

Flex SDK 2.2.0.0 GA

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1 Release Highlights

1.1 Version 2.2.0.0 GA:

1.1.1 RAIL

- Updated RAIL Light and Switch application with new network join mechanism.
- Removed non-RAIL specific generated project files.
- Added support for more EFR32FG14V parts.
- Removed redundant "phy-rtos" plugin.
- Various bug fixes.

1.1.2 Connect

- Micrium OS support for SoC mode.
- Added SimEE v2 non-volatile memory support.
- Added support for more EFR32FG14V parts.
- Various bug fixes.

2 Using This Release

This release contains the following

- Radio Abstraction Interface Layer (RAIL) stack library
- Connect Stack Library
- RAIL and Connect Sample Applications
- RAIL and Connect Plugins and Application Framework

For more information about the Flex SDK see UG103.13 - Application Development Fundamentals: RAIL and UG103.12 - Application Development Fundamentals: Connect. If you are a first time user, see QSG138: Getting Started with the Silicon Labs Flex Software Development Kit for the Wireless Gecko (EFR32) Portfolio.

2.1 Installation:

Installation of the Flex SDK is covered in the document QSG138

2.1.1 Compatible Software:

The Flex SDK should be used in conjunction with the Silicon Labs Simplicity Studio V4 development platform.

2.2 Support:

Development Kit customers are eligible for training and technical support. You can use the Silicon Laboratories web site <http://www.silabs.com> to obtain information about all Silicon Labs Zigbee products and services, and to sign up for product support.

You can contact Silicon Laboratories support at <http://www.silabs.com/support>

3 Added Items

3.1 Version 2.2.0.0 GA:

3.1.1 New Application Plugins:

- Libraries: This plugin contains bundled libraries for all of the parts currently supported by the Flex SDK. This includes but is not limited to libraries for the following: AES Security Form and Join Frequency Hopping HAL Packet Queue Parent Support RAIL Simulated EEPROM version 1 Stack Counters XXTEA Security
- WMBus Helper: This plugin contains all of the code associated with the Wireless M-Bus protocol. This plugin is used in the WMBus sample application.
- Application Configuration: This plugin contains all necessary configurations (startup files, linker configurations, and etc.) for RAIL applications.

3.1.2 New Stack APIs:

- NEW RAIL APIs

4 Changed Items

4.1 Version 2.2.0.0 GA:

- Updated RAIL Light and Switch application with new joining mechanism.

5 Deprecated Items

5.1 Version 2.2.0.0 GA:

We are planning on removing these items in a future release. Please either migrate to the newer alternative, or alert the support team to your needs.

6 Removed Items

6.1 Version 2.2.0.0 GA:

Callback and debug print generation has been removed for RAIL applications.

7 Fixed Issues

7.1 Version 2.2.0.0 GA:

- 296569 Problem with Example: Connect (SoC) Wire-Replacement
- 295610 Studio missing framework
- 295307 Flex SDK 2.1.0 MGM12P32 railtest application not working without mods
- 294958 simeev2 upgrade not building with GCC
- 294485 Can't build apps due to make error in HAL
- 292058 Simee2 linker error when GCC is used
- 290666 BLE DMP Light stops sending reports
- 290661 appBuilder selection for railtest does not list BRD4300B as an option
- 290247 wmbus message timing is above the standard's requirements
- 290240 Sensor Sink test failing with 4170a
- 289579 Add CHAN selection support to RAIL light/switch
- 285521 assembler flags should include -mfloat-abi=softfp -mfpu=fpv4-sp-d16.
- 279942 Flex File generation failed
- 279099 CSP scripts - update needed for emberGetEui64()
- 270485 RAIL apps should stop including flex_*.c files
- 256856 Bootloader should use segments dividable by 4
- 238395 Host: Issue with OTA plugins
- 187064 The spacing between the RAIL app descriptions in the appbuilder is different between different apps

8 Open Issues

- 249575 EFR32FG1VF64GM32's program based on RAIL of Flex stack stays at startup file
- 260616 Flex: Publish Doxygen documentation on the website
- 260625 [QA] 2.4GHz and Sub-GHz FHSS (Frequency Hopping Spread Spectrum) support
- 262574 Adding Flex to cstat jenkins page
- 262589 Help out resolving CSTAT issues on Connect plugins
- 275141 Too many initializer values for hal button enable on BG
- 275587 HWConfig name for file on default generate for BG Module is FG not BG
- 275707 SPI Display's default config generates error
- 276695 em.device.h cannot be found

- 251287 To achieve the lowest current during sleep on EFR32xG12, EFR32xG13, and EFR32xG14 parts, you must turn on voltage scaling. However, the radio will not operate with voltage scaling turned on, so to turn it on you must also make sure to disable it after each wake-up. Furthermore, some resets will not turn off voltage scaling, so please ensure that it is disabled before attempting to turn on the radio.
- 285563 platform/base/phy/phy.h is incorrectly included in the stack install and references other header files not available in the installer.
- 295307 The FEM control plugin is not yet supported in RAIL, which causes the FEM to not work properly on RAIL applications without modifications. To work around this, FEM specific code needs to be added to the main function of any RAIL app that uses FEM.

9 Intended Behavior

9.1 Version 2.2.0.0 GA:

- RAILTEST does not support all OPN/BOARD by default in Studio. To enable RAILTEST for all parts, the following stack change is required.

```
File: connect/meta-inf/appbuilder.properties
# Update the 'architecture' field to display as follow
architecture=\
efr32+iar,\
efr32+gcc,\

# Remove the line below
boards=...
```

```
File: connect/meta-inf/appbuilder-override.properties
# Remove the line below
additionalBoards=...
```

10 Documentation Changes

11 History