BT Shield

-Bluetooth to Serial Port Module Shield

Overview

BT Shield V2.1 is a Serial port Bluetooth module (Slave) breakout board, and it's compatible with Arduino and IFlat-32, it can directly plug in with Arduino/IFlat-32 board, use the UART port for communicating to Arduino/IFlat-32 or FT232.

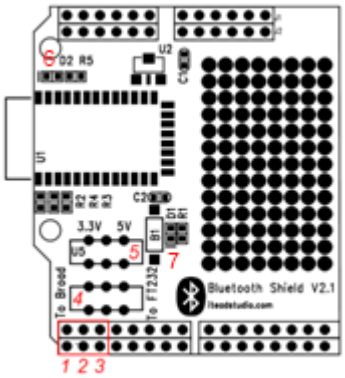
Specifications

Microprocessor	CSR BC417
PCB size	53.3mm X 47mm X 1.6mm
Indicators	PWR ,State
Power supply	5V DC
IO	3
Communication Protocol	UART/Bluetooth 2.0
RoSH	Yes

Electrical Characteristics

Specification		Min	Type	Max	Unit
Power Voltage		4.5	5	5.5	VDC
Input Voltage VH	Target Voltage = 3.3V	3	3.3	3.6	V
	Target Voltage = 5V	4.5	5	5.5	
Input Voltage VL:		-0.3	0	0.5	V
Current Consumption		-	20	40	mA

Hardware



Pin	Pad Name	Type	Description
1	RX/TX	I/O	UART communication Port (Depend on switcher 4)
2	TX/RX	I/O	UART communication Port (Depend on switcher 4)
3	State	O	State Direction

Switcher	Name	Description
4	UART Communication Switch	Connect to broad or FT232
5	Communication Voltage Switch	Set the interface voltage

LED	Name	Description
6	PWR	When power on, the PWR LED light.
7	State	When the module in standby mode, the State LED will alternating light off. When the serial port open, the State LED light.

AT command

Default:
Slave, 9600 baud rate, N, 8, 1. Pincode 1234

AT command:
1. Communications Test :
Sent : AT
receive : OK

2. Change baud rate :
Sent : AT+BAUD1
receive : OK1200

Sent : AT+BAUD2
receive : OK2400
1---------1200
2---------2400
3---------4800
4---------9600
5---------19200
6---------38400
7---------57600
8---------115200
Baud rate setting can be save even power down.

3. Change Bluetooth device name:
Sent : AT+NAMEdevicename
receive : OKname
(devicename is the name you want the device to be , and it will be searched with this name)
Name setting can be save even power down.

4. Change Pincode:
Sent : AT+PINxxxx
receive : OKsetpin
(xxxx is the pin code you set)
Pin code can be save even power down.

Demo Code

```
unsigned int timeout=0;
unsigned char state=0;

ISR(TIMER2_OVF_vect)                    //Timer2    Service
{
   TCNT2 = 0;
   timeout++;
   if (timeout>61)
   {
      state=1;
      timeout=0;
   }

}

void init_timer2(void)
{
   TCCR2A |= (1 << WGM21) | (1 << WGM20);
   TCCR2B |= 0x07;      // by clk/1024
   ASSR |= (0<<AS2);       // Use internal clock – external clock not used in Arduino
   TIMSK2 |= 0x01;      //Timer2 Overflow Interrupt Enable
   TCNT2 = 0;
   sei();
}

void setup()
{
   Serial.begin(9600);
   pinMode(2,INPUT);
   pinMode(13,OUTPUT);
   attachInterrupt(0,cleantime,FALLING);
   init_timer2();
}

void loop()
{
   switch(state)
   {
   case 0:
      digitalWrite(13,LOW);
      break;
```

```
    case 1:
      digitalWrite(13,HIGH);
      Serial.print("Hellow BT");
      break;
    }

}

void cleantime()
{
   timeout=0;
   state=0;
}
```

License

Attribution Non-Commercial Share Alike

cc by-nc-sa

Revision History

Rev.	Description	Release date
v1.0	Initial version	1/15/2011