AIROC™ Bluetooth® SDK 3.0 release notes

About this document

Scope and purpose

This release is an update for AIROC™ Bluetooth® SDK 2.9.

AIROC™ Bluetooth® SDK 3.0 is targeted for the CYW20706, CYW20719B2, CYW20721B2, CYW20735B1, CYW20835B1, CYW20819, CYW20820, CYW89820, and CYW43012 AIROC™ Wi-Fi & Bluetooth® combo chips (for embedded Bluetooth® development only). ModusToolbox™ 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 Bluetooth® SDK 3.0.

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1 What's changed

- Updated the Bluetooth® LE remote code example to be compatible with the Android TV voice search spec 1.0.
- Updated HFP version to 1.8
- Updated A2DP version to 1.3.2
- Updated AVRCP version to 1.6.2
- Added Bluetooth® Mesh code examples for the following module evaluation boards based on CYW20719B2: CYBT-423054-EVAL, CYBT-413055-EVAL, and CYBT-483056-EVAL.
- Added Mesh code examples for the following module evaluation boards based on CYW20719B2: CYBT-413061-EVAL, CYBT-423060-EVAL, and CYBT-483062-EVAL
- Added Test HCI Loopback code example to provide a loopback test for the HCI UART when used with ClientControl running on a PC host.
- Added support for the CYW920835M2EVB-01 evaluation board
- Included support for the CYBT-343052-EVAL module eval board
- Removed support for the CYW920721B2EVK-03 evaluation board
- Inappropriate terms were replaced throughout the SDK. The following table contains the original term in previous SDKs and the new term.

Original term	New term
`HCI_ROLE_MASTER`	`HCI_ROLE_CENTRAL`
`HCI_ROLE_SLAVE`	`HCI_ROLE_PERIPHERAL`
`BTM_ROLE_MASTER`	`BTM_ROLE_CENTRAL`
`BTM_ROLE_SLAVE`	`BTM_ROLE_PERIPHERAL`
`BTM_BLE_STATE_MASTER`	`BTM_BLE_STATE_CENTRAL`
`BTM_BLE_STATE_SLAVE`	`BTM_BLE_STATE_PERIPHERAL`
`HCI_ENABLE_MASTER_SLAVE_SWITCH`	`HCI_ENABLE_ROLE_SWITCH`
`btm_br_sec_master_key_changed_event`	`btm_br_sec_temp_link_key_changed_event`
`BTM_SecUseMasterLinkKey`	`BTM_SecUseTempLinkKey`
`btsnd_hcic_master_link_key`	`btsnd_hcic_temp_link_key`
`btm_br_sec_master_key_changed_event`	`btm_br_sec_temp_key_changed_event`
`HCI_MASTER_LINK_KEY_COMP_EVT`	`HCI_TEMP_LINK_KEY_COMP_EVT`
`btu_hcif_master_link_key_comp_evt`	`btu_hcif_temp_link_key_comp_evt`
`HCIC_PARAM_SIZE_MASTER_LINK_KEY`	`HCIC_PARAM_SIZE_TEMP_LINK_KEY`
`HCI_MASTER_LINK_KEY`	`HCI_TEMP_LINK_KEY`
`HCI_MASTER_KEY_FLAG_OFF`	`HCI_TEMP_LINK_KEY_FLAG_OFF`
`SMP_OPCODE_MASTER_ID`	`SMP_OPCODE_CENTRAL_ID`
`SMP_MASTER_ID_SIZE`	`SMP_CENTRAL_ID_SIZE`
`smp_proc_master_id`	`smp_proc_central_id`

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What's changed

Original term	New term
`BR_MASTER_ID_EVT`	`BR_CENTRAL_ID_EVT`
`SMP_MASTER_ID_EVT`	`SMP_CENTRAL_ID_EVT`
`SMP_PROC_MASTER_ID`	`SMP_PROC_CENTRAL_ID`
`L2CAP_ROLE_MASTER`	`L2CAP_ROLE_CENTRAL`
`L2CAP_ROLE_SLAVE`	`L2CAP_ROLE_PERIPHERAL`
`HCI_LMP_AFH_CLASS_SLAVE_SUPPORTED`	`HCI_LMP_AFH_CLASS_PERIPHERAL_SUPPORTED`
`BTM_BLE_CONN_SLAVE_LATENCY_DEF`	`BTM_BLE_CONN_PERIPHERAL_LATENCY_DEF`
`GAP_SL_CONN_INT_MIN`	`GAP_PERIPHERAL_CONN_INT_MIN`
`GAP_SL_CONN_INT_MAX`	`GAP_PERIPHERAL_CONN_INT_MAX`
`GAP_SL_LATENCY`	`GAP_PERIPHERAL_LATENCY`
`HCI_SUPP_LE_STATES_NON_CONN_ADV_MASTER_MASK`	`HCI_SUPP_LE_STATES_NON_CONN_ADV_CENTRAL_MASK`
`HCI_SUPP_LE_STATES_NON_CONN_ADV_MASTER_OFF`	`HCI_SUPP_LE_STATES_NON_CONN_ADV_CENTRAL_OFF`
`HCI_LE_STATES_NON_CONN_ADV_MASTER_SUPPORTED`	`HCI_LE_STATES_NON_CONN_ADV_CENTRAL_SUPPORTED`
`HCI_SUPP_LE_STATES_SCAN_ADV_MASTER_MASK`	`HCI_SUPP_LE_STATES_SCAN_ADV_CENTRAL_MASK`
`HCI_SUPP_LE_STATES_SCAN_ADV_MASTER_OFF`	`HCI_SUPP_LE_STATES_SCAN_ADV_CENTRAL_OFF`
`HCI_LE_STATES_SCAN_ADV_MASTER_SUPPORTED`	`HCI_LE_STATES_SCAN_ADV_CENTRAL_SUPPORTED`
`HCI_SUPP_LE_STATES_ACTIVE_SCAN_MASTER_MASK`	`HCI_SUPP_LE_STATES_ACTIVE_SCAN_CENTRAL_MASK`
`HCI_SUPP_LE_STATES_ACTIVE_SCAN_MASTER_OFF`	`HCI_SUPP_LE_STATES_ACTIVE_SCAN_CENTRAL_OFF`
`HCI_LE_STATES_ACTIVE_SCAN_MASTER_SUPPORTED`	`HCI_LE_STATES_ACTIVE_SCAN_CENTRAL_SUPPORTED`
`HCI_SUPP_LE_STATES_NON_CONN_ADV_SLAVE_MASK`	`HCI_SUPP_LE_STATES_NON_CONN_ADV_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_NON_CONN_ADV_SLAVE_OFF`	`HCI_SUPP_LE_STATES_NON_CONN_ADV_PERIPHERAL_OFF`
`HCI_LE_STATES_NON_CONN_ADV_SLAVE_SUPPORTED`	`HCI_LE_STATES_NON_CONN_ADV_PERIPHERAL_SUPPORTED`
`HCI_SUPP_LE_STATES_SCAN_ADV_SLAVE_MASK`	`HCI_SUPP_LE_STATES_SCAN_ADV_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_SCAN_ADV_SLAVE_OFF`	`HCI_SUPP_LE_STATES_SCAN_ADV_PERIPHERAL_OFF`

What's changed

Original term	New term
`HCI_LE_STATES_SCAN_ADV_SLAVE_SUPPORTED`	`HCI_LE_STATES_SCAN_ADV_PERIPHERAL_SUPPORTED`
`ble_white_list_size`	`ble_filter_accept_list_size`
`wiced_bt_ble_get_white_list_size`	`wiced_bt_ble_get_filter_accept_list_size`
`BTM_BleReadWhiteListSize`	`BTM_BleReadFilterAcceptListSize`
`btm_update_white_list`	`btm_update_filter_accept_list`
`btsnd_hcic_ble_add_white_list`	`btsnd_hcic_ble_add_filter_accept_list`
`btsnd_hcic_ble_remove_from_white_list`	`btsnd_hcic_ble_remove_from_filter_accept_list`
`btm_ble_clear_white_list`	`btm_ble_clear_filter_accept_list`
`btsnd_hcic_ble_clear_white_list`	`btsnd_hcic_ble_clear_filter_accept_list`
`btm_ble_clear_white_list_complete`	`btm_ble_clear_filter_accept_list_complete`
`btm_ble_add_2_white_list_complete`	`btm_ble_add_2_filter_accept_list_complete`
`btm_ble_remove_from_white_list_complete`	`btm_ble_remove_from_filter_accept_list_complete`
`BTM_BleUpdateAdvWhitelist`	`BTM_BleUpdateAdvFilterAcceptList`
`BTM_BleClearWhiteList`	`BTM_BleClearFilterAcceptList`
`BTM_BleReadWhiteListSize`	`BTM_BleReadFilterAcceptListSize`
`HCI_BLE_READ_WHITE_LIST_SIZE`	`HCI_BLE_READ_FILTER_ACCEPT_LIST_SIZE`
`HCI_BLE_ADD_WHITE_LIST`	`HCI_BLE_ADD_FILTER_ACCEPT_LIST`
`HCI_BLE_CLEAR_WHITE_LIST`	`HCI_BLE_CLEAR_FILTER_ACCEPT_LIST`
`HCI_BLE_REMOVE_WHITE_LIST`	`HCI_BLE_REMOVE_FILTER_ACCEPT_LIST`
`HCIC_PARAM_SIZE_CLEAR_WHITE_LIST`	`HCIC_PARAM_SIZE_CLEAR_FILTER_ACCEPT_LIST`
`HCIC_PARAM_SIZE_ADD_WHITE_LIST`	`HCIC_PARAM_SIZE_ADD_FILTER_ACCEPT_LIST`
`HCIC_PARAM_SIZE_REMOVE_WHITE_LIST`	`HCIC_PARAM_SIZE_REMOVE_FILTER_ACCEPT_LIST`
`wiced_bt_ble_update_advertising_white_list`	`wiced_bt_ble_update_advertising_filter_accept_list`
`wiced_bt_ble_get_white_list_size`	`wiced_bt_ble_get_filter_accept_list_size`
`wiced_bt_ble_clear_white_list`	`wiced_bt_ble_clear_filter_accept_list`
`HCI_SUPP_COMMANDS_LE_READ_WHITE_LIST_SIZE_MASK`	`HCI_SUPP_COMMANDS_LE_READ_FILTER_ACCEPT_LIST_SIZE_MASK`

What's changed

Original term	New term
`HCI_SUPP_COMMANDS_LE_READ_WHITE_LIST_SIZE_OFF`	`HCI_SUPP_COMMANDS_LE_READ_FILTER_ACCEPT_LIST_SIZE_OFF`
`HCI_LE_READ_WHITE_LIST_SIZE_SUPPORTED`	`HCI_LE_READ_FILTER_ACCEPT_LIST_SIZE_SUPPORTED`
`HCI_SUPP_COMMANDS_LE_CLEAR_WHITE_LIST_MASK`	`HCI_SUPP_COMMANDS_LE_CLEAR_FILTER_ACCEPT_LIST_MASK`
`HCI_SUPP_COMMANDS_LE_CLEAR_WHITE_LIST_OFF`	`HCI_SUPP_COMMANDS_LE_CLEAR_FILTER_ACCEPT_LIST_OFF`
`HCI_LE_CLEAR_WHITE_LIST_SUPPORTED`	`HCI_LE_CLEAR_FILTER_ACCEPT_LIST_SUPPORTED`
`HCI_LE_REMOVE_DEVICE_FROM_WHITE_LIST_SUPPORTED`	`HCI_LE_REMOVE_DEVICE_FROM_FILTER_ACCEPT_LIST_SUPPORTED`
`HCI_LE_ADD_DEVICE_TO_WHITE_LIST_SUPPORTED`	`HCI_LE_ADD_DEVICE_TO_FILTER_ACCEPT_LIST_SUPPORTED`
`HCI_SUPP_COMMANDS_LE_ADD_DEVICE_TO_WHITE_LIST_MASK`	`HCI_SUPP_COMMANDS_LE_ADD_DEVICE_TO_FILTER_ACCEPT_LIST_MASK`
`HCI_SUPP_COMMANDS_LE_ADD_DEVICE_TO_WHITE_LIST_OFF`	`HCI_SUPP_COMMANDS_LE_ADD_DEVICE_TO_FILTER_ACCEPT_LIST_OFF`
`HCI_SUPP_COMMANDS_LE_REMOVE_DEVICE_FROM_WHITE_LIST_MASK`	`HCI_SUPP_COMMANDS_LE_REMOVE_DEVICE_FROM_FILTER_ACCEPT_LIST_MASK`
`HCI_SUPP_COMMANDS_LE_REMOVE_DEVICE_FROM_WHITE_LIST_OFF`	`HCI_SUPP_COMMANDS_LE_REMOVE_DEVICE_FROM_FILTER_ACCEPT_LIST_OFF`
`wiced_bt_ble_update_scanner_white_list`	`wiced_bt_ble_update_scanner_filter_list`
`BTM_BLE_SCANNER_FILTER_ALL_ADV_RSP`	`BTM_BLE_SCAN_POLICY_ACCEPT_ADV_RSP`
`BTM_BLE_SCANNER_FILTER_WHITELIST_ADV_RSP`	`BTM_BLE_SCAN_POLICY_FILTER_ADV_RSP`
`BTM_BLE_SCANNER_FILTER_ALL_RPA_DIR_ADV_RSP`	`BTM_BLE_SCAN_POLICY_ACCEPT_RPA_DIR_ADV_RSP`
`BTM_BLE_SCANNER_FILTER_WHITELIST_RPA_DIR_ADV_RSP`	`BTM_BLE_SCAN_POLICY_FILTER_RPA_DIR_ADV_RSP`
`BTM_BLE_SCANNER_FILTER_MAX`	`BTM_BLE_SCAN_POLICY_MAX`
`BTM_BLE_ADVERT_FILTER_ALL_CONNECTION_REQ_ALL_SCAN_REQ`	`BTM_BLE_ADV_POLICY_ACCEPT_CONN_AND_SCAN`
`BTM_BLE_ADVERT_FILTER_ALL_CONNECTION_REQ_WHITELIST_SCAN_REQ`	`BTM_BLE_ADV_POLICY_ACCEPT_CONN_FILTER_SCAN`
`BTM_BLE_ADVERT_FILTER_WHITELIST_CONNECTION_REQ_ALL_SCAN_REQ`	`BTM_BLE_ADV_POLICY_FILTER_CONN_ACCEPT_SCAN`
`BTM_BLE_ADVERT_FILTER_MAX`	`BTM_BLE_ADV_POLICY_MAX`
`WICED_BT_BLE_IGNORE_WHITE_LIST`	`WICED_BT_BLE_IGNORE_FILTER_ACCEPT_LIST_FOR_CONNS`

What's changed

Original term	New term
`WICED_BT_BLE_CONNECT_TO_WHITE_LIST_DEVICES`	`WICED_BT_BLE_USE_FILTER_ACCEPT_LIST_FOR_CONNS`
`btm_ble_conn_whitelist_functions`	`btm_ble_conn_filter_accept_list_functions`
`wiced_bt_ble_update_scanner_white_list`	`wiced_bt_ble_update_scanner_filter_accept_list`
`btm_read_white_list_size_complete`	`btm_read_filter_accept_list_size_complete`
`MESH_FLT_TYPE_WHITE_LIST`	`MESH_FLT_TYPE_ACCEPT_LIST`
`MESH_FLT_TYPE_BLACK_LIST`	`MESH_FLT_TYPE_REJECT_LIST`
`HCI_SUPP_LE_STATES_SLAVE_MASK`	`HCI_SUPP_LE_STATES_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_SLAVE_OFF`	`HCI_SUPP_LE_STATES_PERIPHERAL_OFF`
`HCI_SUPP_LE_STATES_PASS_SCAN_SLAVE_MASK`	`HCI_SUPP_LE_STATES_PASS_SCAN_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_PASS_SCAN_SLAVE_OFF`	`HCI_SUPP_LE_STATES_PASS_SCAN_PERIPHERAL_OFF`
`HCI_SUPP_LE_STATES_ACTIVE_SCAN_SLAVE_MASK`	`HCI_SUPP_LE_STATES_ACTIVE_SCAN_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_ACTIVE_SCAN_SLAVE_OFF`	`HCI_SUPP_LE_STATES_ACTIVE_SCAN_PERIPHERAL_OFF`
`HCI_LE_STATES_ACTIVE_SCAN_SLAVE_SUPPORTED`	`HCI_LE_STATES_ACTIVE_SCAN_PERIPHERAL_SUPPORTED`
`HCI_SUPP_LE_STATES_CONN_ADV_SLAVE_MASK`	`HCI_SUPP_LE_STATES_CONN_ADV_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_CONN_ADV_SLAVE_OFF`	`HCI_SUPP_LE_STATES_CONN_ADV_PERIPHERAL_OFF`
`HCI_LE_STATES_CONN_ADV_SLAVE_SUPPORTED`	`HCI_LE_STATES_CONN_ADV_PERIPHERAL_SUPPORTED`
`HCI_SUPP_LE_STATES_HI_DUTY_DIR_ADV_SLAVE_MASK`	`HCI_SUPP_LE_STATES_HI_DUTY_DIR_ADV_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_HI_DUTY_DIR_ADV_SLAVE_OFF`	`HCI_SUPP_LE_STATES_HI_DUTY_DIR_ADV_PERIPHERAL_OFF`
`HCI_LE_STATES_HI_DUTY_DIR_ADV_SLAVE_SUPPORTED`	`HCI_LE_STATES_HI_DUTY_DIR_ADV_PERIPHERAL_SUPPORTED`
`HCI_SUPP_LE_STATES_LO_DUTY_DIR_ADV_SLAVE_MASK`	`HCI_SUPP_LE_STATES_LO_DUTY_DIR_ADV_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_LO_DUTY_DIR_ADV_SLAVE_OFF`	`HCI_SUPP_LE_STATES_LO_DUTY_DIR_ADV_PERIPHERAL_OFF`
`HCI_LE_STATES_LO_DUTY_DIR_ADV_SLAVE_SUPPORTED`	`HCI_LE_STATES_LO_DUTY_DIR_ADV_PERIPHERAL_SUPPORTED`
`HCI_SLAVE_PAGE_RESP_TIMEOUT_EVT`	`HCI_PERIPHERAL_PAGE_RESP_TIMEOUT_EVT`

What's changed

Original term	New term
`HCI_FEATURE_AFH_CAP_SLAVE_MASK`	`HCI_FEATURE_AFH_CAP_PERIPHERAL_MASK`
`HCI_FEATURE_AFH_CAP_SLAVE_OFF`	`HCI_FEATURE_AFH_CAP_PERIPHERAL_OFF`
`HCI_LMP_AFH_CAP_SLAVE_SUPPORTED`	`HCI_LMP_AFH_CAP_PERIPHERAL_SUPPORTED`
`HCI_FEATURE_AFH_CLASS_SLAVE_MASK`	`HCI_FEATURE_AFH_CLASS_PERIPHERAL_MASK`
`HCI_FEATURE_AFH_CLASS_SLAVE_OFF`	`HCI_FEATURE_AFH_CLASS_PERIPHERAL_OFF`
`HCI_EXT_FEATURE_CSB_SLAVE_MASK`	`HCI_EXT_FEATURE_CSB_PERIPHERAL_MASK`
`HCI_EXT_FEATURE_CSB_SLAVE_OFF`	`HCI_EXT_FEATURE_CSB_PERIPHERAL_OFF`
`HCI_CSB_SLAVE_SUPPORTED`	`HCI_CSB_PERIPHERAL_SUPPORTED`
`HCI_EXT_FEATURE_SYNC_SCAN_SLAVE_MASK`	`HCI_EXT_FEATURE_SYNC_SCAN_PERIPHERAL_MASK`
`HCI_EXT_FEATURE_SYNC_SCAN_SLAVE_OFF`	`HCI_EXT_FEATURE_SYNC_SCAN_PERIPHERAL_OFF`
`HCI_SYNC_SCAN_SLAVE_SUPPORTED`	`HCI_SYNC_SCAN_PERIPHERAL_SUPPORTED`
`HCI_LE_FEATURE_SLAVE_INIT_FEAT_EXC_MASK`	`HCI_LE_FEATURE_PERIPHERAL_INIT_FEAT_EXC_MASK`
`HCI_LE_FEATURE_SLAVE_INIT_FEAT_EXC_OFF`	`HCI_LE_FEATURE_PERIPHERAL_INIT_FEAT_EXC_OFF`
`HCI_LE_SLAVE_INIT_FEAT_EXC_SUPPORTED`	`HCI_LE_PERIPHERAL_INIT_FEAT_EXC_SUPPORTED`
`HCI_SUPP_COMMANDS_SET_CONLESS_SLAVE_BRCST`	`HCI_SUPP_COMMANDS_SET_CONLESS_PERIPHERAL_BRCST`
`HCI_SUPP_COMMANDS_SET_CONLESS_SLAVE_BRCST_OFF`	`HCI_SUPP_COMMANDS_SET_CONLESS_PERIPHERAL_BRCST_OFF`
`HCI_SET_CONLESS_SLAVE_BRCST_SUPPORTED`	`HCI_SET_CONLESS_PERIPHERAL_BRCST_SUPPORTED`
`HCI_SUPP_COMMANDS_SET_CONLESS_SLAVE_BRCST_RECEIVE`	`HCI_SUPP_COMMANDS_SET_CONLESS_PERIPHERAL_BRCST_RECEIVE`
`HCI_SET_CONLESS_SLAVE_BRCST_RECEIVE_SUPPORTED`	`HCI_SET_CONLESS_PERIPHERAL_BRCST_RECEIVE_SUPPORTED`
`HCI_SUPP_COMMANDS_SET_CONLESS_SLAVE_BRCST_DATA`	`HCI_SUPP_COMMANDS_SET_CONLESS_PERIPHERAL_BRCST_DATA`
`HCI_SUPP_COMMANDS_SET_CONLESS_SLAVE_BRCST_RECEIVE_OFF`	`HCI_SUPP_COMMANDS_SET_CONLESS_PERIPHERAL_BRCST_RECEIVE_OFF`
`HCI_SET_CONLESS_SLAVE_BRCST_DATA_SUPPORTED`	`HCI_SET_CONLESS_PERIPHERAL_BRCST_DATA_SUPPORTED`
`DISABLED_SLAVE_LATENCY_ONLY`	`DISABLED_PERIPHERAL_LATENCY_ONLY`
`HCI_SUPP_COMMANDS_SET_CONLESS_SLAVE_BRCST_DATA`	`HCI_SUPP_COMMANDS_SET_CONLESS_PERIPHERAL_BRCST_DATA`

What's changed

Original term	New term
`WICED_APP_LE_SLAVE_CLIENT_INCLUDED`	`WICED_APP_LE_PERIPHERAL_CLIENT_INCLUDED`
`HCI_LE_STATES_SLAVE_SUPPORTED`	`HCI_LE_STATES_PERIPHERAL_SUPPORTED`
`HCI_LE_STATES_PASS_SCAN_SLAVE_SUPPORTED`	`HCI_LE_STATES_PASS_SCAN_PERIPHERAL_SUPPORTED`
`HCI_SUPP_LE_STATES_INIT_MASTER_SLAVE_MASK`	`HCI_SUPP_LE_STATES_INIT_MASTER_PERIPHERAL_MASK`
`HCI_SUPP_LE_STATES_INIT_MASTER_SLAVE_OFF`	`HCI_SUPP_LE_STATES_INIT_MASTER_PERIPHERAL_OFF`
`HCI_LE_STATES_INIT_MASTER_SLAVE_SUPPORTED`	`HCI_LE_STATES_INIT_MASTER_PERIPHERAL_SUPPORTED`

2 What's included

2.1 AIROC™ Bluetooth® SDK

This SDK includes the following:

- Bluetooth® firmware
- Platform and board support packages
- Utilities including BTSpy trace, Manufacturing Bluetooth® Test tool, Client Control, and Mesh Client control
- Peer apps for OTA and Mesh
- A rich set of WICED™ connectivity APIs that allow for simplified programming of Bluetooth®/Bluetooth® LE connectivity
- Various sample applications that demonstrate how to use the Bluetooth®/Bluetooth® LE APIs
- More complex code examples that use various APIs and middleware to create a more complete solution

2.2 Supported devices

The AIROC™ Bluetooth® SDK is targeted for the following devices with ModusToolbox™ 2.3:

- AIROC™ CYW20706 Bluetooth® & Bluetooth® LE system on chip
- AIROC™ CYW20719B2 Bluetooth® & Bluetooth® LE system on chip
- AIROC™ CYW20721B2 Bluetooth® & Bluetooth® LE system on chip
- AIROC™ CYW20735B1 Bluetooth® & Bluetooth® LE system on chip
- AIROC™ CYW20835B1 Bluetooth® LE system on chip
- AIROC™ CYW20819A1 Bluetooth® LE system on chip
- AIROC™ CYW20820A1 Bluetooth® LE system on chip
- AIROC™ CYW89820 Automotive Bluetooth® chip
- AIROC™ CYW43012C0 Wi-Fi & Bluetooth® combo chip (for embedded Bluetooth® development only)
- AIROC™ CYW213043-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW223058-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW243053-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW253059-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW263065-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW273063-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW343026-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW343052-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW353027-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW483056-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW413055-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW423054-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW483062-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW413061-02 Bluetooth® & Bluetooth® LE module
- AIROC™ CYW423060-02 Bluetooth® & Bluetooth® LE module

3　Design impact

3.1　Updating from Bluetooth® SDK 2.9

AIROC™ Bluetooth® SDK 3.0 code examples can be acquired from the **Cypress GitHub repo**.

Note:　　*If you must keep a Bluetooth® SDK 2.x or earlier version, create a new workspace project to pull in Bluetooth® SDK 3.0 and to avoid overwriting previous versions.*

Do the following in the initial setup of AIROC™ Bluetooth® SDK 3.0 with ModusToolbox™ 2.3:

1. In the IDE, click the **New Application** link in the Quick Panel (or, use **File** > **New** > **ModusToolbox Application**).
2. In Project Creator, click **AIROC Bluetooth BSPs**.
3. Pick your board for Bluetooth® SDK.
4. Select a template application.
5. Click **Create** and then click **Close**.

4 **Supported boards**

Board	MCU	Connectivity
CYW920819EVB-02	CYW20819	CYW20819
CYW920819REF-KB-01	CYW20819	CYW20819
CYBT-213043-MESH	CYBT-213043-02	CYW20819
CYBT-213043-EVAL	CYBT-213043-02	CYW20819
CYBT-223058-EVAL	CYBT-223058-02	CYW20819
CYW920820EVB-02	CYW20820	CYW20820
CYBT-243053-EVAL	CYBT-243053-02	CYW20820
CYBT-253059-EVAL	CYBT-253059-02	CYW20820
CYW920835REF-RCU-01	CYW20835	CYW20835
CYW920835M2EVB-01	CYW20835	CYW20835
CYW920735Q60EVB-01	CYW20735	CYW20735
CYW920721B2EVK-02	CYW20721B2	CYW20721B2
CYW920721M2EVK-01	CYW20721B2	CYW20721B2
CYW920721M2EVK-02	CYW20721B2	CYW20721B2
CYBT-413061-EVAL	CYBT-413061-02	CYW20721B2
CYBT-423060-EVAL	CYBT-423060-02	CYW20721B2
CYBT-483062-EVAL	CYBT-483062-02	CYW20721B2
CYW920719B2Q40EVB-01	CYW20719B2	CYW20719B2
CYBT-423054-EVAL	CYBT-423054-02	CYW20719B2
CYBT-413055-EVAL	CYBT-413055-02	CYW20719B2
CYBT-483056-EVAL	CYBT-483056-02	CYW20719B2
CYW920706WCDEVAL	CYW20706	CYW20706
CYBT-353027-EVAL	CYBT-353027-02	CYW20706
CYBT-343026-EVAL	CYBT-343026-02	CYW20706
CYW989820EVB-01	CYW89820	CYW89820
CYW943012BTEVK-01	CYW43012	CYW43012
CYW9M2BASE-43012BT	CYW43012	CYW43012

5 Fixes for known issues

This section lists the known issues from the AIROC™ Bluetooth® SDK 2.9 release that were fixed in this release.

Platform/Bluetooth® firmware/application	Fix
[CYW920719B2Q40EVB-01] SDS	Updated firmware to fix the issue where CYW20719B2 was unable to main connection in SDS.
[CYW920719B2Q40EVB-01] SDS	Fixed the issue where CYW20719B2 would keep waking up from SDK if RPA is used.
[CYW920721M2EVK-02] Thermistor	Fixed the issue by enabling the ADC pin selection to be passed in the thermistor_read command.
[CYW943012BTEVK-01] PDS	Updated firmware to fix the issue where the CYW43012 failed to enter PDS mode after a2dp stream is disconnected.
[CYW943012BTEVK-01] Boot	Fixed the issue where any app image > 75KB would fail to put on CYW43012.
[CYW920706WCDEVAL] HAL PUART	Added PUART hardware flow control functionality into CYW20706 HAL PUART code example.
[CYW920706WCDEVAL] BD Address	Updated firmware to fix the issue where CYW20706 didn't resolve BD address correctly after restart.
[CYBT-413055-EVAL] Delay issue	Fixed the issue where hardware timers were restarted at the end of the first time through idle thread loop causing any timers started prior to no longer be correct.

6 Known issues/limitations

Table 1 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**.

Table 2 Platform

Limitation	Workaround
ModusToolbox™ 2.3 supports Arm® GCC, Arm® compiler v6, and IAR toolchain. The Bluetooth® SDK supports only Arm® GCC.	None.
The following kits have limited availability: • CYW920820EVB-02 • CYW920835REF-RCU-01 • CYW920835M2EVB-01 • CYW920721M2EVK-01 • CYW920721M2EVK-02 • CYW920719B2Q40EVB-01 • CYW989820EVB-01 • CYW943012BTEVK-01 • CYW9M2BASE-43012BT	Contact Sales to request access.
CYW920721M2EVK-01, CYW920721M2EVK-02, and CYW943012BTEVK-01 are not supported in Linux and macOS due to an issue with the client control host application.	Use Windows 10. This issue will be fixed in the next Bluetooth® SDK release.
CYW920721B2EVK-02 has limited availability. Note that support for this platform will be removed in a future Bluetooth® SDK release.	Contact Sales to request access to the CYW920721M2EVK-02.
iAP2 code examples are not included by default in Bluetooth® SDK 3.0.	Get the MFi license and contact Sales to request access to the additional code example.
PEPS code examples for the CYW89820 are not included by default in Bluetooth® SDK 3.0.	Contact Sales to request access to the additional code examples available for CYW89820.

Table 3 Bluetooth® SDK

Problem	Workaround
[CYW920706WCDEVAL] Bluetooth® Mesh conformance: Expected value and received value do not match for LC server PTS test cases	This is a Profile Tuning Suite (PTS) issue. A newer version of PTS should fix the issue.
[CYW920719B2Q40EVB-01] Bluetooth® Mesh conformance: Command receive failed (timeout) in MESH/NODE/RLY/BV-02-C	This is a PTS issue. A newer version of PTS should fix the issue.

Known issues/limitations

Problem	Workaround
[CYW920721B2EVK-01] MAP: There is no provision in client control UI to download e-mails	There are no plans to implement this feature.
[CYW920721B2EVK-01] MAP: Contact number/name is not displayed for Unsaved contacts. This is an UI display issue; the trace shows the operation is working as expected.	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920721B2EVK-02] Headset_wass: Glitches are heard on PRI and no audio on SEC during audio streaming when OTA upgrade through OTA SPP app is running.	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920721B2EVK-02] Headset_wass: Glitch is heard on the headset when the Bluetooth® LE connection changes to source2 during audio streaming from source 1.	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920721B2EVK-02] Headset_wass: No voice prompt is working from the time SEC is reset during headset re-connection from PRI.	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920721B2EVK-02] Headset_wass: Discoverability reduces to zero when the DUT is disconnected before pairing mode is allowed to zero.	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920721B2EVK-02] BT Speaker Pro AMA: Need to put the DUT in discoverable mode to perform LE reconnection	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920721B2EVK-03] Headset_wass_aac: Media volume sync is disabled after re-connection from the source during audio streaming	This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920735Q60EVB-01] The board requires recovery reset before download.	Reset recovery can be used as a workaround. This issue is targeted to be addressed in a future Bluetooth® SDK release.
[CYW920819EVB-02] Watch: Current spikes of 200 uA on J15 (VDDIO)	This issue will not be fixed.
[CYW920820EVB-02] The Spi_master functionality does not work after changing the pin configuration through the Device Configurator.	Device Configurator should be used only for reserving pins and not assigning functionality. This issue will not be fixed.
[CYW920820EVB-02] The Spi_slave functionality does not work after changing the pin configuration through the Device Configurator.	Device Configurator should be used only for reserving pins and not assigning functionality. This issue will not be fixed.
[CYW920820EVB-02] homekit_lightbulb: Characteristics datatype is displayed as "unknown".	This issue will be addressed in a future Bluetooth® SDK release.
[CYBT-213043-EVAL] MC receives bad packets when HCI tracing is enabled due to low baud rate and buffer settings with Linux.	Decrease logging on the UART for Linux. This issue will not be fixed.
[CYBT-213043-EVAL] Lecoc: Intermittently observed bad packets	This issue is due to Cy Serial bridge software. This issue will not be fixed.

Known issues/limitations

Problem	Workaround
[CYBT-213043-MESH, CYW920820EVB-02] Unable to do OTA upgrade for apps which do not have the Proxy feature enabled (dimmer, on_off_switch)	This issue will be addressed in a future Bluetooth® SDK release.
[CYBT-213043-MESH] Bluetooth® LE MMDL conformance: Did not receive all of the expected messages (expected message 2 of 2 at address 0xC001).	This is a PTS issue. A newer version of PTS should fix the issue.
[CYW920721M2EVK-01, CYW920721M2EVK-02, and CYW943012BTEVK-01] Client control: Intermittenlty observing bad packets in the client control host application on Linux and macOS	This issue will be addressed in a future Bluetooth® 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.
Update any API documentation that uses the bd_addr as input to reflect the endianness required.	This documentation issue will be addressed in a future Bluetooth® SDK release.
Update the wiced_bt_dev API documentation to reflect that it is intended for Bluetooth® LE only (wiced_bt_dev_add_device_to_address_resolution_db api).	This documentation issue will be addressed in a future Bluetooth® SDK release.

7 Open source

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8 Further reading

See ModusToolbox™ documents (including but not limited to the following):

- ModusToolbox™ installation guide
- Bluetooth® API documentation
- Eclipse IDE for ModusToolbox™ quick start guide
- Eclipse IDE for ModusToolbox™ user guide
- ModusToolbox™ configurator guides (for each Configurator)

Other documentation includes (but is not limited to):

- Device datasheets
- Application notes
- Training

Contact your representative as needed.

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