

Bluetooth Shield v1.0

Description

The Bluetooth Shield integrates a Serial Bluetooth module. It can be easily used with Arduino /AZLduino for transparent wireless serial communication. You can choose two pins from Arduino D0 to D7 as Software Serial Ports to communicate with Bluetooth Shield (D0 and D1 is Hardware Serial Port). It also expands five analog IOs that you can use it to connect other devices.



Features

- AZLduino/Arduino compatible.
- Standard Shield designed that you can use it easily.
- Up to 10m communication distance in house without obstacle
- UART interface (TTL) with programmable baud rate (SPP firmware installed)
- Default baud rate: 38400, data bits: 8, stop bit: 1, Parity: No parity
- Default PINCODE:"0000"
- A full set of configuration commands
- On board PCB antenna
- FCC ID certificated

Application Idea

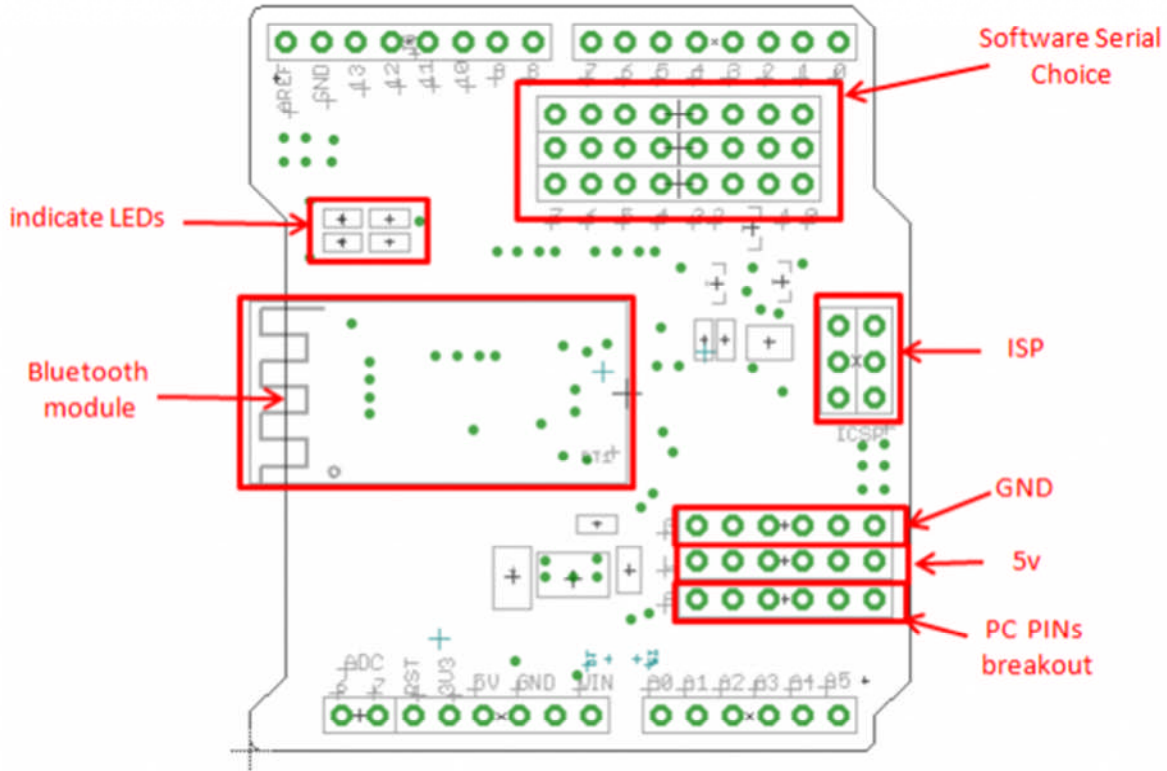
1. Communicate with two Bluetooth Shield.
2. Use your Android phone to control the Arduino car.
3. Communicate with your computer.

Specification

Items	Min	Typical	Max	Unit
Voltage	2.8	3.3	3.5	v
Current	3	/	100	mA
Communication Distance(in house)	/	/	10	m
Protocol	Bluetooth V2.0 with SPP firmware			/
Interface	Uart Serial Port(TTL)			/
Supported Baudrate	9600, 19200, 38400, 57600, 115200, 230400, 460800			bps

ESD contact discharge	±4	KV
ESD air discharge	±8	/
Dimension		mm
Net Weight		g

Interface



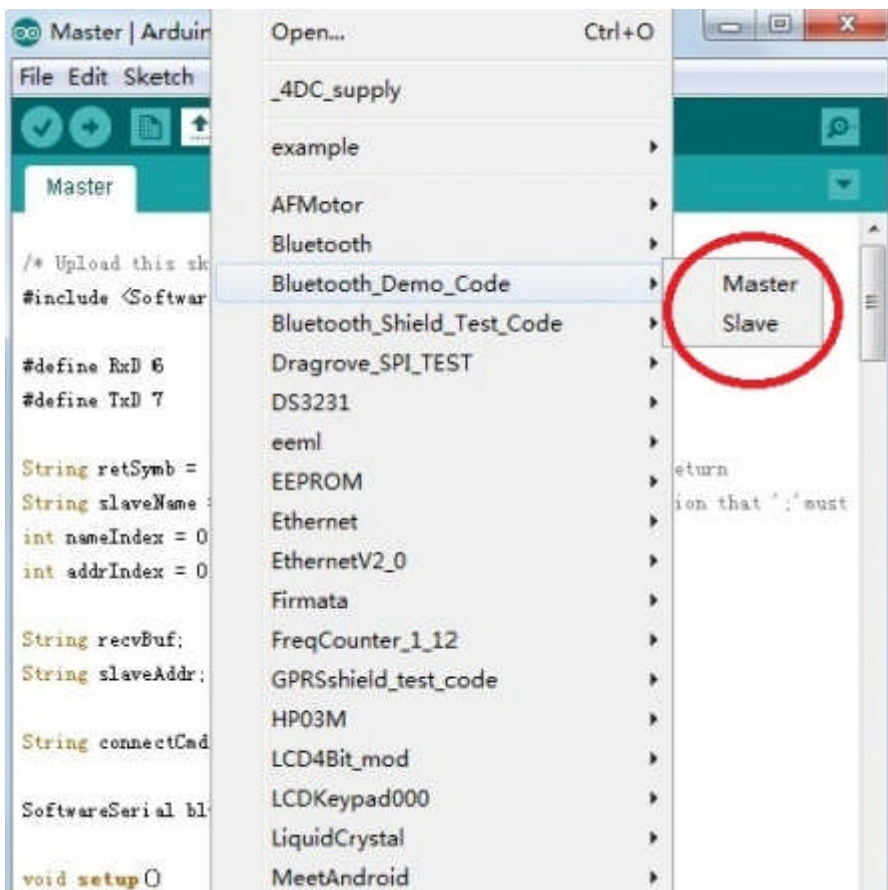
Usage

Communicating between two Bluetooth Shield



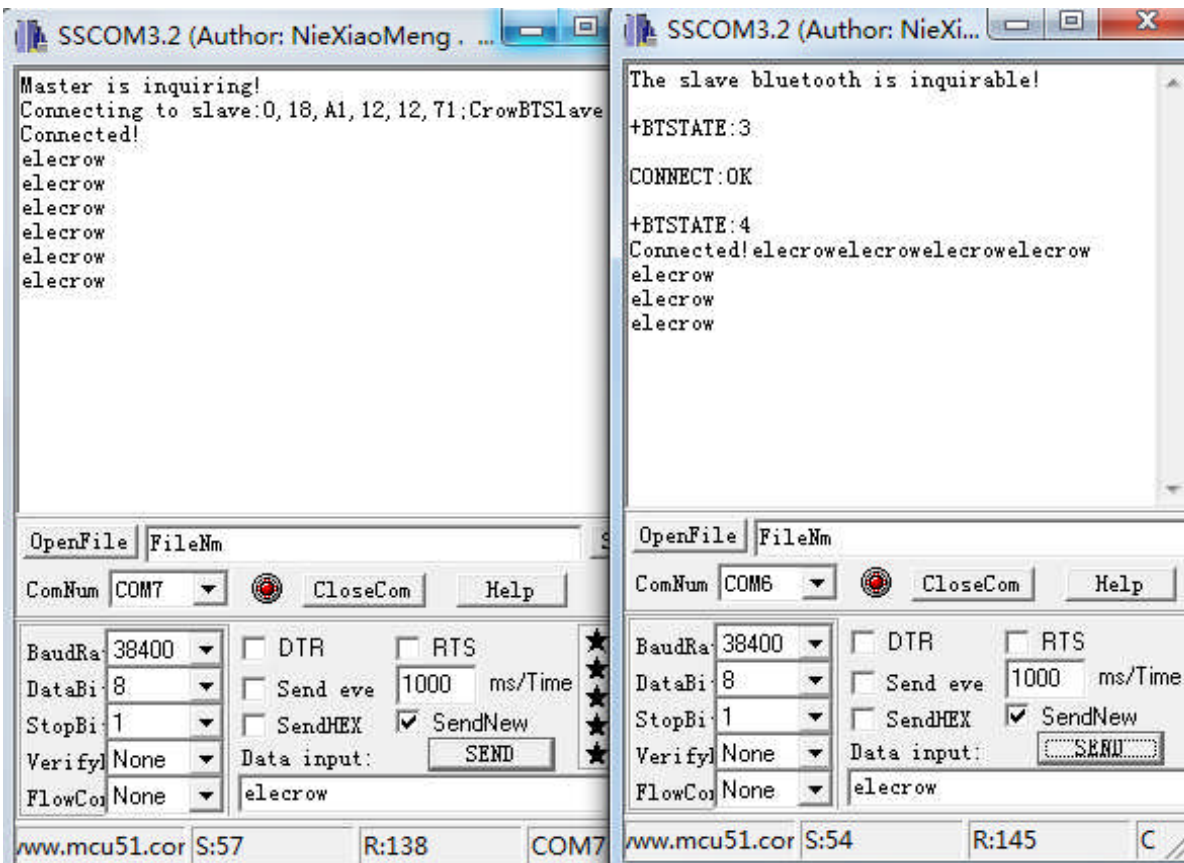
This demo will show you how to communicate between two Arduino/AZLduino through Bluetooth Shield for the special applications, you may need to write the code by yourself.

- Download the [Arduino Library](#) for the shield, and unzip it into the path of Arduino Libraries. This library includes two sketches one for Master and the other for Slave. Make sure [Software Serial Library](#) is included as well.



- Upload the sketch Master.ino and Slave.ino to two separate Arduino/AZLduino.
- Open two [Serial Terminals](#) on your PC, with the setting of 38400, 8, 1, N. Open the two Com Port of Arduino/AZLduino.
- Plug the Bluetooth Shields to the Master board and the Slave Board, and reset the two boards.

Then you will see the red and green LED on the boards are flashing in interval indicating they are inquiring for each other. After a while only the green led is flashing one time per second indicating that they are connected. There's also some information printed on the two terminals as follows.



- The connection is successful now, and you can type any character on the Serial Terminal and send to each

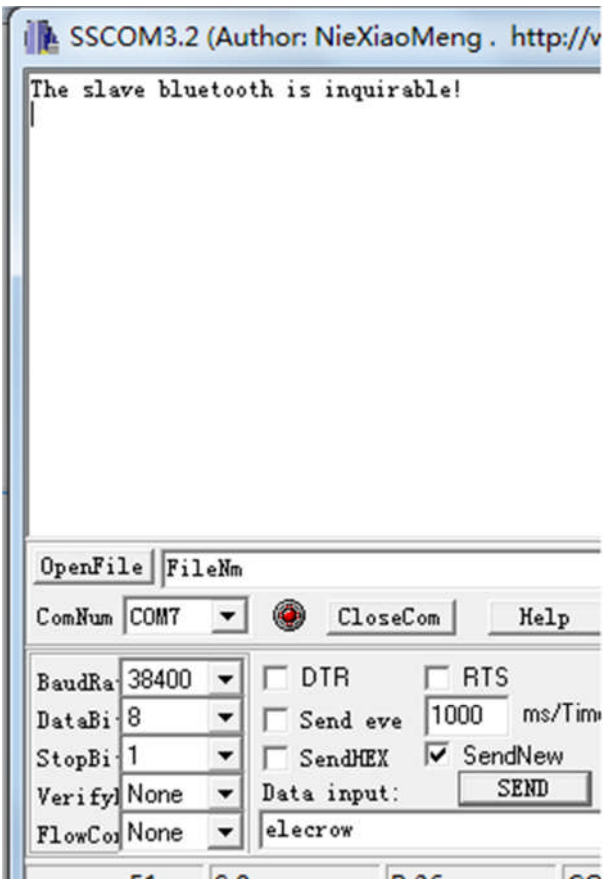
Connecting Bluetooth Shield to Android Phone



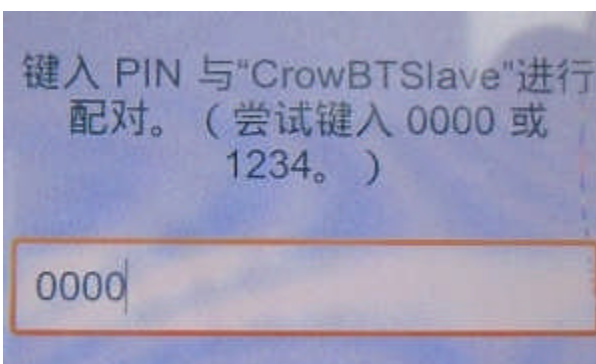
This demo will show you how to connect Bluetooth Shield to Android Phone. Here we test on HTC Legend with Android 2.2. For the special applications you may need to write the code by yourself.

- Download the [Arduino Library](#) for the shield, and unzip it into the path of Arduino Libraries. This library includes two sketch, one for Master and the other for Slave. Make sure [Serial Library](#) is included as well.

- Plug the Bluetooth Shield onto the Arduino/AZLduino, and upload the Slave.ino to the board. Open the Serial Terminal with setting of 9600, 8, 1, N.



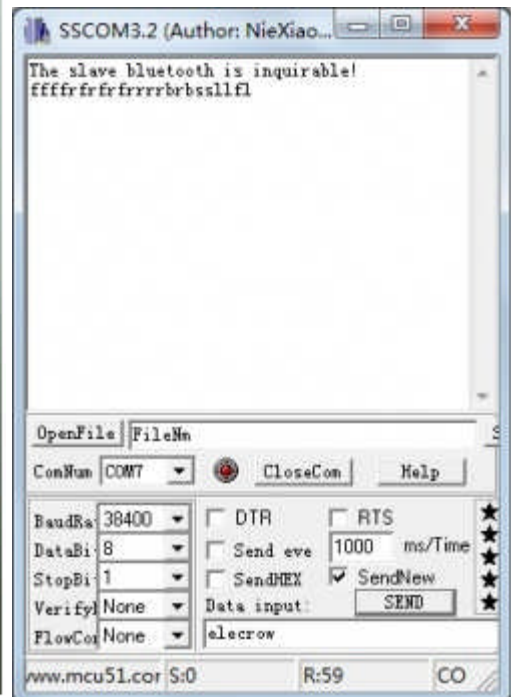
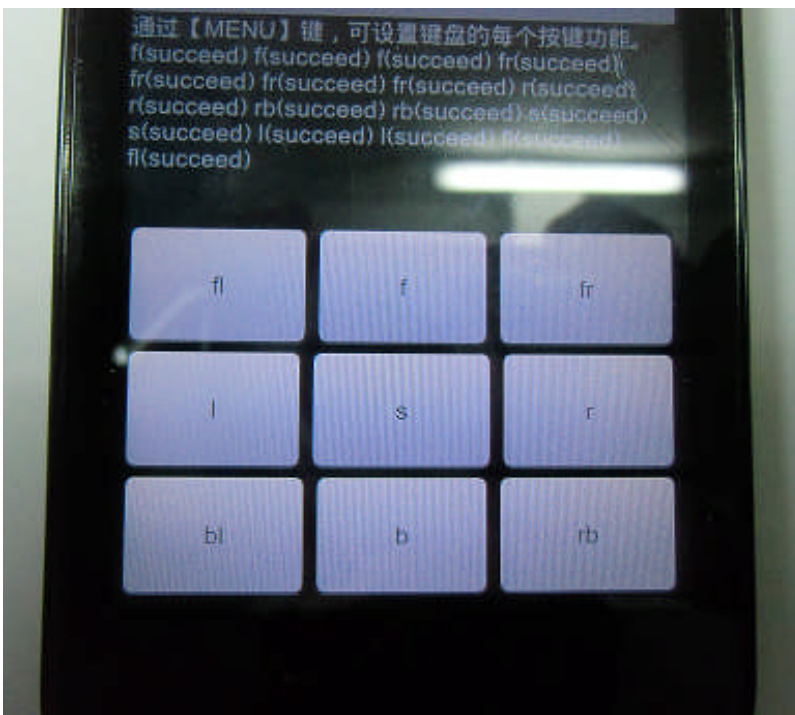
- Download a Serial Terminal for Android to the phone. [Here](#) we find an apk (Bluetooth SPP) in Chinese. Install the apk.
- Enable the bluetooth function and scan for devices. You will find the CrowBTSlave device.
- Select and pair with the "CrowBTSlave", input the PIN code **0000**, choose OK.



- Now let's open the Bluetooth SPP on Android. It illustrates Press [search] key to find Bluetooth-enabled device. and there will be a list of devices found shown the phone.



- Select "CrowBTSlave", and press connect key, wait a second, the connection will be established. And you can receive and send any character through this terminal.



- Notice : you can also send data to your phone.