Release Notes

OMAPL137 BIOSPSP 01.20.00

March 31 2009

This page has been intentionally left blank.

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third–party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Mailing Address:

Texas Instruments

Post Office Box 655303

Dallas, Texas 75265

Copyright ©. 2008, Texas Instruments Incorporated

This page has been intentionally left blank.

TABLE OF CONTENTS

1 Introduction

This PSP Package serves as fundamental software platform for development, deployment and execution of application software on OMAPL137 based platform. PSP abstracts the functionality provided by the OMAPL137.

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 01.20.00 is an Engineering drop for EVMOMAPL137. Please refer to section Drivers/Components for this release for details of this release.

1.2 Text Conventions

☞	This bullet indicates important information. Please read such text carefully.
❑	This bullet indicates additional information.

2 Out-of-Box Contents

BIOSPSP_01_20_xx_xx_Setup.exe contains following:

1.	– Source code for driver and other necessary abstractions. – Project files (DSP/BIOS™), CCS3.3 build files – The above mentioned items are located inside the <installation dir>\pspdrivers_01_20_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.	Doxygen based driver API (generated) documentation for all the drivers inside package.

3 Dependencies

- CCS 3.3.24 or higher with service release 10
- OMAPL137 EVM
- DSP-BIOS 5.33.03
- Code Generation Tools 6.1.5
- EDMA3 product version 01.06.00.01
- XDC 3.10.02 (for xdc build and not required for CCS build)

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™ 5.33.xx) inside the drivers.

4.1 Changes from previous release (Version 01.20.00.08 BETA)

1) This is a GA release for EVM OMAPL137.
2) Support for slave mode in I2C and SPI drivers have been verified
3) Support for GPIO as chip select has been verified
4) Misra-C compliance has been met with some waivers and exceptions
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 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.

5.2 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

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. Higher frequencies are not tested and might result in errors to due to driver latencies in slave mode of operation.
- (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 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.

6.4 McASP (DSP/BIOS™) Device Driver

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

6.5 Aic3106 Codec driver (DSP/BIOS™)

The Aic31 driver currently supports only one codec instance.

6.6 evmOMAPL137 EVM Limitation

None

7 Fixed in this release

7.1 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

7.2 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

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 BIOS PSP

To submit questions about issues with this BIOS PSP 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 01.20.00.08

The release 01.20.00.08 was an internal release for OMAPL137

10.1.1 Known Issues

10.1.1.1 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.

10.1.1.2 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

10.1.2 Limitations

10.1.2.1 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)

10.1.2.2 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.

10.1.2.3 McASP (DSP/BIOS™) Device Driver

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

10.1.2.4 Aic3106 Codec driver (DSP/BIOS™)

- The Aic31 driver currently supports only one codec instance.

10.1.2.5 evmOMAPL137 EVM Limitation

- None

10.1.3 Fixed in this release

10.1.3.1 MISRA C

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

10.1.3.2 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.

10.1.3.3 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.

10.1.3.4 IOM_FLUSH handling

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

10.1.3.5 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

10.1.3.6 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.

10.1.3.7 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

10.1.3.8 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

10.1.3.9 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

10.1.3.10 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

10.2 Release 01.20.00.07

The release 01.20.00.07 was the BETA release for OMAPL137

10.2.1 Known Issues

10.2.1.1 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.

10.2.1.2 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.

10.2.1.3 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

10.2.1.4 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

10.2.1.5 UART (DSP/BIOSTM)

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

  Workaround: None**.**

10.2.1.6 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**.**

10.2.1.7 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.

10.2.1.8 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.

10.2.1.9 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.

10.2.1.10 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.

10.2.2 Limitations

10.2.2.1 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)

10.2.2.2 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.

10.2.2.3 McASP (DSP/BIOS™) Device Driver

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

10.2.2.4 Aic3106 Codec driver (DSP/BIOS™)

- The Aic31 driver currently supports only one codec instance.

10.2.2.5 evmOMAPL137 EVM Limitation

- None

10.2.3 Fixed In this release

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

10.3 Release 01.20.00.06

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

10.4 Release 01.20.00.05

This was the BETA release for OMAPL137.

10.4.1 Known Issues

10.4.1.1 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.

10.4.1.2 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.

10.4.1.3 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

10.4.1.4 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

10.4.1.5 UART (DSP/BIOS™)

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

  Workaround: None**.**

10.4.1.6 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**.**

10.4.1.7 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.

10.4.1.8 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.

10.4.1.9 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.

10.4.1.10 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.

10.4.2 Limitations

10.4.2.1 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)

10.4.2.2 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.

10.4.2.3 McASP (DSP/BIOS™)Device Driver

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

10.4.2.4 Aic3106 Codec driver (DSP/BIOS™)

- The Aic31 driver currently supports only one codec instance.

10.4.2.5 evmOMAPL137 EVM Limitation

- None

10.4.3 Fixed in this release

10.4.3.1 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

10.4.3.2 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.

10.4.3.3 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 –** OMAPL137 uart edma example Pjt file list and cmd file errors. This IR is fixed in this release.

Files Modified: uartSample_Debug.cmd, uartSample.pjt

10.4.3.4 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.**

10.4.3.5 Audio Interface driver (DSP/BIOS™)

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

10.4.3.6 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**

10.5 Release 01.20.00.04

This was the EA2 release for OMAPL137.

10.5.1 Fixed in this release

- None.

10.5.2 Known Issues

10.5.3 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.

10.5.4 Instrumentation (all components)

- Instrumentation code is not yet implemented

10.5.5 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

10.5.6 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.

10.5.7 UART (DSP/BIOS™)

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

  Workaround: None.

10.5.8 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

10.5.9 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

10.5.10 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

10.6 Release 01.20.00.03

- This was the EA1 release for OMAPL137 that contained the rCSLs and their examples. This contained the fixes for following IRs
  - SDOCM00048718
  - SDOCM00048737

10.7 Release 01.20.00.02

- This was the EA1 release for OMAPL137 that contained the rCSLs and their examples. This was the initial release