BT SDK 1.2 Release Notes

Overview

This release is an update to the BT_20819A1 SDK. The BT SDK 1.2 is targeted for the CYW20721B2, CYW20819, and CYW20820 ultra low power Bluetooth 5.0 SoCs and the ModusToolbox™ IDE. ModusToolbox 1.1 with the Bluetooth SDK software library provides a complete development environment to allow you to quickly create Bluetooth enabled IoT solutions like smart watches, medical devices, or home automation platforms. This document describes the features and known limitations for the BT SDK 1.2.

Contents

What's Changed

This section provides a high-level overview about what changed from BT_20819A1SDK to BT_SDK1.2.

- Added support for a new CYW20819 based platform: CYBT-213043-EVAL
- Added support for CYW20820 device and CYW920820EVB-02 platform
  - **Note**: The CYW920820EVB-02 will be available soon from a Cypress distributor.
- Added the following demo code examples for the CYW920819EVB-02, CYBT-213043-MESH, CYBT-213043-EVAL, CYW920820EVB-02
  - BLE_Mesh_LightSmart
  - BLE_Mesh_SensorMotion

- BLE_Mesh_LowPowerLED
- Added SPP code example and library for all devices and platforms in BT SDK1.2
- Added support for the CYW20721B2 device and CYW920721B2EVK-01 platform.
    - **Note**: The CYW920721B2EVK-01 has limited availability. Contact Cypress sales.
    - **Note**: Additional audio demo/snip/middleware code examples are available in a separate Pro zip file distribution. Contact Cypress sales to get access.

What's Included

Bluetooth SDK

The Bluetooth SDK is targeted for the CYW20721B2, CYW20819A1, and CYW20820A1 ultra low power Bluetooth 5.0 SoC and the ModusToolbox IDE. This SDK includes the following:

- Bluetooth firmware
- Platform and board support packages
- Build system
- Local tools including BTSpy trace utility and debugger
- Various sample applications

Design Impact

Updating from BT_20819A1 SDK

Installing the BT SDK 1.2 will remove any previous version. If you have local work that needs to be saved, copy out the <MT_INSTALL_FOLDER>/libraries/xx to a different location. The default BT_20819A1 SDK1.0 can be removed if desired, installing this SDK will update/obsolete. Use the following steps to install the BT SDK1.2 in the ModusToolbox 1.1 IDE:

1. From the ModusToolbox IDE, click on the Help menu and select Update ModusToolbox SDKs
2. Click install Custom SDK
3. Browse to the downloaded .cysdk file and install

Supported Boards

This release provides support for the following boards.

Board	MCU	Connectivity
CYW920819EVB-02	CYW20819	On-chip Bluetooth
CYBT-213043-MESH	CYW20819	On-chip Bluetooth
CYBT-213043-EVAL	CYW20819	On-chip Bluetooth
CYW920820EVB-02	CYW20820	On-chip Bluetooth

Board	MCU	Connectivity
CYW920721B2EVK-01	CYW20721	On-chip Bluetooth

Known Issues/Limitations

This section lists the known issues/limitations of this release:

Documentation

Problem	Workaround
Various documents included with the release may contain incomplete information or may not contain up to date screen captures or information.	New versions of documents, including these release notes, may be available online at: www.cypress.com/modustoolbox

Platform

Limitation	Workaround
CYW920820EVB-02 will be available soon.	Contact Cypress sales for availability.
CYW920721B2EVK-01 has limited availability.	Contact Cypress sales to request access.
Audio demo/snip/middleware code examples for the CYW20721B2 are not included by default in the BT SDK1.2	Contact Cypress sales to request access to the additional code examples available for the CYW20721B2.

Bluetooth SDK

Problem	Workaround
[CYW20721B2EVK-01] Hello sensor: The LED on the DUT is not blinking even though a valid number is input.	This issue will be addressed in the next BT SDK release.
[CYW20721B2EVK-01] I2C master: Observed "I2C comboread operation failed" instead of motion sensor value in the debug logs	This issue will be addressed in a future BT SDK release.
[CYW20721B2EVK-01] Low power sensor: Getting no SDS debug logs when downloading with SDS configuration and vice-versae	This issue will be addressed in the next BT SDK release.
[CYW20721B2EVK-01] Pbap client: Chip name is 20719	This issue will be addressed in the next BT SDK release.
[CYW20721B2EVK-01] Not observing much difference in throughput for LE1M Phy and LE2M Phy for 1Mb data	This issue is targeted to be addressed in the next BT SDK release.
[CYBT-213043-EVAL] Button is working with default pin configuration even when functionality is changed through device configurator	This issue will be addressed in the next BT SDK release.

Problem	Workaround
[CYW920819EVB-02, CYBT-213043-EVAL] LED is working with default pin configuration even when functionality is changed through device configurator	This issue will be addressed in the next BT SDK release.
[CYW920819EVB-02] Configured GCI-SECI pins are not working.	This issue will be addressed in the next BT SDK release.
[CYW920820EVB-02] Spi_master functionality is not working after changing pin configuration through device configurator	This issue will be addressed in the next BT SDK release.
[CYW920820EVB-02] Spi_slave functionality is not working after changing pin configuration through device configurator	This issue will be addressed in the next BT SDK release.
[CYBT-213043-EVAL] Not observing much difference in throughput for LE1M Phy and LE2M Phy for 1Mb data	This issue is targeted to be resolved in the BT2.0 SDK release.
[CYBT-213043-MESH, CYW920820EVB-02] Unable to do OTA upgrade for apps which does not have Proxy feature enabled (dimmer, on_off_switch)	This issue will be addressed in the next BT SDK release.
[CYBT-213043-MESH] Failed to send friend update because FSN didn't get updated as expected.	This issue will be addressed in the next BT SDK release.
[CYBT-213043-MESH, CYW920820EVB-02] Unable to get Component info from Light_dimmable app. Device doesn't reply back anything on sending "Get Info"	This issue will be addressed in the next BT SDK release.
[CYBT-213043-MESH, CYW920820EVB-02] OTA does not work on mesh/demo/applications using Android mobile app. Gatt disconnect occurs before completing the Download verification step of OTA	This issue will be addressed in the next BT SDK release.
[CYBT-213043-MESH] Unable to provision through PB-ADV using Client control. Provision stops after receiving device capabilities.	This issue will be addressed in the next BT SDK release.
[CYBT-213043-MESH] Provisioning invite send failed for mesh_provision_server app and provisioning fails.	This issue will be addressed in the next BT SDK release.
[CYW920820EVB-02] PTS does not receive Generic OnPowerUp or Power Level status after power on reset.	This issue will be addressed in the next BT SDK release.
[CYW920820EVB-02] Unable to send subscription get from client control and mesh conformance test fails since PTS "Did not receive Config SIG Model Subscription Get (Element Address = PTS's unicast address"	This issue will be addressed in the next BT SDK release.
[CYBT-213043-MESH] Unable to bind required AppKey during the execution of MESH/CFGCL/KR/BV-XX-C	This issue will be addressed in the next BT SDK release.
[CYW20819A1, CYW20820A1] BLE throughput is not optimized.	This issue is targeted to be resolved by the BT2.0 SDK release.
[CYW920819EVB-02] Wake up from ePDS doesn't reinitialize I2C	This issue will be addressed in the next BT SDK release.

Problem	Workaround
[CYW920819EVB-02] HID-off mode current is not optimized	This issue will be addressed in the next BT SDK release.
[CYW920819EVB-02] Range of values allowed by the API wiced_bt_ble_set_adv_tx_power() seems to be invalid.	This issue will be addressed in the next BT SDK release.
[CYW920819EVB-02] Connection drops if de-assert the bt_dev_wake_gio signal when not streaming audio	This issue is targeted to be resolved by the BT2.0 SDK release.
[CYW920819EVB-02] Observed connection drop due to connection timeout in BTLE sleep test cases where IUT is in slave role	This issue is targeted to be resolved in the next BT SDK release.
[CYW920819EVB-02] Volume up/down and disconnect not working after 3 minutes of AV source streaming to sink device	This issue is targeted to be resolved in the next BT SDK release.
[CYW920820EVB-02] Low power UART data gets corrupted	This issue is targeted to be addressed in the next BT SDK release.
Linker does not complain about duplicate objects	This issue will be addressed in the next BT SDK release.
When using the ANS application, the UI does not allow generating all possible alerts simultaneously.	This is a current UI limitation, the application can handle generating alerts. The UI can generate individual alerts.
Unable to open multiple Client Control applications on Mac OS.	This is a limitation only if you use 2 or more boards on same Mac OS simultaneously and need to use Client Control for each app. In such a case, 2 different PCs will be needed.
sensor_motion example project does not support LPN functionality fully, and cannot enter sleep mode during operation.	This issue will be addressed in the next BT SDK release.
Android Mesh Controller – DFU over mesh disabled	This issue will be addressed in the next BT SDK release.
Android app crashes if we try to switch the app mode from 'HOME' to 'AWAY'	This issue will be addressed in the next BT SDK release.

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http://www.cypress.com/documentation/software-and-drivers/free-and-open-source-software-download-page

Further Reading

There are several related documents provided with ModusToolbox software. These documents include (but are not limited to):

- ModusToolbox Installation Guide

- Bluetooth API Documentation

- ModusToolbox IDE Quick Start Guide

- ModusToolbox IDE User Guide
- ModusToolbox Configurator Guides (for each Configurator)

Other documentation includes (but is not limited to):

- Device Datasheets
- Application Notes
- Training

Contact your Cypress representative, as needed.