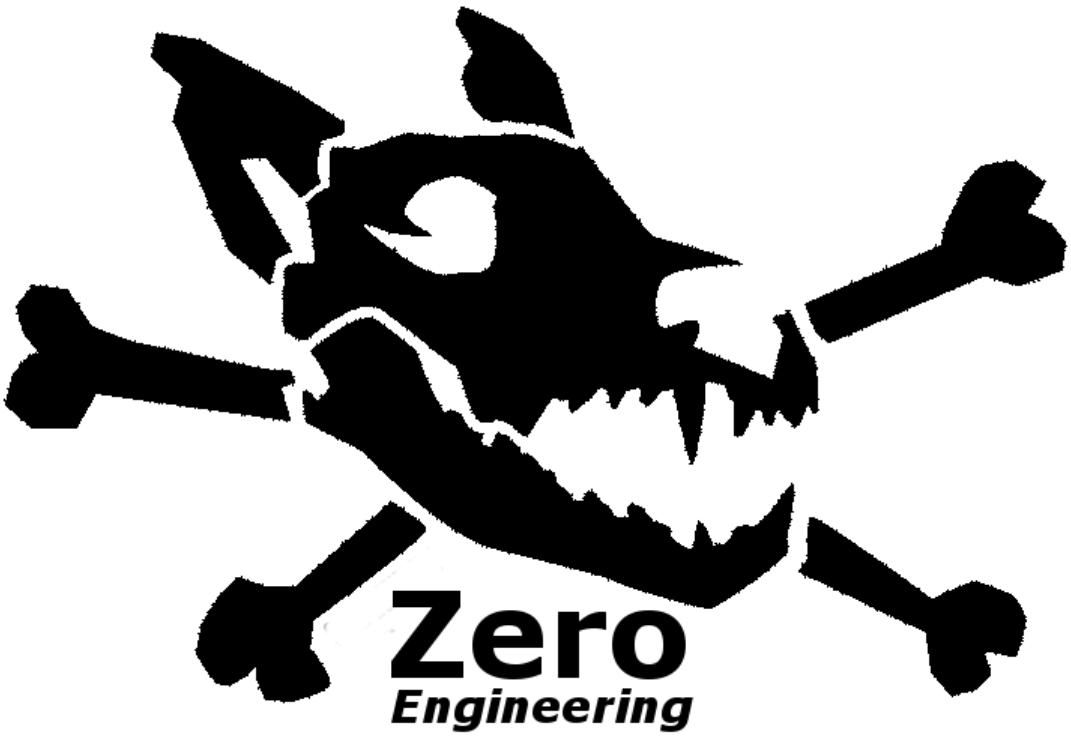
Zero Tiny BLE
Datasheet



V1.0

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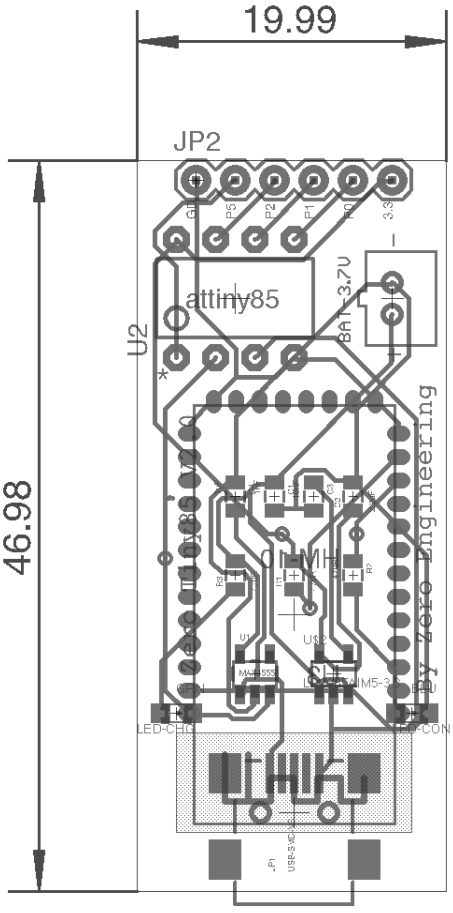
Overview

The Zero Tiny BLE is a small low cost and low powered embeddable board with an AVR ATTiny85 microcontroller and a Bluetooth 4.0 (Bluetooth Low Energy or BLE) radio.

- AVR ATTiny85 microcontroller running at 8MHz internal clock and 3.3V. [ATTiny85 Datasheet.]
- HM-10 Bluetooth 4.0 Low Energy module. [HM-10 Datasheet].
- Powered by single cell 3.7V Lithium Polymer battery (LiPo) or USB B mini port.
- LiPo battery recharge capabilities via the USB B mini port.
- Standard UART communication over Bluetooth 4.0.
- Easy prototyping via breadboard.
- Use either Arduino or AVR-GCC development environments.
- Small form factor of 20mm x 47mm (0.79” x 1.85”)



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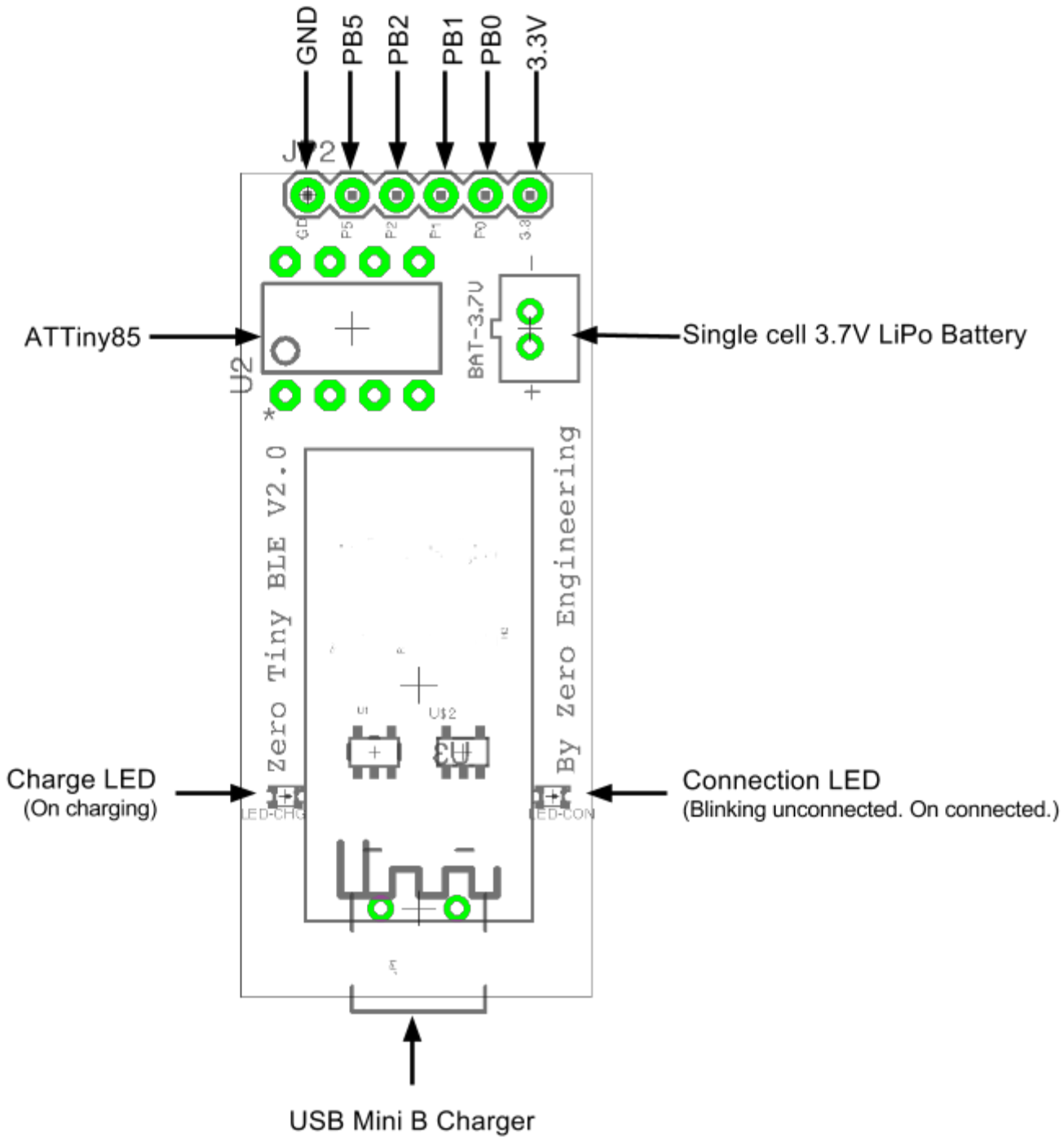
Pinouts



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Programming Notes

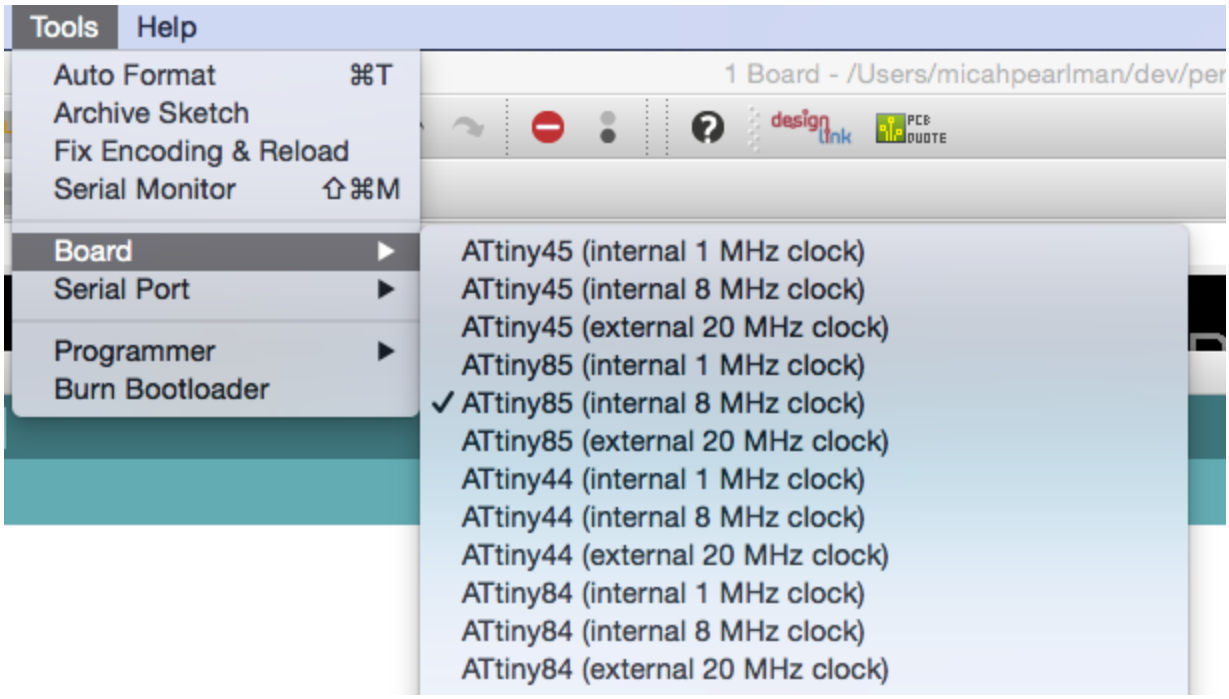
- The ATTiny85 cannot be programmed in circuit. It must be removed and a separate programmer such as the excellent Sparkfun Tiny AVR Programmer.
- The ATTiny85 pins PB3 (RX) and PB4 (TX) are used for serial communication with the Bluetooth 4.0 radio.
- The ATTiny85 does not have hardware UART serial. The Arduino SoftwareSerial library should be used. Example:

```
#  define rxPin 3
#  define txPin 4
SoftwareSerial _bluetoothSerial = SoftwareSerial(rxPin, txPin);

void setup() {
       // initialize serial communications at 9600 bps:
       _bluetoothSerial.begin(9600);
}

void loop() {
     _bluetoothSerial.print("Hello World");
}
```

- ***Important:*** make sure that when programming your ATiny85 in the Arduino IDE that the board is set to "ATTiny85 (internal 8MHz)"



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