1.3 BLE Demo Experience

The demo consists of the WBZ451 Curiosity board with accompanying ble_senor_app firmware, the Microchip Bluetooth Data (MBD) Smartphone App. The MBD app has the capability to scan for BLE Advertisements from WBZ451 module and to establish a connection.

Scan operation monitors the temperature sensor and status of RGB LED (ON or OFF). Establishing a BLE connection with WBZ451 Module enables users to control the RGB status (on or off) as well as intensity and color of the RGB LED using slide controls.

BLE Sensor App Demo

1. Install the Microchip Bluetooth Data (MBD) Smartphone App

   a. iOS/Android users can search for "Microchip Bluetooth Data" App in the App Store .

   b. Enable Bluetooth on the Smartphone

2. Launch the MBD Smartphone App

3. Supply power to WBZ451 Curiosity Board:

   a. Connect a USB cable to the kit or a 4.2V Li-ion/Li-Po Battery. For more information, refer to the Power Supply section of the *PIC32CX-BZ25* and *WBZ451 Curiosity Board User's Guide*.

   b. The user-programmable blue LED starts blinking on the Curiosity Board when the board is in Advertisement mode.

4. Monitor RGB LED state and temperature:

   a. WBZ451 Curiosity Board starts in Advertisement mode to advertise its presence on a smartphone and to allow access to RGB LED ON/OFF state and temperature sensor data.

   b. Navigate through the Smartphone App as illustrated in the following figure to access the advertisement information.
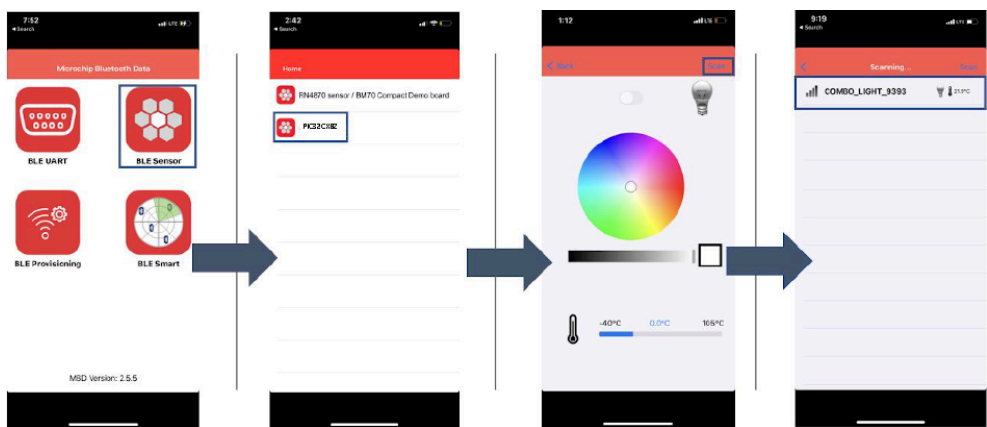
5. Control RGB LED state on/off as well as intensity and color.
   - Click the device that shows up after initiating a scan to establish a connection with WBZ451 Module.
   - The user programmable blue LED becomes solid, once the connection is established between the smartphone and WBZ451 Module.
   - Controls the RGB LED state on/off.

   - Controls the color of RGB LED when the LED is "on".

   - Controls the intensity of RGB LED when the LED is "on".

   - Additional information

6. To disconnect the MBD Application running on your smartphone, ensure to follow one of the following steps:
   - Press the reset button on WBZ451 Curiosity Board
   - Initiating a "Scan" on Smartphone App

Upon successful disconnection, the WBZ451 Module starts in Advertisement mode.

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