Release Notes

BIOSUSB 01.10.02

2 February 2010

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.

This page has been intentionally left blank.

TABLE OF CONTENTS

1   Introduction

The BIOSUSB Package (based on JUNGO USB stack) provides capability to incorporate a USB host or USB device functionality for an embedded C6747/OMAPL137 and C6748/OMAPL138 platform device.

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

1.1   Release Category

This BIOSUSB release versioned 01.10.02 is a GA release support for C6747/OMAPL137 or C6748/OMAPL138 EVMs.

1.2   Text Conventions

❖	This bullet indicates important information. Please read such text carefully.
➢	This bullet indicates additional information.

2   Out-of-Box Contents

BIOSUSB_01_10_02_Setup.exe contains following:

1	- Libraries for device, host and dual role mode configuration. - Source code for host, device and dual role example, MSC-Device Glue application. - The above mentioned items are located inside the "<bios_installation_dir>\ti\packages\" - Project files for each example (DSP/BIOS™), CCS3 and CCS4 build files - 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 vendor.
2	Release Notes (this document) providing an overview of this release
3	User Guide that provides information on usage of the package .
4	Data sheet provides performance figures and CPU load for MSC host and MSC device configuration.

TEXAS
INSTRUMENTS

3   Dependencies

The following products are required to be installed prior to using the BIOSUSB Package for C6747/OMAPL37 and C6748/OMAPL138 platform:

For CCS3 Environment

- ❖ CCS 3.3.80.11 (service release 10)
- ❖ DSP-BIOS versioned **5.41.02.14**
- ❖ Code Generation Tools **6.1.9**
- ❖ EVM C6747/OMAPL37 (Rev-D recommended) or C6748/OMAPL138 Board (Beta- version recommended)
- ❖ XDS 510 USB Emulator (Optional) – EVM has on board emulator

For CCS4 Environment

- ❖ CCS4 version 4.0.0.16000
- ❖ DSP-BIOS versioned **5.41.02.14**
- ❖ XDS 510 USB Emulator (Optional) – EVM has on board emulator

Dependent Packages

- ❖ EDMA 3 LLD – versioned **01.11.00.02**
- ❖ ERTFS File System package versioned **1.10.00.30 or higher version**
- ❖ PSP_DRIVERS Package **-** The BIOSPSP GA Package with versioned **1.30.00**

4   BIOSUSB Features supported in this release

- USB Host features
    - o   MSC class driver
    - o   HID class driver

    Note: Maximum of two USB mass storage devices are supported.

- USB –Slave/Device features
    - o   Mass storage class
    - o   HID class (keyboard function driver)
- USB Dual Mode features
    - o   Switching between Host and Device mode without reloading the stack image on the platform
- Other component dependency for BIOSUSB
    - o   Blockmedia (BIOSPSP Package)
    - o   ERTFS (ERTFS Package)

4.1   Changes from previous release

- ❖   Added Dual Mode Stack support
- ❖   Added 'usbdualhid' example to illustrate the dual mode switching
- ❖   Added endpoint Traffic configuration API to support multiple application needs.

4.2   Other changes

- none

TEXAS INSTRUMENTS

5 Known Issues

5.1 USB Host Disconnect Issue (SDOCM00057283)

In USB Host configuration when mass storage device is removed while file i/o is in progress and further re-connection of any device is not recognized by the host.

This issue is applicable for both USB1 (OHCI) and USB0 (Mentor host controller) interfaces.

Workaround : Avoid device removal when being used actively.

5.2 Unable createPartition when two usb stick connected to C6747/C6748 (SDOCM00064929)

when two usb mass storage device or stick connected to usb 1.1 port or usb2.0 port of Freon/primus platform, the two device detected and getDriveId() returns the driveID. After clear partition is done, when trying to create partition, the getdevparams function returns failure. Further not able to create the partition on the usb drive.

Workaround : None.

5.3 USB MSC Device Example (Dynamic removal of MMC/SD or NAND OR SATA device is not supported)

When target as USB Mass storage device exposing MMC/SD or NAND device as storage media to Host PC. The dynamic removal of MMC/SD card or NAND device is not supported.

Workaround : None

5.4 USB Device Disconnect Issue while write I/O is in progress (SDOCM00066489)

In USB Device configuration when USB cable is disconnected from host while file write I/O in progress, further re-connection of any device is not recognized by the host.

This issue is applicable for USB0 (Mentor host controller) interface.

Workaround : Avoid device removal when being used actively.

6 Fixed in this Release

IR #	Description
SDOCM00066148	While running 'usbdevhid' example, the application hangs after continuous key press for several minutes

7   Technical Support BIOSUSB

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

TEXAS INSTRUMENTS

Revision History

Date	Author	Revision History	Version
May 2009	Ravi Babu	Support of C6747 platform on CCS3	01_00_00_04
Nov 2009	Ravi Babu	Support for C6747/C6748 platform on both CCS3/CCS4	01_10_01_01
Feb 2010	Sundaram Raju	Support dual mode feature with additional fixes	01_10_02_01