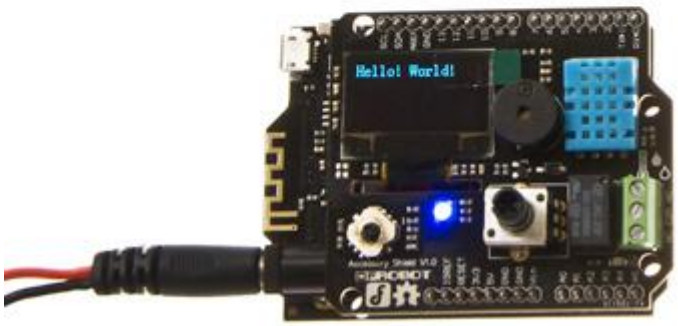
Bluno - BLE with Arduino Uno

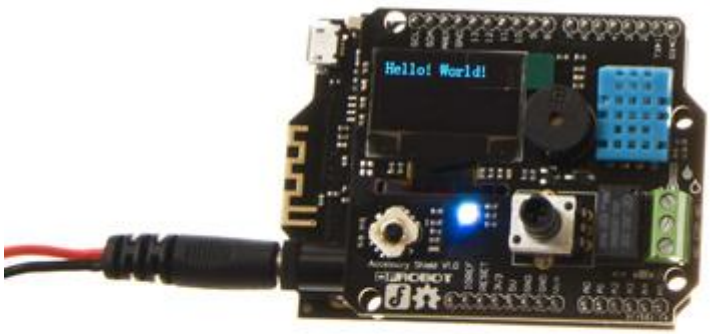
Introduction

It's time to get Bluetooth 4.0 into your project, together with your phone! For aficionados of smart devices and wearables, now you can go further than hacking things bought in the market to building your own prototype out of garage. The Bluno board is first of its kind in intergrating BT 4.0(BLE) module into Arduino Uno, making it an ideal prototyping platform for both software and hardware developers to go wireless. You will be able to develope your own smart bracelet , smart pedometer and more. Through the low- power Bluetooth 4.0 technology, real-time low energy communication can be made really easy.

Bluno integrates with a TI CC2540 BT 4.0 chip with the Arduino UNO development board. It allows wireless programming via BLE, supports Bluetooth HID, supports AT command to config the BLE, and you can upgrade BLE firmware easily. Bluno is also compatible with all Arduino Uno pins which means any project made with Uno can directly go wireless!

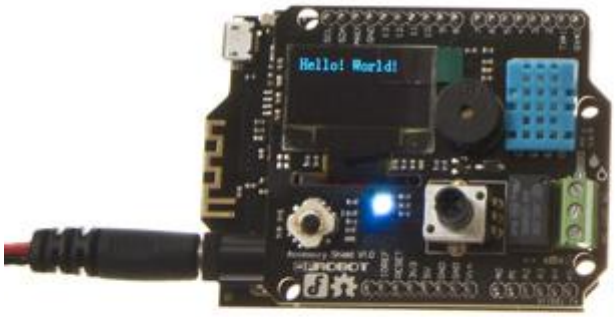
Whatsmore, we also developed the App for the Bluno (both Android and IOS), and they are completely opensource, so that you can modify and develope your own BLE-hardware platform. Below is a quick demo video covering some of the major features of Bluno with the help of an Accessory Shield for Bluno, which will also be available very soon.



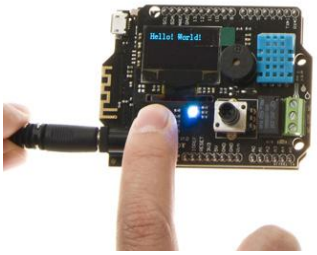


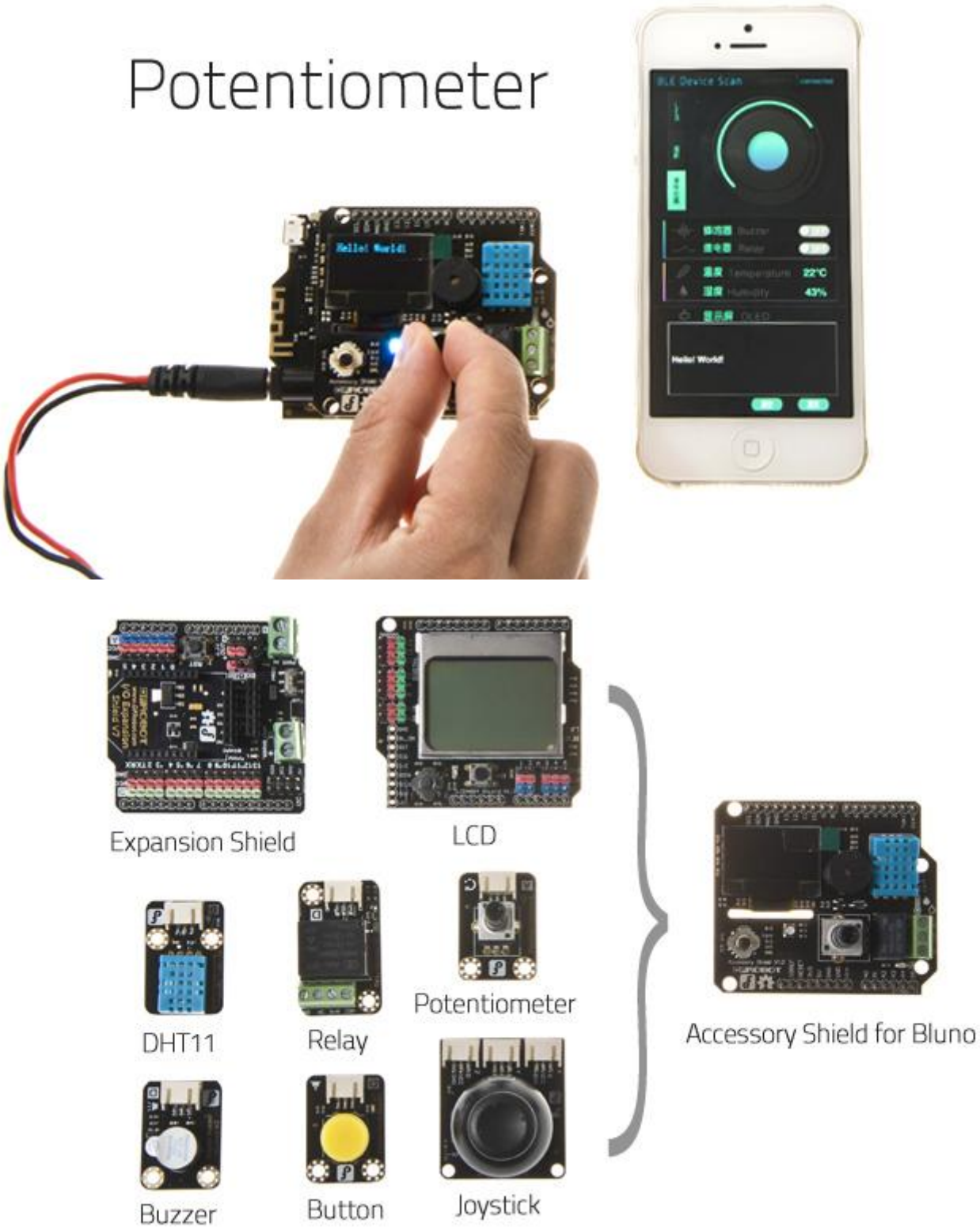
In short, you can use Bluno with any Bluetooth 4.0 compatible devices and enjoy features such as wireless transmission, master and slave settings, wireless burning, and even establishing a Bluetooth HID connection with the PC between devices.

RGB LED



Joystick



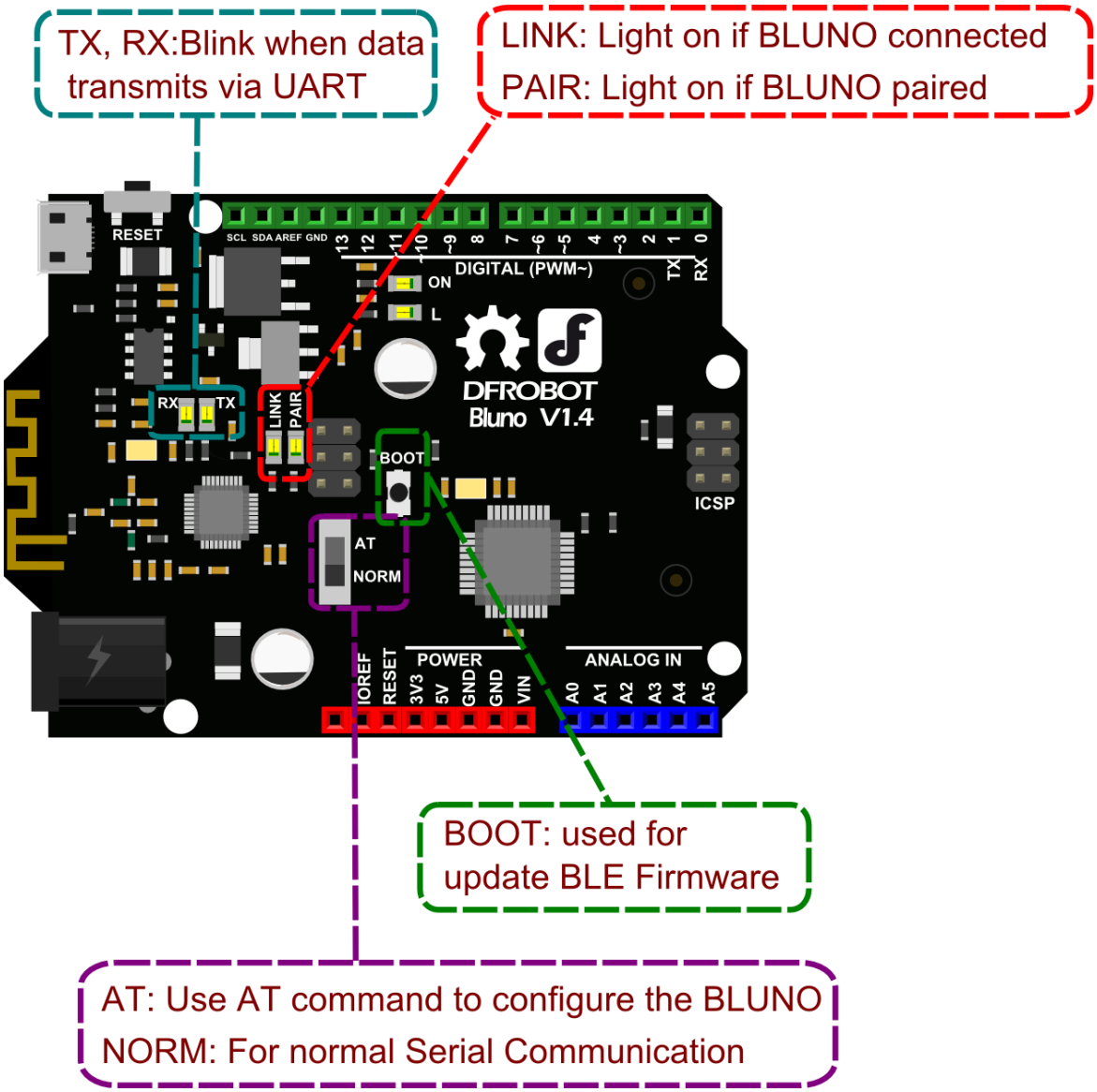


Note: For the demo application and arduino code, we integrated dfrobot wireless libraries for the beginners. The idea is supplying a simple way for you to use wireless modules without learning the wireless comunication protocol.However, for the developer, recommend to custom or choose the protocol according to the product features or the application.

Specification

- On-board BLE chip: TI CC2540
- Wireless Programming Via BLE
- Support Bluetooth HID
- Support AT command to config the BLE
- Transparent communication through Serial
- Upgrade BLE firmware easily

- DC Supply:USB Powered or External 7V~12V DC
- Microcontroller: Atmega328
- Bootloader: Arduino Uno (disconnect any BLE device before uploading a new sketch)
- Compatible with the Arduino Uno pin mapping
- Size: 60mm*53mm
- Weight: 30g



Shipping List

- Bluno 1 unit

Documents

- Wiki Doc

Hareware info

- Bluno Schematic
- Bluno bluetooth Smart firmware - CC2540 (v1.6)
- How to upgrade the firmware

Demo Package

- BLUNO Basic Demo Package (Android & iOS)
- Accessory shield Demo for BLUNO Package (Android & iOS)
- More details

Reference

- PlainProtocol introduction and examples
- More details about the PlainProtocol libraries
- Android 4.3 ROMs (Cyanogenmod Stable version) Recommended to use 10.2 or later version

Review

- Embedded Computing Review by Rei Vilo

Custom Application from user

- Bluno iOS Terminal (developed by Air Vision)