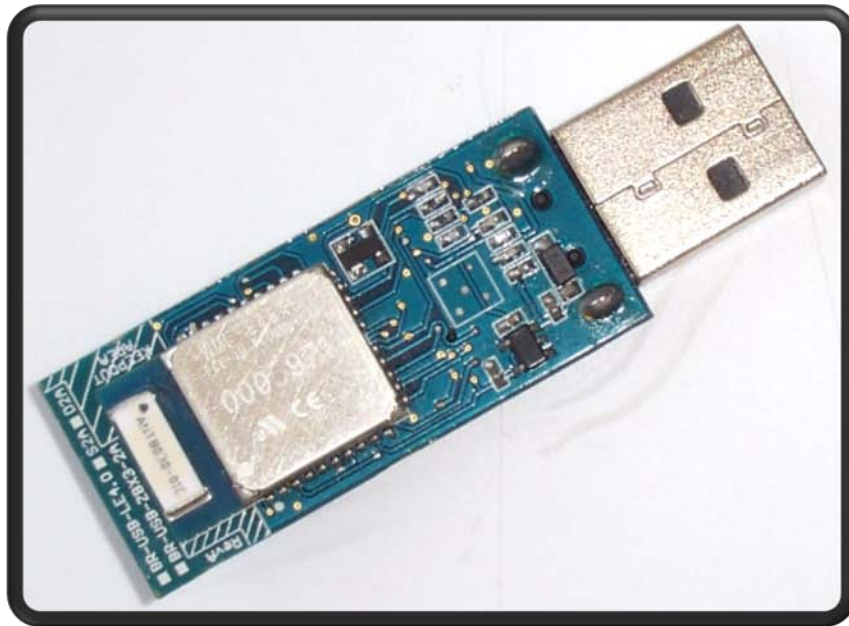


nBlue[™] Bluetooth[®] Low Energy Sensor Bug/Fob to USB Dongle Demo User's Guide



BR-USB-LE4.0-S2A USB Evaluation Dongle Pictured Above with BR-LE4.0-S2A BLE Module.

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Revision History

Rev	Date	Description
1.0.0	5/20/11	Initial Document

1 Overview

In this demo the USB Dongle is programmed as a master always in the discovery state looking for BlueRadios slave modules. If a BlueRadios Bug/Fob is found the Dongle will initiate a connection to the slave and read the state of each sensor and send it out on the UART. The Button or Fob is programmed to start advertising once a second, resulting in the USB dongle sending out a measurement every second.

2 Instructions

1. Plug the Dongle into an available USB port on your PC and a red power led will come on along with a flashing green led. Follow the prompts to install the device and be sure to note the COM port that has been assigned to the dongle in Device Manager->Ports.

2. Open HyperTerminal with factory default settings (do not echo characters or append any additional line feeds). Connect to the COM port assigned to your Dongle at 115200, 8-N-1, and using hardware flow control.

3. Press the right switch on the Bug/Fob to turn it on. The Dongle will automatically connect to the Bug/Fob and a blue led will come on. The Dongle will print the following for each connection:

```
<cr_lf>CONNECT,ECFE7EXXXXXX<cr_lf>
```

```
<cr_lf><X_AXIS>,<Y_AXIS>,<Z_AXIS>,<ORIENTATION>,<TEMPERATURE>,<LUX>,<LEFT_SW>,<
```

```
<RIGHT_SW>,<BATT_PERCENT>;<cr_lf>
```

```
<cr_lf>DISCONNECT<cr_lf>
```

4. The Bug/Fob can be turned off by pressing the right switch again. Both leds will turn on momentarily and then the device will power down.

3 Data Format

- <cr_lf> - 0x0D0A (carriage return, linefeed)
- <X,Y,Z_AXIS> - acceleration in units of 62.5mg
- <ORIENTATION> - 0=unknown, 1=X+, 2=X-, 4=Y+, 8=Y-, 16=Z+, 32=Z-
- <TEMPERATURE> - temperature in Fahrenheit
- <LIGHT> - light in lux
- <LEFT_SW> - left switch presses since last report
- <RIGHT_SW> - right switch presses since last report

Note: Since the right switch is used to turn the Bug/Fob on and off, the right switch field is just a duplicate of the left switch field.