



Release Notes for EV-SC59x EZ-KIT[®] Board Support Package Rel.3.0.0

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1 Release Notes

Thank you for installing the EV-SC59x EZ-KIT® Board Support Package (BSP) Rel.3.0.0. The BSP provides software and documentation in support of the EV-SC59x EZ-KIT®. The EV-SC59x EZ-KIT is 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 .

The EV-SC59x EZ-KIT® BSP provides comprehensive software support for the EV-SC59x EZ-KIT® (ADSP-21593, ADSP-SC594, ADSP-SC598) . In this release, various examples are provided to demonstrate the on-chip drivers and services.

In EV-SC59x EZ-KIT® 3.0.0 , EV-SOMCRR-EZ-LITE® Rev B support has been newly added along with existing EV-SOMCRR-EZ-KIT® Rev A.

2 Release Dependencies:

- Requires CrossCore® Embedded Studio version 2.11.1 onwards
- EV-SC598-SOM EZ-KIT® Rev C
- EV-SC594-SOM EZ-KIT® Rev C
- EV-21593-SOM EZ-KIT® Rev A
- EV-SOMCRR-EZ-KIT® Rev A
- EV-SOMCRR-EZ-LITE® Rev B

3 Examples:

3.1 Power_On_Self_Test:

This example allows the user to test many peripherals of the EV-SC59x EZ-KIT®. Readme is provided in the POST example to understand how these tests are run. Power_On_Self_Test is available for both EV-SOMCRR-EZ-KIT® and EV-SOMCRR-EZ-LITE® for 21593, SC594 & SC598 in both debug & release mode.

3.2 Device_Programmer:

This example allows the user to program the flash device on the EV-SC59x EZ-KIT® in conjunction with the "Command-Line Device Programmer (cldp)".

A pre-built binary exists so that users can just program the flash device without having to build the example.

3.3 Multi-Core :

The following Multi-Core examples are provided for EV-SC59x EZ-KIT® Board Support Package (BSP):

- SwRaiseInterCoreInt : Demonstrates inter-core handshake using system software interrupts.
- SwTrigInterCoreInt : Demonstrates inter-core handshake using TRU software master trigger and TRU interrupts.

3.4 Drivers/Services:

The following Device Driver and System Service examples are provided for EV-SC59x EZ-KIT® Board Support Package (BSP):

Device Drivers

- ASRC
- ADC-DAC
- CAN-FD
- CRC
- Crypto (PKTE)

- EMAC
- EMSI
- FIR
- HADC
- IIR
- LINKPORT
- OSPI
- SPDIF
- SPI
- SPORT
- TMU
- TWI
- UART

System Services

- ARM-TMR
- ARM-PMU
- DAI/DRU
- DMA (MDMA, EMDMA)
- FMU
- GIC-PMU
- GPIO
- MDMA
- MCAPI
- PDM
- PWR
- RCU
- SMPU
- STDIO
- SWU
- TMR

- TRU
- WD

Known Issues:

- Rebuilding the BSP examples without clean build fails for some workspaces with deep paths.
- Intermittent failures may be observed in EMAC, Push-button, TWI , ADC-DAC, SPI_MemoryMappedMode, LP DMA examples while running on EV-SOMCRR-EZLITE Rev-B. This is due to the connector misalignment between the EV-SOMCRR-EZLITE and 21594/SC594/SC598 SOM boards. Please try removing and reconnecting the boards for such scenarios.
- For the Power_On_Self_Test, the Si5356A(For SC598), usb-qspi, SPI0 MicroSD card, USB3340 PHY interface tests are not integrated. If these tests are executed, the "Test function is not integrated" message will be displayed on the UART console which is expected.
- PKTE examples tested on A55 only with cache disabled.
- EMAC1 test enabled with the macro TEST_EMAC1 may fail in EMACPhyLoopback example code.
- DRU example works intermittently and might require occasional resets for them to work correctly.
- It is recommended to run all the OSPI BSP examples on EV-SC598-SOM Rev C board or replace R54 & R56 with 100K resistor on EV-SC598-SOM Rev A and Rev B board.
- OSPI PHY mode example will work only with EV-SC594-SOM/EV-SC598-SOM Rev C alone, without connecting any EV-SOMCRR-EZKIT board. Since the OSPI lines are shared with another flash device in EV-SOMCRR-EZKIT board and since OSPI PHY mode examples are run at High Speed (80Mhz), connecting SOMCRR-EZKIT may cause signal integrity issues and example may fail.
- Semantic Error may be seen while loading the LP_DMA_EZL example, due to some file linking issue. But this won't affect anything functionally, still, the user can build and run this example.
- For POST ,twi write failure, failure in Pushbutton test, Linkport test and EMAC test can be intermittently seen because of connectors issue in EV-SOMCRR-EZLITE REV B
- Three core example fails to recognize push button input with EV-SOMCRR-EZLITE Rev-B.
- ospi_phycalib example causes a problem when using the launch group that use both arm and sharc
- RCUCoreReset example for ADSP-21593 and ADSP-SC598 is not working as expected.