



USB Device Stack 1.4.0.0 GA

December 16, 2024

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:

1.4.0.0 released December 16, 2024

KEY FEATURES

- Underlying platform changes only

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1 New Items

None.

2 Improvements

Changed in release 1.4.0.0

None.

3 Fixed Issues

None.

4 Known Issues in the Current Release

None.

5 Deprecated Items

None.

6 Removed Items

None.

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