

Bluetooth Low Energy Client Module Out of Box Setup Guide Version 1.0.0

Martin Bowman — Applications Engineer

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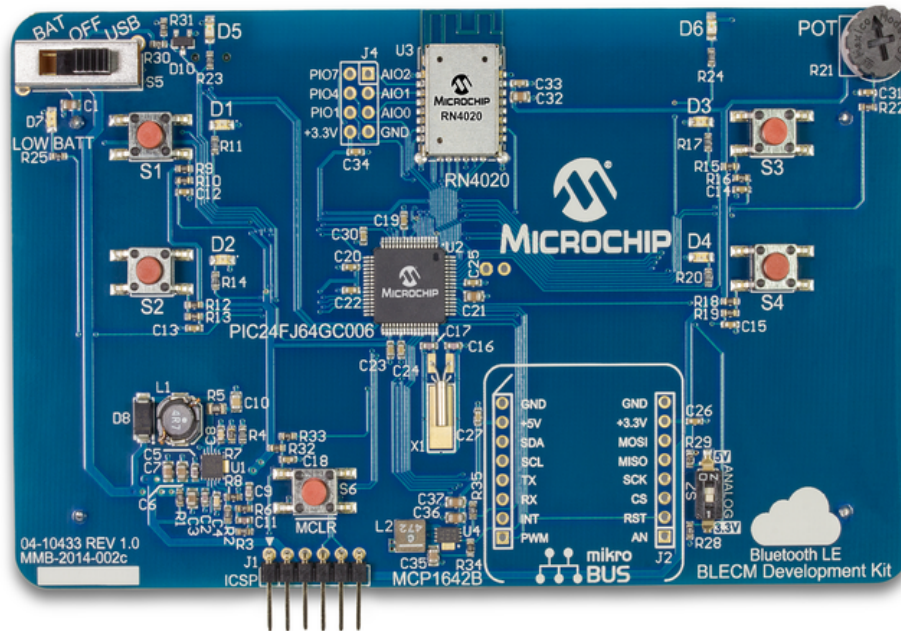
Bluetooth Low Energy Client Module

1 IoT BLECM Development Kit

Microchip's BLECM (Bluetooth Low Energy Client Module) Development Kit is designed to enable you to quickly and easily connect an embedded system to a cellphone gateway. This entire ecosystem can be setup in a matter of a few minutes by installing the iOS or Android app and connecting to the development kit.

1.1 Out of the box setup

This document outlines the steps that are required to run the BLECM connected demo.



Bluetooth® Low Energy Client Module (Part # DM182022)

Figure 1: BLECM Board

The BLECM is powered from either 2 AA batteries or from a Mini USB connector. The power switch on the top left of the board allows switching to either supply.

2 Notes about this version

The BLECM is shipped with the latest version of the firmware programmed into the unit.

The latest version of the firmware can be found on the Microchip IoT webpage at <http://www.microchip.com/iot>

The firmware uses the GATT (Generic Attribute) profile to send data between the App and the BLECM board. To add additional data to the Payload both the App and the BLECM firmware will need to be modified. Both the App source code and the BLECM source code are commented and detail the GATT payload.

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3 Microchip required Tools and Applications

To rebuild and modify the code MPLAB X and XC16 are required. Both of these tools are available to download from the Microchip website <http://www.microchip.com/mplabx>

4 Bluetooth iOS and Android Applications

The BLECM board required an application to be loaded onto a cell phone or tablet for operation. Apps are available for both Android and iOS and are available in the respective app stores.

NOTE: There is no need to enter a server address in the application, this is reserved for future development

4.1 Android

The latest version of the android app is version 1.0.0 and can be found by searching for BLECM in the google play store or by following this link directly

<https://play.google.com/store/apps/details?id=com.microchip.blecm.android>

If you are reading this document on your device this will open the google play application so that you can download the app, viewing on a PC/MAC will allow for remote install of the app.

4.2 iOS

The iOS application is version 1.0.0 and can be found either in itunes or the App store by searching for BLECM or by accessing this link directly

<https://itunes.apple.com/us/app/blecm-development-kit/id963898849?mt=8>.

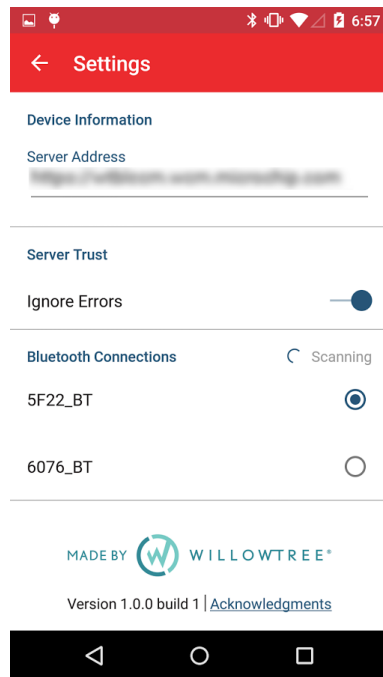
This will open a link and allow you to install via itunes.

5 Commisioning the demo

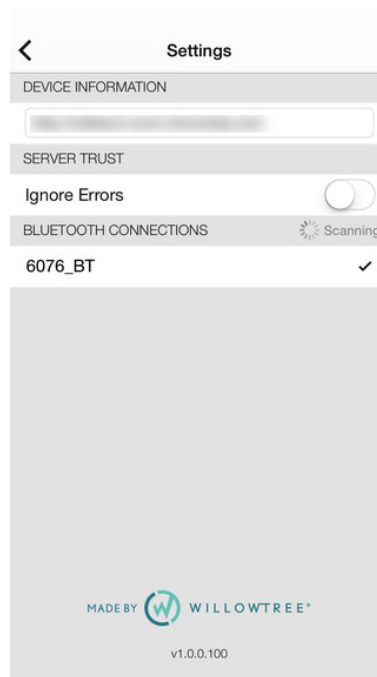
Once the App has been installed, start the App and navigate the to settings in the top right hand corner of the app. Android app is shown iOS is similar.

Once the app has negotiated the bluetooth connection to the device, pressing the buttons on the BLECM or adjusting the POT the values will be mirrored on the App. Using the sliders on the App the LED's on the BLECM board can be toggled.

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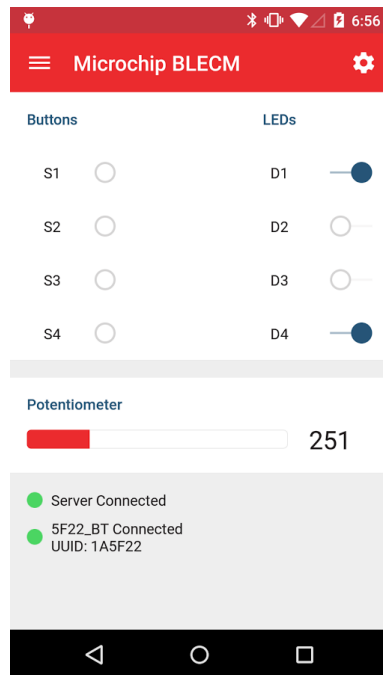


(a) Android

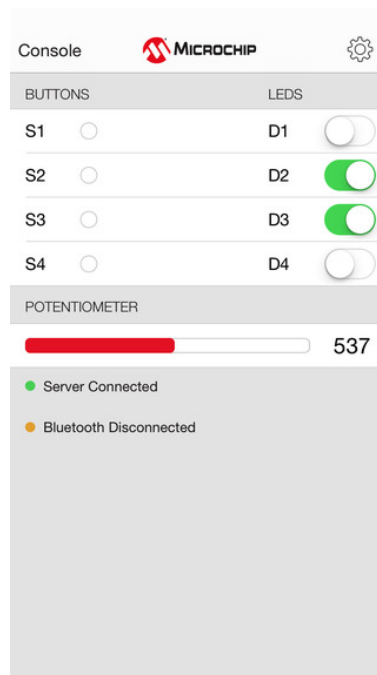


(b) iOS

Figure 2: App Settings - Connected to BLECM Board



(a) Android



(b) iOS

Figure 3: Realtime data between App and BLECM board

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Revision History

Revision	Date	Author(s)	Description
1.0.0	2015-12-14	M.Bowman	Initial Draft of Document