# BT SDK 1.3 Release Notes

## Overview

This release is an update to the BT SDK 1.2. The BT SDK 1.3 is targeted for the CYW20719B2, CYW20721B2, CYW20819, CYW20820, and CYW89820 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 1.3.

## Contents



## What's Changed

This section provides a high-level overview about what changed from BT SDK1.2 to BT SDK1.3.

- Added support for the CYW20719B2 device and the CYW920719B2Q40EVB-01 platform
- Added support for CYW89820 device and CYW989820EVB-01 platform
  - **Note**: Additional PEPS demo code examples are available in a separate BT Pro PEPS zip file distribution. Contact Cypress sales to get access.
- Added the following demo code examples for the CYW920719B2Q40EVB-01, and CYW920721B2EVK-01

- Map Client

- Added/updated the following demo code examples for the CYW920721B2EVK-01.
  - Added support for the Google Fast Pair Service in the following demo code examples
    - HeadsetPro, HeadsetProAAC, Speaker Pro, Speaker Pro AAC
    - **Note**: Audio demo/snip/middleware code examples for the CYW20721 are available in separate BT Pro zip files. Contact Cypress sales to get access.
  - Added Headset WASS code example
    - **Note**: Headset_wass code example is available in a separate BT Pro zip file. Contact Cypress sales to get access.

## What's Included

### *Bluetooth SDK*

The Bluetooth SDK is targeted for the CYW20719B2, CYW20721B2, CYW20819A1, CYW20820A1, and CYW89820 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 SDK 1.2*

Installing the BT SDK 1.3 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 SDK1.3 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 |
| CYW920721B2EVK-01 | CYW20721 | On-chip Bluetooth |
| CYW920719B2Q40EVB-01 | CYW20719 | On-chip Bluetooth |
| CYW989820EVB-01 | CYW89820 | On-chip Bluetooth |

## Known Issue Fixes

This section lists the known issues from the BT SDK1.2 release that were fixed in this release.

| Platform/BT Firmware/Application | Fix |
|---|---|
| [CYW20721B2EVK-01] Pbap client | Corrected chip name. |
| [CYBT-213043-EVAL] Button | Fixed issue that the button is working with default pin configuration even when functionality was changed through device configurator |
| [CYW920819EVB-02, CYBT-213043-EVAL] LED | Fixed issue that the LED is working with default pin configuration even when functionality is changed through device configurator |
| [CYBT-213043-MESH, CYW920820EVB-02] Light dimmable | Fixed issue of not being able to get Component info from Light_dimmable app and device doesn't reply back anything on sending "Get Info" |
| [CYBT-213043-MESH, CYW920820EVB-02] OTA | Fixed issue that OTA wasn't working on mesh demo applications using Android mobile app. |
| [CYBT-213043-MESH] MESH Conformance | Fixed issue of not being able to provision through PB-ADV using Client control. |
| [CYBT-213043-MESH] MESH Conformance | Fixed issue of the provisioning invite send failure for mesh_provision_server app and provisioning fails. |
| [CYW920820EVB-02] PTS | Fixed issue where PTS doesn't receive Generic OnPowerUp or Power Level or OnOffStatus after power on reset. |
| [CYW920820EVB-02] MESH Conformance | Fixed issue of not being able 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" |
| [CYBT-213043-MESH] PTS | Fixed issue of not being able to bind required AppKey during the execution of MESH/CFGCL/KR/BV-XX-C |
| [CYW920819EVB-02] ePDS | Fixed issue that wake up from ePDS doesn't reinitialize I2C |
| [CYW920819EVB-02] BTLE sleep | Fixed connection drop issue due to connection timeout in BTLE sleep test cases where IUT is in slave role. |
| [CYW920819EVB-02] Watch | Fixed issue that volume up/down and disconnect not working after 3 minutes of AV source streaming to sink device. |

| Platform/BT Firmware/Application | Fix |
|---|---|
| [CYW920819EVB-02] Watch | Fixed connection drop issue that was caused by de-assert the bt_dev_wake_gpio sginal when not streaming audio |
| [CYW920719B2Q40EVB-01] Android app – BLE Mesh controller | Corrected the issue that the Android app crashes if we try to switch the app mode from 'HOME' to 'AWAY' |
| | |

## 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. |
| CYW920719B2Q40EVB-01 has limited availability. | Contact Cypress sales to request access. |
| CYW989820EVB-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 SDK1.3 | Contact Cypress sales to request access to the additional code examples available for the CYW20721B2. |
| PEPS code examples for the CYW89820 are not included by default in the BT SDK1.3 | Contact Cypress sales to request access to the additional code examples available for the CYW89820. |

### *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. |

| Problem | Workaround |
|---|---|
| [CYW20721B2EVK-01] I2C master: Observed “I2C comboread operation failed” instead of motion sensor value in the debug logs | This issue will be addressed in the next BT SDK release. |
| [CYW20721B2EVK-01] Low power sensor: Getting no SDS debug logs when downloading with SDS configuration and vice-versa | 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 BT 2.0 SDK release. |
| [CYW20721B2EVK-01] PCM signal is assigned to gpio pins but not there in the list of peripherals. | This issue is targeted to be addressed in the next BT SDK release. |
| [CYW20721B2EVK-01] Device-Configurator: PCM pins are assigned to SPI peripheral | This issue is targeted to be addressed in a future BT SDK release. |
| [CYW20721B2EVK-01] MAP: There is no provision in client control UI to download e-mails | This issue is targeted to be addressed in the next BT SDK release. |
| [CYW20721B2EVK-01] MAP: Contact number/name is not displayed for Unsaved contacts. This is an UI display issue; the trace shows the operation is working fine. | This issue is targeted to be addressed in the next BT SDK release. |
| [CYW920819EVB-02] Configured GCI-SECI pins are not working. | This issue will be addressed in a future BT SDK release. |
| [CYW920819EVB-02] wiced_hal_gpio.h: GPIO mapping isn’t correct for WICED_GCI_GPIO_06 and WICED_GCI_GPIO_07. | This issue is targeted to be resolved in the next BT SDK release. |
| [CYW920819EVB-02] Watch: Observing current spikes of 200uA on J15 (VDDIO) | This issue is targeted to be resolved 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 BT 2.0 SDK release. |
| [CYW920820EVB-02] Spi_slave functionality is not working after changing pin configuration through device configurator | This issue will be addressed in the BT 2.0 SDK release. |
| [CYW920820EVB-02] Ble_keyboard/ble_mouse/ble_remote: Observing CYW20819 as chip name instead of CYW20820. | 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 BT 2.0 SDK release. |
| [CYBT-213043-EVAL] App is scanning only for 2sec and we are observing bad packet when the board is used with Linux as the host. | This issue will be addressed in a future BT SDK release. |
| [CYBT-213043-EVAL] MC is receiving bad packets when HCI tracing is enabled due to low baud rate and buffer settings with Linux. | This issue can be worked around by decreasing the logging on the UART for Linux. This issue is targeted to be addressed in the BT 1.4 SDK release. |
| [CYBT-213043-MESH, CYW920819EVB-01] ePDS isn’t working in mesh. | This issue will be addressed in the next BT 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 BT 1.4 SDK release. |

| Problem | Workaround |
|---|---|
| [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] 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. |
| [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. |
| [CYW20819A1, CYW20820A1] BLE throughput is not optimized. | This issue is targeted to be resolved by the BT 2.0 SDK release. |
| [CYW920819EVB-02] HID-off mode current is not optimized | A workaround for this issue is to add a small delay of 5ms before going HID-off. 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 by the BT 2.0 SDK release. |
| [CYW920820EVB-02] Low power UART data gets corrupted | This issue is targeted to be addressed in the next BT SDK release. |
| [CYW920820EVB-02] Ble_remote: After enabling "START_ADV_ON_POWERUP" option, device is not connected automatically to the paired host | This issue is targeted to be addressed in the next BT SDK release. |
| [CYW920820EVB-02] Ble_remote: Not getting disconnection logs after board RESET and Re-connection is not successful. | This issue is targeted to be addressed in the next BT SDK release. |
| [CYW920820EVB-02] Ble_remote: After enabling "DISCONNECTED_ENDLESS_ADV" option, device is not advertising for long time | 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 fully support LPN functionality 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. |

## Open Source

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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.

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