



USB Device Stack 1.1.2.0 GA

June 7, 2023

USB is commonly viewed as an interface for computer peripherals, but its flexibility and plug-and-play design have led to its adoption in many IoT applications. Silicon Labs' USB device stack, which leverages an efficient, multi-task architecture, is perfect for developers with IoT projects requiring USB connectivity. With an intuitive API and implementations of several popular classes, the stack is capable of supporting a variety of use cases, including USB communication between a network co-processor (NCP) and host.

The USB stack complies with the "Universal Serial Bus specification revision 2.0" and Implements the "Interface Association Descriptor Engineering Change Notice (ECN)"

It also supports Control, Bulk and Interrupt endpoints and provide ready-to-use support for the following USB classes:

- Communication Device Class (CDC)
- Abstract Control Model (ACM)
- Human Interface Device (HID)
- Mass Storage Class (MSC)
- Vendor-specific class framework

Other features include:

- Scalable to include only required features to minimize memory footprint
- Supports Full-speed (12 Mbit/s)
- Supports composite (multi-function) devices
- Supports multi-configuration devices
- Supports USB power-saving functionalities (device suspend and resume)
- Complete integration of Mass Storage Class into Micrium OS File System module
- Developed with CMSIS-RTOS2 abstraction layer so that it can work with different OSes. Silicon Labs GSDK comes with FreeRTOS and Micrium OS ports.

This document covers the following stack versions:

- 1.1.2.0 released June 7, 2023
- 1.1.1.0 released February 1, 2023
- 1.1.0.0 released December 14, 2022

KEY FEATURES

- The USB driver can now compile with the -Wundef GCC compiler option without any warnings.

Contents

- 1 New Items2
- 2 Improvements.....3
- 3 Fixed Issues4
- 4 Known Issues in the Current Release5
- 5 Deprecated Items6
- 6 Removed Items7

1 New Items

None

2 Improvements

Changed in release 1.1.2.0

- Internal modifications to reduce USB stack code size.

Changed in release 1.1.0.0

- The USB driver has been modified to be able to compile with the -Wundef GCC compiler option without any warnings.

3 Fixed Issues

Fixed in 1.1.1.0

ID #	Description
1091510	Fix issue with clock initialization in USB Device Driver for DWC OTG FS controller, that prevented it from starting on EFM32xG1x chips

4 Known Issues in the Current Release

None

5 Deprecated Items

USB stacks that were previously supported by Silicon Labs (Gecko USB and Micrium OS USB) are now deprecated and will be removed in an upcoming release.

6 Removed Items

None

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