SPI (DSP/BIOS™) Device Driver

- CQ: SDOCM00050526 - Spi edma mode example needs to be added and hence the driver still needs to be tested in edma mode. This IR is fixed in this release. The EDMA mode sample application is provided in this release for SPI driver.

  Files Modified: spiSample_main.c, spiSample_io.c

- CQ: SDOCM00049902 - SPI data transfer fails when configured for loopback in Interrupt mode. This IR is fixed in this release.

  Files Modified: None

- CQ: SDOCM00051114 - Spi_IOCTL_CANCEL_PENDING_IO ioctl returns failure. This IR is fixed in this release.

  Files Modified: Spi.c.

- CQ: SDOCM00048831 - The SPI driver need to have "use a GPIO" as chip select feature. This IR is fixed in this release.

  Files Modified: Spi.c, Spi.h.

- CQ SDOCM00050831 - After loading the SPI sample application program (.out) through CCS, none of the program can be loaded. This IR is fixed in this release.

  Files Modified: spiSample_main.c

10.9.3.2 I2C (DSP/BIOS™) Device Driver

- CQ: SDOCM00049900 - I2C Set bit rate IOCTL commands fails. This IR is fixed in this release.

  Files Modified: I2c.c

- CQ: SDOCM00050946 - Driver hangs for I2C write to invalid slave address in Interrupt and DMA mode. This IR is fixed in this release.

  Files Modified: I2c.c.

- CQ: SDOCM00050950 – code review, the driver code should return error in case of failure. This IR is fixed in this release.

  Files Modified: I2c.c.

10.9.3.3 UART (DSP/BIOS™) Device Driver

- CQ: SDOCM00049903 - UART data transfer fails when configured as loopback in DMA mode. This IR is fixed in this release.

Files Modified: None.

- CQ: SDOCM00050475 - UART Baud rates greater than 115200 are not supported. This IR is fixed in this release.

  Files Modified: none. (Please refer to the section 6.3)

- CQ: SDOCM00050477 - UART Multiple submit calls (transmit) results in failure in DMA mode. This IR is fixed in this release.

  Files Modified: Uart_edma.c, Uart.h.

- IR SDOCM00050835 - UART sample application fails in interrupt mode, when a file greater than 1000 bytes is given as input. This IR is fixed in this release.

  Files Modified: uartSample_io.c.

- CQ: SDOCM00052469 - c6747 uart edma example Pjt file list and cmd file errors. This IR is fixed in this release.

  Files Modified: uartSample_Debug.cmd, uartSample.pjt

10.9.3.4 Aic3106 Codec driver (DSP/BIOS™)

- AIc31 driver does not support more than one codec instance CQ SDOCM00049853.
- AIC31 driver does not support some IOCTLS CQ SDOCM00049855.
- The left channel of the audio output from the HP out pin is muted. CQ SDOCM00050490.
- Option to configure gain in the initialization parameter is not available. CQ SDOCM00051147.

10.9.3.5 Audio Interface driver (DSP/BIOS™)

- The audio interface driver does not implement some IOCTLS. CQ SDOCM00049862.

10.9.3.6 McASP (DSP/BIOS™) Device Driver

- Mcasp clock failure error handling is not implemented. CQ SDOCM00049850.
- Usage of hardware FIFO in Mcasp driver is not implemented CQ SDOCM00049851.
- McASP peripheral count check is wrong in the driver CQ SDOCM00051171.
- McASP is to be tested in master mode CQ SDOCM00052187.

IOCTL command for MUTE on/off is not working. CQ SDOCM00049904

10.10 Release 01.20.00.04

This was the EA2 release for C6747.

10.10.1 Fixed in this release

- None.

10.10.2 Known Issues

10.10.2.1 MISRA C (All components)

- MISRA C check was not run on the code base as we had issues in running MisraC tools on this package. Tool had issues to scan the xdc based header files and we are currently working on it). Workaround: None.

10.10.2.2 Instrumentation (all components)

- Instrumentation code is not yet implemented

10.10.2.3 SPI (DSP/BIOS™)

- SPI EDMA mode has not been tested and there is no sample application available for spi edma mode. CQ: SDOCM00050526

  Workaround: None.

- IOM_FLUSH packet command is not supported by IOM drivers.CQ: SDOCM00050527.

  Workaround:None.

- Slave mode is not tested, due to absence of on-board SPI master. The plan is to test the slave mode using board to board communication in future releases. CQ SDOCM00048829

  Workaround: None.

- SPI driver fails in interrupt mode and configured for loopback (DLB). CQ SDOCM00049902

  Workaround: None.

- The SPI Sample application does not work when built in release profile. CQ: SDOCM00050609

  Workaround: None

- The SPI sample application IO transfer fails after usage of IOCTL_SET_POLLEDMODETIMEOUT ioctl call for any value of timeout. CQ: SDOCM00051115

  Workaround: None

- After loading the SPI sample application program (.out) through CCS, none of the program can be loaded. CQ SDOCM00050831

  Workaround: None

10.10.2.4 I2C (DSP/BIOS™)

- Slave mode is not tested, due to absence of on-board I2C master. The plan is to test the slave mode using board to board communication in future releases. CQ SDOCM00048829

  Workaround: None.

- IOCTL command for setting the bit rate for data transfer fails. CQ SDOCM00049900

  Workaround: None.

10.10.2.5 UART (DSP/BIOS™)

- UART driver fails in EDMA mode and configured for loopback (DLB). CQ SDOCM00049903

  Workaround: None.

10.10.2.6 McASP (DSP/BIOS™)

- McASP FIFO support is not yet implemented and is planned for future releases. CQ **SDOCM00049851**

  Workaround: None.

- SPDIF mode is not tested and planned for future release. CQ SDOCM00050686

  Workaround: None.

- McASP clock failure error handling is not yet implemented. CQ **SDOCM00049850**

  Workaround: None.

- IOCTL command for MUTE on/off is not working yet. This is being analyzed. CQ **SDOCM00049904**

  Workaround: None

10.10.2.7 Audio Interface driver (DSP/BIOS™)

IOCTLs for the following are not yet implemented.

- Configuring the receive channel sample rate for a given Audio configuration
- Configuring the transmit channel sample rate for a given Audio configuration

10.10.2.8 Aic3106 Codec driver (DSP/BIOS™)

IOCTLs for the following are not yet implemented.

- Select the input Audio mode Line-In or Mic-In.
- Select the output Audio mode Line-Out or Speaker-Out

Increase or Decrease the input volume

10.11 Release 01.20.00.03

- This was the EA1 release for C6747 that contained the rCSLs and their examples. This contained the fixes for following IRs
  - SDOCM00048718
  - SDOCM00048737

10.12 Release 01.20.00.02

- This was the EA1 release for C6747 that contained the rCSLs and their examples. This was the initial release