USB Device Stack 1.2.3.0 GA

August 14, 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.

KEY FEATURES

- Targeted quality improvements and bug fixess

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:

1.2.3.0 released August 14, 2024
1.2.2.0 released May 2, 2024
1.2.1.0 released April 10, 2024
1.2.0.0 released December 13, 2023

Contents

1 New Items

None.

2 Improvements

Changed in release 1.2.1.0

ID #	Description
1198820	Improved USB Driver performance.

Changed in release 1.2.0.0

ID #	Description
1118080	Add non-blocking read/write functions to the SL-USB CDC ACM class driver.
1064770	Added vendor class API sl_usbd_core_abort_endpoint to handle endpoint abort.

3 Fixed Issues

None

4 Known Issues in the Current Release

None

5 Deprecated Items

None

6 Removed Items

None

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