ADSP-BF609 EZ-Kit Board Support Package (BSP) v1.1.0 Release Notes

Release Dependencies

- **Requires CrossCore Embedded Studio (CCES) Release version 1.1.0**. The download link can be found in the "Product Downloads" section at www.analog.com/cces .
- **Requires Video Encoder EI3 Extender BSP version 1.1.0**. Download it from the "Product Downloads Section" of www.analog.com/EI3-VidEncoder
- **Requires Video Decoder EI3 Extender BSP version 1.1.0**. Download it from the "Product Downloads Section" of www.analog.com/EI3-VidDecoder

 This release was tested with the following hardware:

- **ADSP-BF609 EZ-Board Rev 1.0 BOM Rev 1.2**. More information on this hardware can be found at www.analog.com/BF609EZBoard
- **Video Encoder EI3 Extender Rev 1.0 BOM Rev 1.2**. For more information please visit http://www.analog.com/EI3-VidEncoder
- **Video Decoder EI3 Extender Rev 1.0 BOM Rev 1.2**. For more information please visit http://www.analog.com/EI3-VidDecoder

New features and examples in this release

- The following example issues have been addressed
    - Examples that were not running in release mode have been modified
        - MemCopyArrayMode
        - MemCopyListMode
        - MemCopyOneShot1D
        - MemCopyOneShot2D
        - MemCopyOneToMany
    - Warnings emitted by the linker have been removed
        - STDIO Character Echo
    - The PowerService has been modified in CCES 1.1.0. Some examples were incorrectly setting CLKIN to 27MHz. These examples are now correctly setting CLKIN to 25 MHz.
        - UDS Downscaler
        - Linkport Loopback
        - SPORT Loopback
        - Rotary Counter
    - Examples that were not correctly copying files into the Workspace have been fixed.
        - POST
        - Flash Programmer

Feature removed in this release

- The USB Vendor Bulk example has been removed.

Software issues addressed in this release

None

Documentation

Documentation is not updated in this release.

Known issues

- The example "CrcDmaDataCompare.c" fails to run in Release mode.
  To address this issue you can change one line of code in CrcDmaDataCompare.c at line 40 from
    static bool   bCrcDataCompareErr;
  to
    volatile static bool   bCrcDataCompareErr;

BF609 EZ KIT Board Support Package (BSP) v1.0.3 Release Notes

These release notes subsume the release notes for previous updates. Release notes for previous updates can be found at the end of this document.

Release Dependencies

- **Requires CrossCore Embedded Studio (CCES) Release version 1.0.2**. The download link can be found in the "Product Downloads" section at www.analog.com/cces .
- **Requires Video Encoder EI3 Extender BSP version 1.0.1**. Download it from the "Product Downloads Section" of www.analog.com/EI3-VidEncoder
- **Requires Video Decoder EI3 Extender BSP version 1.0.1**. Download it from the "Product Downloads Section" of www.analog.com/EI3-VidDecoder

This release was tested with the following hardware:

- **ADSP-BF609 EZ-Board Rev 1.0 BOM Rev 1.2**. More information on this hardware can be found at www.analog.com/BF609EZBoard
- **Video Encoder EI3 Extender Rev 1.0 BOM Rev 1.2**. For more information please visit http://www.analog.com/EI3-VidEncoder
- **Video Decoder EI3 Extender Rev 1.0 BOM Rev 1.2**. For more information please visit http://www.analog.com/EI3-VidDecoder

New features and examples in this release

- CRC DMA Sketches are provided
- TRU Service examples and sketches are provided
- The MCAPI Message Example has been updated
- A USB Vendor Bulk example has been added

This example includes binaries for the USB Core, USB Vendor, RTOS and USB-STDIO components.

- A PVP Programmer based UDS example has been added

    This example demonstrates use of the new PVP Programmer add-in shipped with CCES 1.0.2

- POST example has been updated based on the removal of some RSI macros.

Software issues addressed in this release

None

Documentation

Documentation is not updated in this release.

Known issues

No known issues.

BF609 EZ KIT Board Support Package (BSP) v1.0.2 Release Notes

These release notes subsume the release notes for previous updates. Release notes for previous updates can be found at the end of this document.

Release 1.0.2 requires CrossCore Embedded Studio (CCES) Patch Release version 1.0.1.1. The download link can be found in the "Product Downloads" section at www.analog.com/cces .

Release Dependencies

- Requires CrossCore Embedded Studio (CCES) Patch Release version 1.0.1.1
- Requires Video Encoder EI3 Extender BSP version 1.0.1
- Requires Video Decoder EI3 Extender BSP version 1.0.1

This release was tested with:

- ADSP-BF609 EZ-Board Rev 1.0 BOM Rev 1.2
- Video Encoder EI3 Extender Rev 1.0 BOM Rev 1.2
- Video Decoder EI3 Extender Rev 1.0 BOM Rev 1.2

New features and examples in this release

No new features are added in this release.

Software issues addressed in this release

The [TAR-49994](#) is addressed by upgrading the PVP examples to use latest version (1.0.1) of the Video Encoder EI3 Extender BSP and Video Decoder EI3 Extender BSPs.

Documentation

Documentation is not updated in this release.

Known issues

No known issues.

BF609 EZ KIT Board Support Package (BSP) v1.0.1 Release Notes

Thank you for installing the BF609 EZ Board Board Support Package (BSP). The BSP provides example which demonstrate the drivers and services provided along with CCES 1.0.0

The EZ Board designed for use with CrossCore® Embedded Studio (CCES) for Analog Devices Processors software development tools. The CCES development environment aids advanced application code development and debug, such as:

- Create, compile, assemble, and link application programs written in C++, C, and assembly
- Load, run, step, halt, and set breakpoints in application programs
- Read and write data and program memory
- Read and write core and peripheral registers
- Plot memory

For more details on CCES, please visit www.analog.com/cces For more on the ADSP-BF609 EZ Board, please visit www.analog.com/BF609EZBoard

The BF609 EZ Board   BSP provides comprehensive examples which demonstrate support for services , drivers, examples and code sketches .

Installation Logging

Support and Assistance

- Submit your questions online at:
    o http://www.analog.com/support

- E-mail your Processor and DSP software and development tools questions from within CrossCore Embedded Studio:
    o processor.tools.support@analog.com
- E-mail your Processors and DSP applications and processor questions to:

- processor.support@analog.com OR
- processor.china@analog.com (Greater China support)
- Post your questions in the Processors and DSP online technical support community in Engineer Zone at:
    - http://ez.analog.com/community/dsp

Software Requirements

To build the projects included in the BF609 EZ Board BSP, CrossCore Embedded Studio version 1.0.0 or later is required..

Interrupts

CrossCore Embedded Studio provides a coherent interrupt management mechanism which allows for the same interface to be used in RTOS and non-RTOS applications. This means that interrupt service routines in all applications must be written in C and use the adi_int interface. Any thread-safety requirements or interactions with tasks are handled by the adi_int interface. For more information on the adi_int API, in CrossCore Embedded Studio go to Help > Search and enter adi_int.

Examples of the usage of this interrupt management mechanism are the System Services and Device Drivers provided with Crosscore Embedded Studio. By using the adi_int interface, the same services and drivers can be used in all applications regardless of whether an operating system is used.

Sketches and Examples

Sketches

CrossCore Embedded Studio provides a mechanism by which small code fragments, called sketches, can be generated with parameterized input provided by the user. The resulting code can then be copied and pasted to a project. BF609 EZ Board BSP related sketches are provided. To locate the sketches specific to the BF609 EZ Board r BSP, open up the example browser (Help -> Browse Examples) and then select the appropriate product name in the "Product:" pulldown.

Examples

Power_On_Self_Test example which includes a test for each device on the ADSP-BF609 EZ-Board in order to make sure that the board is functioning correctly

Parallel flash programmer interface application used with the device programmer to access the PC28F128P33 parallel flash device on the ADSP-BF609 EZ-Board

Serial flash programmer interface application used with the device programmer to access the W25Q32BV Quad SPI flash device on the ADSP-BF609 EZ-Board

EXAMPLES FOR DRIVERS:

1. SSLDD Rotary Encoder example using the on-chip ADSP-BF609 Rotary encoder
2. SSLDD TWI example that reads from the ADSP-BF609 EZ-Kit thermal sensor
3. SSLDD example to demonstrate character echo using UART
4. SSLDD example for using Linkport

5. SSLDD example for using SPORT
6. SSLDD example for using SPI
7. SSLDD PVP examples for memory and camera pipe.

Please note that camera pipe example for PVP requires additional hardware and BSPs which are mentioned below.

1. Video decoder EI3 Extender board   and its BSP(Video_Decoder_EI3_Extender_Board-Rel1.0.0)
2. Video encoder EI3 Extender board   and its BSP(Video_Encoder_EI3_Extender_Board-Rel1.0.0)

1. A DVD player and a TV

Details about the Video decoder E13 Extender board /Video encoder E13 Extender board and its Board Support Package(BSP) can be found at

www.analog.com/ex3-viddecoder

EXAMPLES FOR SERVICES:

1. SSLDD example using GPIO
2. SSLDD example using mcapi
3. SSLDD example for using power management
4. SSLDD example for using stdio service.
5. SSLDD example for using timer

Location

In order to locate BF609 EZ Board BSP examples and sketches, you can use the following:

*   Open CrossCore Embedded Studio's Example Browser which can be found in CrossCore Embedded Studio under Help. Select in the Product section ADSP-BF609 EZ-Board v1.0.1 for a full list of examples and sketches.
*   Import projects located in your BF609 EZ Board BSP installation folder under the example directory in product installation "ADSP-BF609_Evaluation_Board-Rel1.0.1\BF609_Evaluation_Board\Blackfin\Examples" .

Documentation

General information on the driver model can be found in CCES help under

   CrossCore® Embedded Studio 1.0.0 > BF609 EZ Board   Board Support Package 1.0.1 > System Services and Device Drivers

MISRA-C Support

MISRA C is a software development standard for the C programming language developed by the Motor Industry Software Reliability Association (MISRA). Its aims are to facilitate code safety, portability, and

reliability in the context of embedded systems, specifically those systems programmed in ANSI C. The compiler detects violations of the MISRA rules at compile-time, link-time, and run-time.

As of release 1.0.1 All system services and device drivers are MISRA-C compliant (the specific suppressions are listed in the header files).

System Services and Device Driver Thread Safety

All system services and device drivers (SSDD) use mutexes and semaphores to ensure thread-safety. If an RTOS is present then the SSDD will use the RTOS mutex and semaphores. If an RTOS is not present then the SSDD will use a non-RTOS implementation of mutexes and semaphores (spin locks).

Known issues with BF609 EZ Board Board Support Package (BSP)

None