



32-bit MCU SDK 6.6.1.0 GA

Gecko SDK Suite 4.4

February 14, 2024

The 32-bit MCU SDK provides sample applications for EFM32 and EZR32 development kits.

This document covers the following SDK versions:

6.6.1.0 released February 14, 2024
6.6.0.0 released December 13, 2023

KEY FEATURES

- Added support for new OPNs
- Upgrade compilers to GCC 12.2.1 and IAR 9.40.1

Compatibility and Use Notices

For information about security updates and notices, see the Security chapter of the Gecko Platform Release notes installed with this SDK or on the [Silicon Labs Release Notes page](#). Silicon Labs also strongly recommends that you subscribe to Security Advisories for up-to-date information. For instructions, or if you are new to the 32-bit MCU SDK, see [Using This Release](#).

Compatible Compilers:

This version of the 32-bit MCU SDK is compatible with the following tool chains.

- IAR Embedded Workbench for ARM (IAR-EWARM) version 9.40.1
- GCC (The GNU Compiler Collection) version 12.2.1 (provided with Simplicity Studio)

Contents

- 1 New Items 3
- 2 Improvements..... 4
- 3 Fixed Issues 5
- 4 Known Issues in the Current Release 6
- 5 Deprecated Items 7
- 6 Removed Items 8
- 7 Using This Release 9
 - 7.1 Security Information..... 9
 - 7.2 Support..... 10

1 New Items

This release of the Gecko SDK (GSDK) will be the last with combined support for all EFM and EFR devices, except for patches to this version as needed. Starting in mid-2024 we will introduce separate SDKs:

- The existing Gecko SDK will continue with support for Series 0 and 1 devices.
- A new SDK will cater specifically to Series 2 and 3 devices.

The Gecko SDK will continue to support all Series 0 and 1 devices with no change to the long-term support, maintenance, quality, and responsiveness provided under our software policy.

The new SDK will branch from Gecko SDK and begin to offer new features that help developers take advantage of the advanced capabilities of our Series 2 and 3 products.

This decision aligns with customer feedback, reflecting our commitment to elevate quality, ensure stability, and enhance performance for an exceptional user experience across our software SDKs.

New in release 6.6.0.0

Added support for the following new OPNs:

- BRD2500B
- BRD2501B

2 Improvements

None

3 Fixed Issues

None

4 Known Issues in the Current Release

Known issues in release 6.6.0.0

There is a known issue, detected when updating the GCC toolchain from version 10.3 to 12.2, which increases the RAM usage by about 400 bytes in some cases.

5 Deprecated Items

None

6 Removed Items

None

7 Using This Release

The 32-bit MCU SDK v 64.x is installed as part of Gecko SDK (GSDK) 4.4.x, the suite of Silicon Labs SDKs. To quickly get started with the GSDK, install [Simplicity Studio 5](#), which will set up your development environment and walk you through GSDK installation. Simplicity Studio 5 includes everything needed for IoT product development with Silicon Labs devices, including a resource and project launcher, software configuration tools, full IDE with GNU toolchain, and analysis tools. Installation instructions are provided in the online [Simplicity Studio 5 User's Guide](#).

Alternatively, Gecko SDK may be installed manually by downloading or cloning the latest from GitHub. See https://github.com/SiliconLabs/gecko_sdk for more information.

This release contains the following.

EFM32 and EZR32 sample applications

This SDK depends on Gecko Platform. The Gecko Platform code provides functionality that supports protocol plugins and APIs in the form of drivers and other lower layer features that interact directly with Silicon Labs chips and modules. Gecko Platform components include EMLIB, EMDRV, RAIL Library, NVM3, and mbedTLS. Gecko Platform release notes are available through Simplicity Studio's Launcher Perspective.

The GSDK default install location has changed with Simplicity Studio 5.3.

Windows: C:\Users\<<NAME>\SimplicityStudio\SDKs\gecko_sdk

MacOS: /Users/<NAME>/SimplicityStudio/SDKs/gecko_sdk

7.1 Security Information

Security Advisories

To subscribe to Security Advisories, log in to the Silicon Labs customer portal, then select **Account Home**. Click **HOME** to go to the portal home page and then click the **Manage Notifications** tile. Make sure that 'Software/Security Advisory Notices & Product Change Notices (PCNs)' is checked, and that you are subscribed at minimum for your platform and protocol. Click **Save** to save any changes.

The screenshot shows the 'Update Preference' page in the Silicon Labs customer portal. The page is titled 'Update Preference' and has a search bar at the top. Below the search bar, there are navigation links for 'HOME', 'CASES', and 'SOFTWARE RELEASES'. The main content area is divided into two sections: 'WHAT EMAILS WOULD YOU LIKE TO RECEIVE?' and 'SELECT THE PRODUCTS TO RECEIVE UPDATES FOR'.

In the 'WHAT EMAILS WOULD YOU LIKE TO RECEIVE?' section, there are two sub-sections: 'Newsletters' and 'Product Specific Notifications'. Under 'Product Specific Notifications', the checkbox for 'Software/Security Advisory Notices & Product Change Notices (PCNs)' is checked and highlighted with a red box. Other checkboxes include 'Community Monthly Newsletter', 'Sales Newsletter', 'Micrium Newsletter', 'Product Information and Newsletter', and 'Technical Document Updates (Release Notes, Data Sheets, etc.)'.

In the 'SELECT THE PRODUCTS TO RECEIVE UPDATES FOR' section, there is a 'Select/Unselect All' checkbox. Below it, there are several product categories, each with a checkbox. The 'Microcontrollers' category is selected and highlighted with a red box. Within this category, the '32-bit MCUs' checkbox is checked. The 'Wireless' category is also selected and highlighted with a red box. Within this category, the 'Proprietary' checkbox is checked. Other categories include 'Audio and Radio', 'Interface', 'Isolation', 'Modems and DAAs', 'Timing', 'Clocks', 'Buffers', 'Oscillators', 'CDR and PHY', 'Power over Ethernet', 'Sensors', 'TV and Video', 'Voice', 'Bluetooth Classic', 'Bluetooth Low Energy', 'Wi-Fi', 'ZigBee and Thread', and 'Z-Wave'.

7.2 Support

Development Kit customers are eligible for training and technical support. Use the Silicon Laboratories web site www.silabs.com/products/mcu/32-bit to obtain information about all EFM32 Microcontroller products and services, and to sign up for product support.

You can contact Silicon Laboratories support at www.silabs.com/support

Simplicity Studio

One-click access to MCU and wireless tools, documentation, software, source code libraries & more. Available for Windows, Mac and Linux!



IoT Portfolio
www.silabs.com/IoT



SW/HW
www.silabs.com/simplicity



Quality
www.silabs.com/quality



Support & Community
www.silabs.com/community

Disclaimer

Silicon Labs intends to provide customers with the latest, accurate, and in-depth documentation of all peripherals and modules available for system and software implementers using or intending to use the Silicon Labs products. Characterization data, available modules and peripherals, memory sizes and memory addresses refer to each specific device, and "Typical" parameters provided can and do vary in different applications. Application examples described herein are for illustrative purposes only. Silicon Labs reserves the right to make changes without further notice to the product information, specifications, and descriptions herein, and does not give warranties as to the accuracy or completeness of the included information. Without prior notification, Silicon Labs may update product firmware during the manufacturing process for security or reliability reasons. Such changes will not alter the specifications or the performance of the product. Silicon Labs shall have no liability for the consequences of use of the information supplied in this document. This document does not imply or expressly grant any license to design or fabricate any integrated circuits. The products are not designed or authorized to be used within any FDA Class III devices, applications for which FDA premarket approval is required or Life Support Systems without the specific written consent of Silicon Labs. A "Life Support System" is any product or system intended to support or sustain life and/or health, which, if it fails, can be reasonably expected to result in significant personal injury or death. Silicon Labs products are not designed or authorized for military applications. Silicon Labs products shall under no circumstances be used in weapons of mass destruction including (but not limited to) nuclear, biological or chemical weapons, or missiles capable of delivering such weapons. Silicon Labs disclaims all express and implied warranties and shall not be responsible or liable for any injuries or damages related to use of a Silicon Labs product in such unauthorized applications.

Note: This content may contain offensive terminology that is now obsolete. Silicon Labs is replacing these terms with inclusive language wherever possible. For more information, visit www.silabs.com/about-us/inclusive-lexicon-project

Trademark Information

Silicon Laboratories Inc.[®], Silicon Laboratories[®], Silicon Labs[®], SiLabs[®] and the Silicon Labs logo[®], Bluegiga[®], Bluegiga Logo[®], EFM[®], EFM32[®], EFR, Ember[®], Energy Micro, Energy Micro logo and combinations thereof, "the world's most energy friendly microcontrollers", Redpine Signals[®], WiSeConnect, n-Link, ThreadArch[®], EZLink[®], EZRadio[®], EZRadioPRO[®], Gecko[®], Gecko OS, Gecko OS Studio, Precision32[®], Simplicity Studio[®], Telegesis, the Telegesis Logo[®], USBXpress[®], Zentri, the Zentri logo and Zentri DMS, Z-Wave[®], and others are trademarks or registered trademarks of Silicon Labs. ARM, CORTEX, Cortex-M3 and THUMB are trademarks or registered trademarks of ARM Holdings. Keil is a registered trademark of ARM Limited. Wi-Fi is a registered trademark of the Wi-Fi Alliance. All other products or brand names mentioned herein are trademarks of their respective holders.



Silicon Laboratories Inc.
400 West Cesar Chavez
Austin, TX 78701
USA

www.silabs.com