M2-TBT

User Manual

2017/12/12

Revision History

2017/12/12	1st released	Jill

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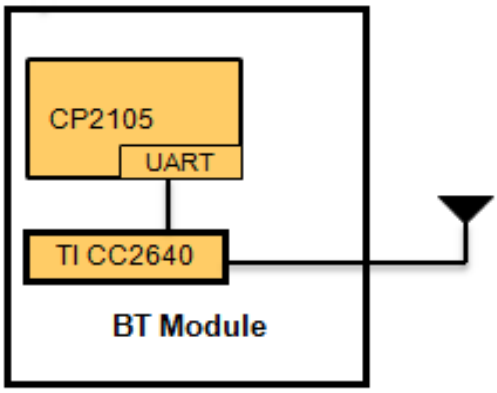
1. Usage

It will be built in any wired/wireless devices for Bluetooth connection and application.
Eg. AP/Router/Repeater…etc

2. HW Block Diagram



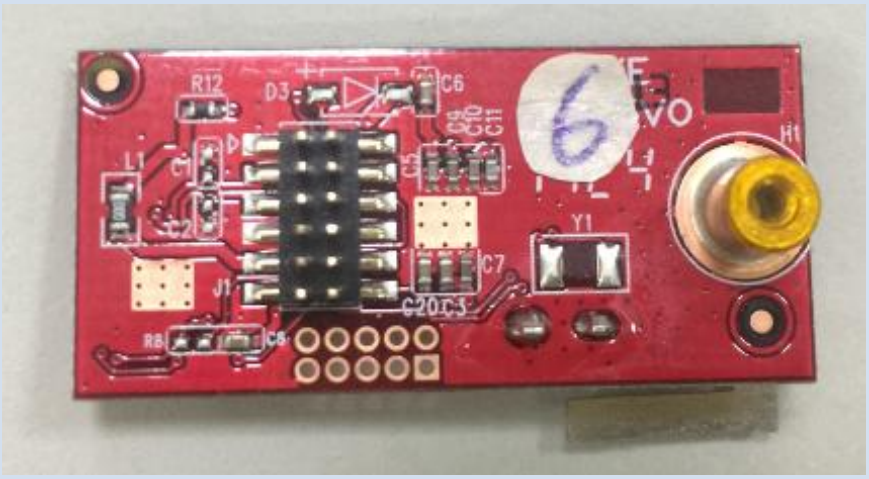
Detail description for HW block diagram :

- ❑ Microcontroller：TI CC2640
  - ▲ Powerful ARM Cortex-M3
  - ▲20KB SRAM
  - ▲8KB Cache
  - ▲128KB Flash
- ❑ USB to Dual UART Bridge：CP2105
  - ▲USB 2.0 full speed function controller
- ❑ Antenna：PIFA Antenna *1

3. Picture & Dimension

3.1 Picture: PCB color might be changed. (Red/Green)

➤**M2-TBT**

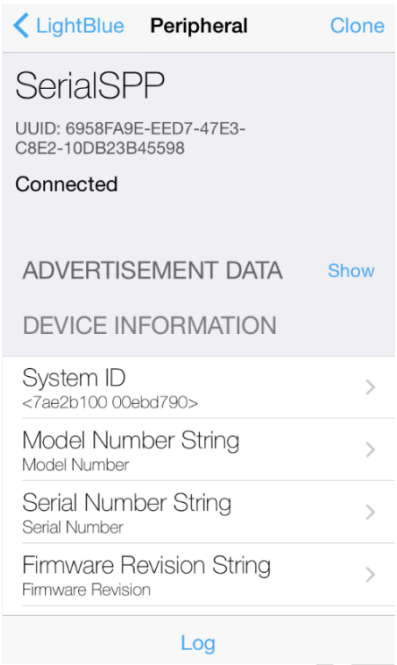


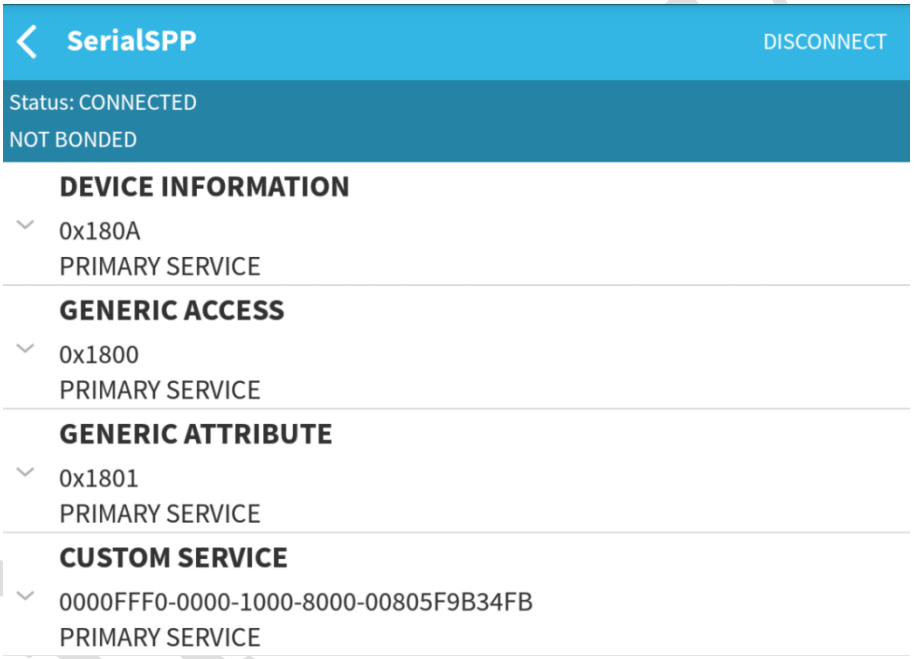
3.2 Physical Interface

Dimension	32mm(L) *18mm(W) *11mm(H)
Pin header	Pin *12

4. How to ensure the BT module is workable

4.1 Install “LightBlue” APP on cell phone from “App Store” or install “BLE Scanner” on cell phone from “Google Play”.
4.2 Turn on Bluetooth function on cell phone.
4.3 Turn on “LightBlue” or “BLE Scanner” on cell phone. (Depends on cell phone OS)
4.4 Turn on the Bluetooth module by power on the wired/wireless device.
4.5 Check cell phone can scan “SerialSPP” or not.
4.6 Select “SerialSPP” to connect with the Bluetooth module.
4.7 Check the status is connected. Capture screen as below for reference.





5. Applications

Describe what kind of application that can be implemented.

5.1 BLE4.2

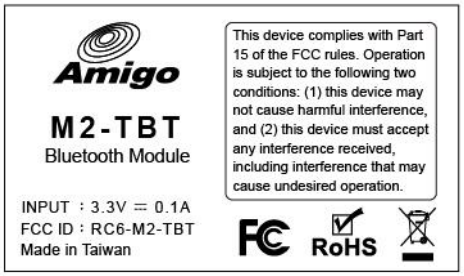
iBeacon advertising data	➤Device UUID ➤Major Value ➤Minor Value ➤Measured Power
Access for configuration	➤APP Interface
Application(Optional)	➤Home and Building Automation – Connected Appliances – Lighting – Locks – Gateways – Security Systems ➤Industrial – Logistics – Production and Manufacturing – Automation – Asset Tracking and Management – Remote Display – Cable Replacement – HMI – Access Control ➤Retail – Beacons – Advertising – ESL and Price Tags – Point of Sales and Payment Systems ➤Health and Medical – Thermometers – SpO2 – Blood Glucose and Pressure Meters – Weight Scales – Vitals Monitoring – Hearing Aids ➤Sports and Fitness – Activity Monitors and Fitness Trackers

– Heart Rate Monitors
– Running Sensors
– Biking Sensors
– Sports Watches
– Gym Equipment
– Team Sports Equipment

➤HID
– Remote Controls
– Keyboards and Mice
– Gaming

➤Accessories
– Toys
– Trackers
– Luggage Tags
– Wearables

6. Label
Size :60x35mm



7. Declaration of Conformity

FCC Part 15.19 Caution:

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference and

(2) this device must accept any interference received, including interference that may cause undesired operation

2. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
3. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

FCC Section 15.105

"Federal Communications Commission (FCC) Statement"

This equipment has been tested and found to comply with the limits for a lass B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.