

## Serial Bluetooth Module

This module enables you to wireless transmit & receive serial data. It is a drop in replacement for wired serial connections allowing transparent two way data communication. You can simply use it for serial port replacement to establish connection between MCU or embedded project and PC for data transfer.

### Features

- 3.3V power operation
- UART interface
- 10 meters range
- Easy to use
- Minimum External Components
- Status LEDs



### Applications

- Wireless Telemetry
- Remote Data Logging
- Robotics
- Sensor Monitoring
- Remote Programming

### Product Specifications

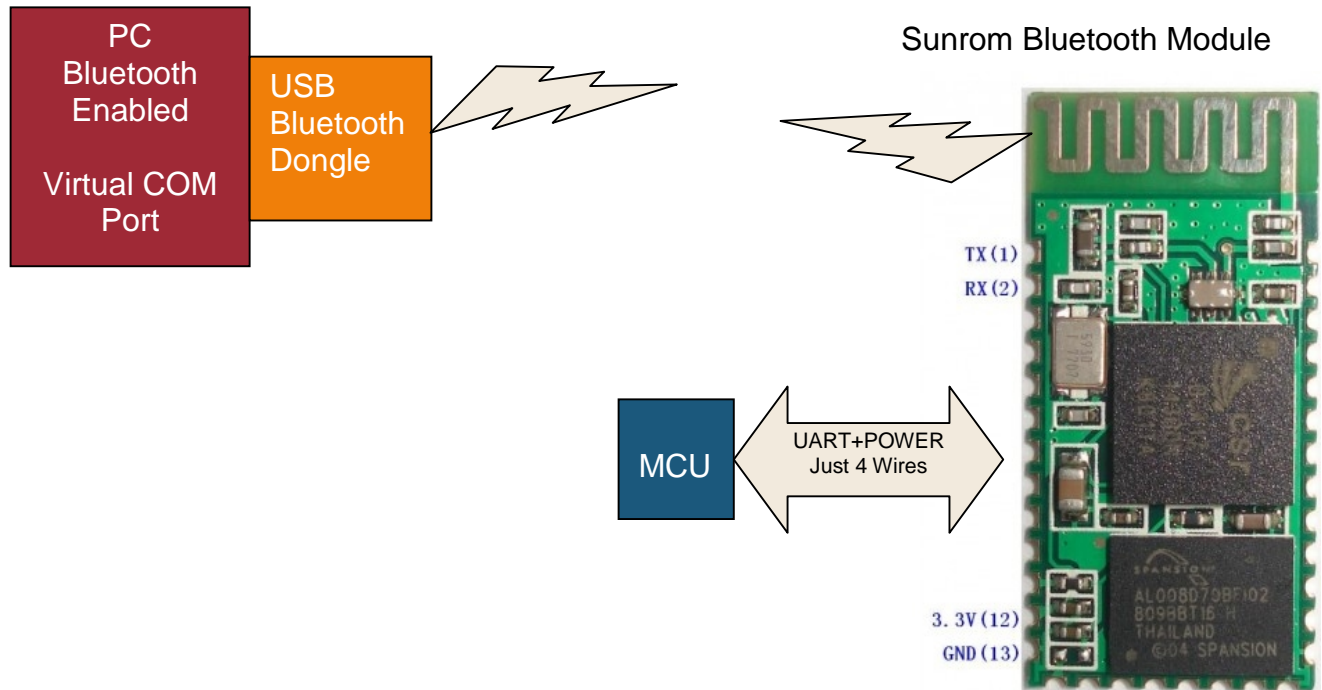
- Bluetooth protocol v2.0
- Range 10 meters
- Frequency: 2.4 Ghz ISM
- Modulation: GFSK
- Transmit power: 4dBm
- Sensitivity: 84dBm
- Rate: 2.1Mbps(Max) /160kbps(Async); 1Mbps(Sync)
- Authentication & Encryption
- Power Supply: +3.3 VDC 50mA
- Operating Temperate: -20C to +55 C
- Dimensions: 26.9 mm x 13 mm x 2.2 mm

## PC Data Transfer Mode:

We supply module with 9600 baud rate in ready to use with PC. You will need a USB Bluetooth adapter at PC side or Bluetooth Enabled Laptop to connect to our Bluetooth module.

Module supplied by us with this setting: 9600 baud rate, Pair Code: 1234

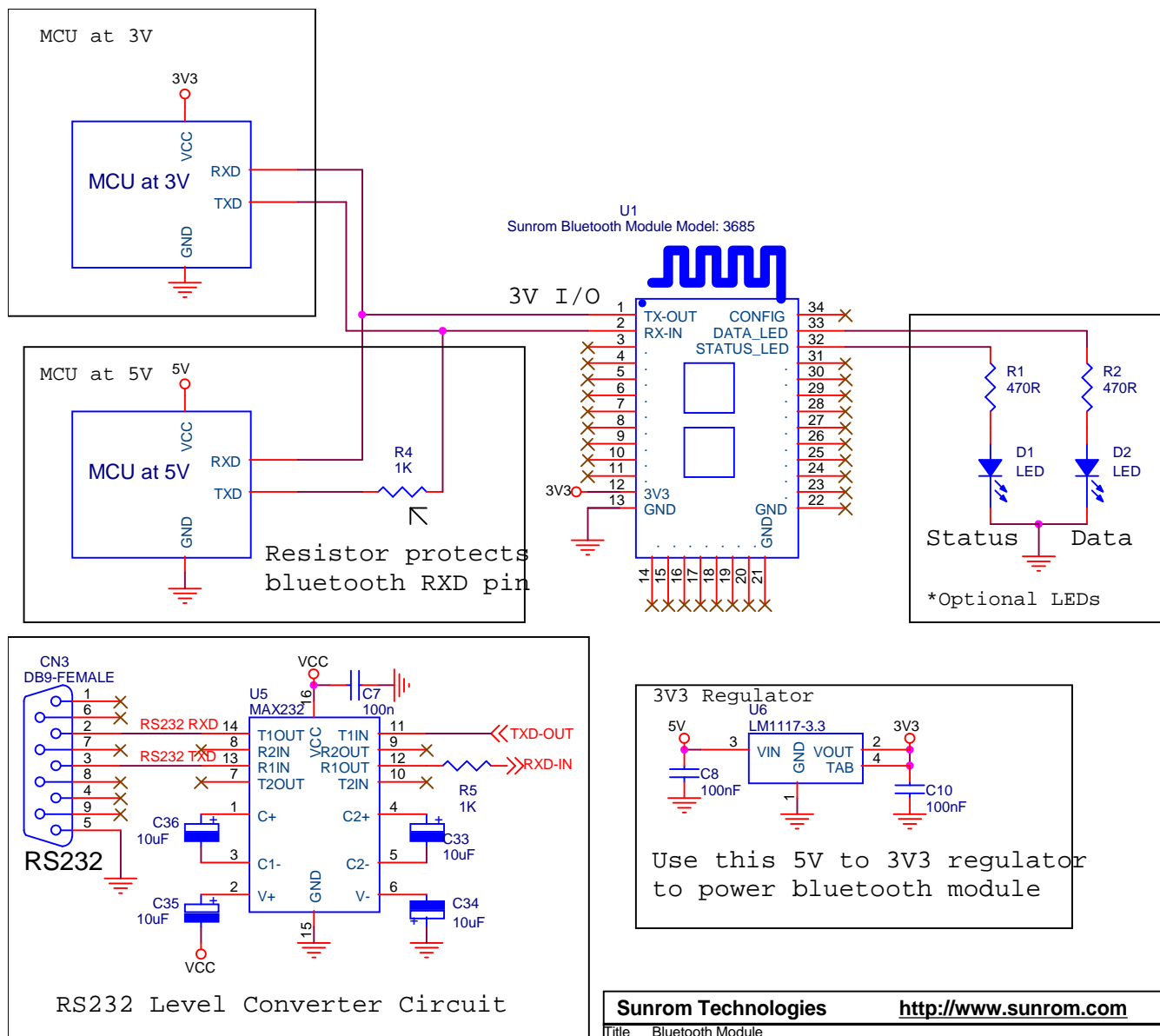
Note: There are many low cost USB Bluetooth dongle adapters for PC available with mobile spares suppliers. You can use any of them with PC to establish Bluetooth connection.



## Application Diagram

The Bluetooth module works on 3.3V level only. **High voltage like 5V will permanently damage the module, so please take care in using it.**

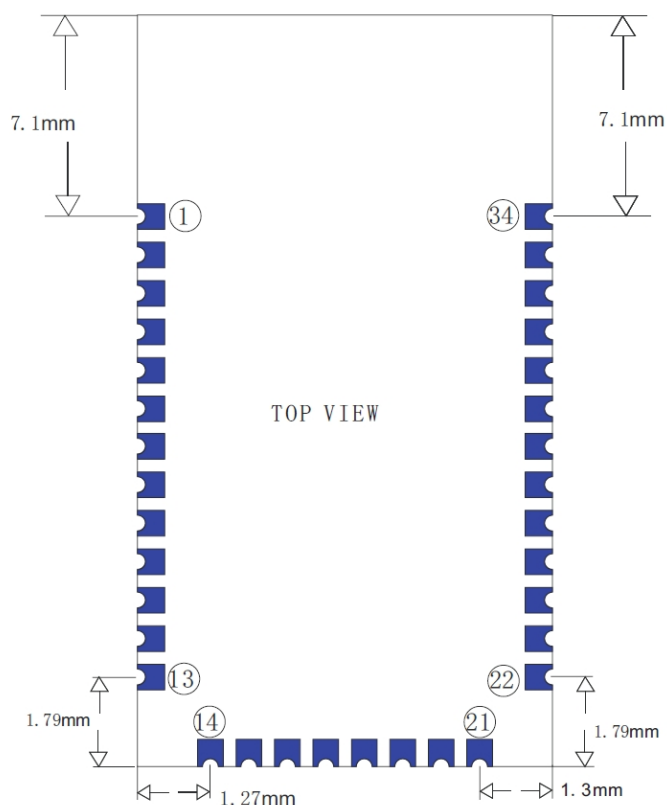
If your application requires to be operated at 5V then use a LM1117-3.3 regulator to convert the 5V level to 3V3 level as required by module. Also protect the RXD pin against 5V TXD signal by inserting 1K resistor in series to module RXD pin.



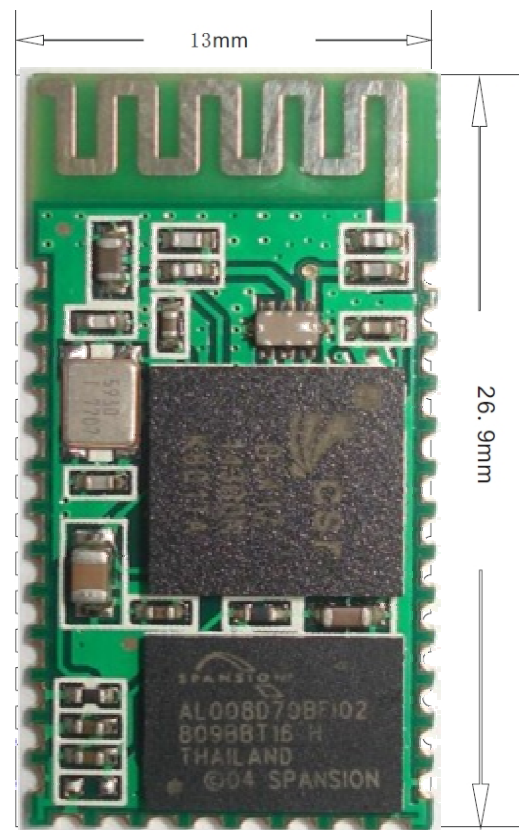
If you wish to connect this module to PC's Serial port which is at RS232 level, then you need to add MAX232 circuit as shown above.

Status LED flashes at different rates to indicate different status like searching, config, connected. Data LED lights on continuously when matching and data connection is established successfully.

## Dimensions & Pinouts



0.8mm  
2.2mm



Pin #	Pin Name	Pin#	Pin Name
1	UART-TX-OUT	18	
2	UART-RX-IN	19	
3		20	
4		21	GND
5		22	GND
6		23	
7		24	
8		25	
9		26	
10		27	
11		28	
12	3.3V	29	
13	GND	30	
14		31	
15		32	STATUS_LED
16		33	DATA_LED
17		34	

\*Note: 1) All Ground pins are internally connected in module so connecting any one ground pin will be ok. 2) Pins blank in above table are not used in module.

## Using PC Data Transfer Mode



Let us see how our Bluetooth can transfer data to PC. For this you will need a laptop with Bluetooth built in or PC with USB Bluetooth Dongle. On PC you will also need IVT BlueSoleil software to install virtual COM port.

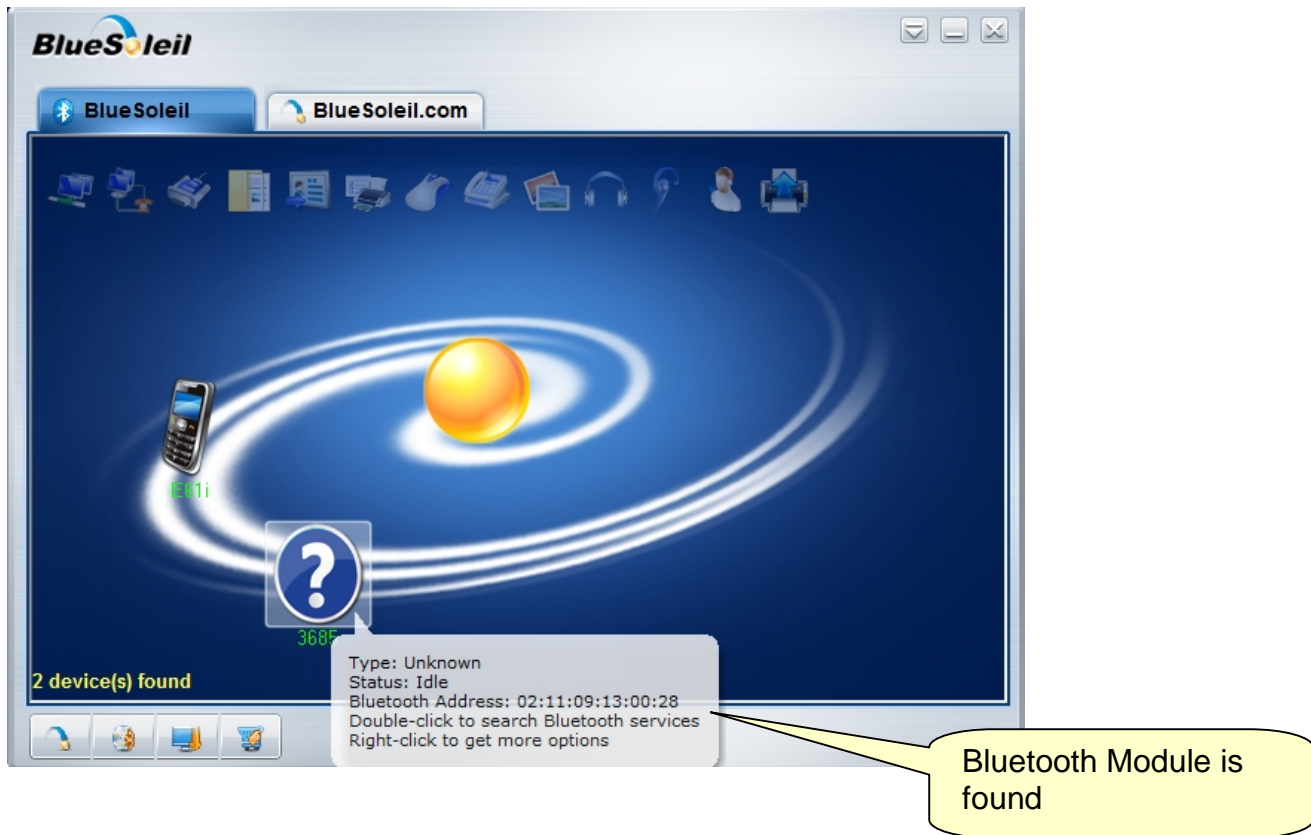
It's very easy to make any PC Bluetooth enabled. Visit a mobile spare supplier and ask for PC USB Bluetooth dongle. They are very low cost and can be found on ebay.in for around 250/- (\$4 approx).

When you have got Bluetooth USB dongle from a mobile spare supplier you can connect it to PC. The CD will contain a software usually IVT BlueSoleil. If not download BlueSoleil software from below

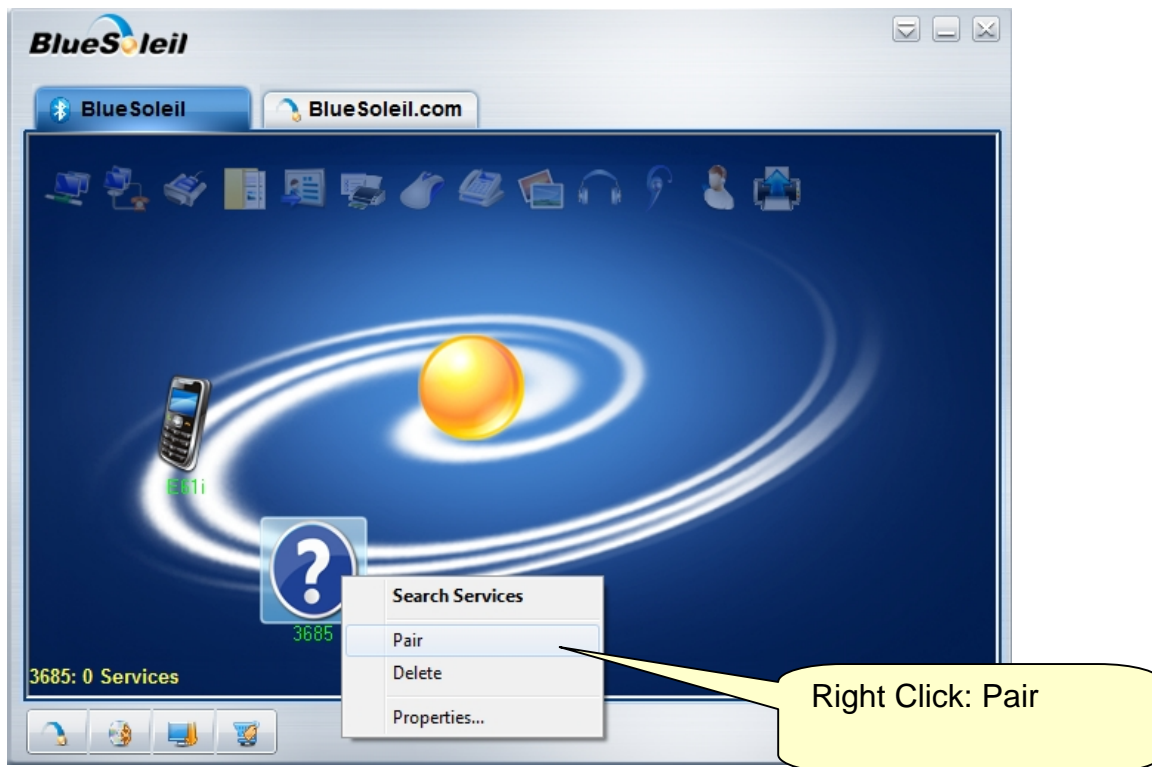
<http://www.softpedia.com/progDownload/BlueSoleil-Download-101364.html>

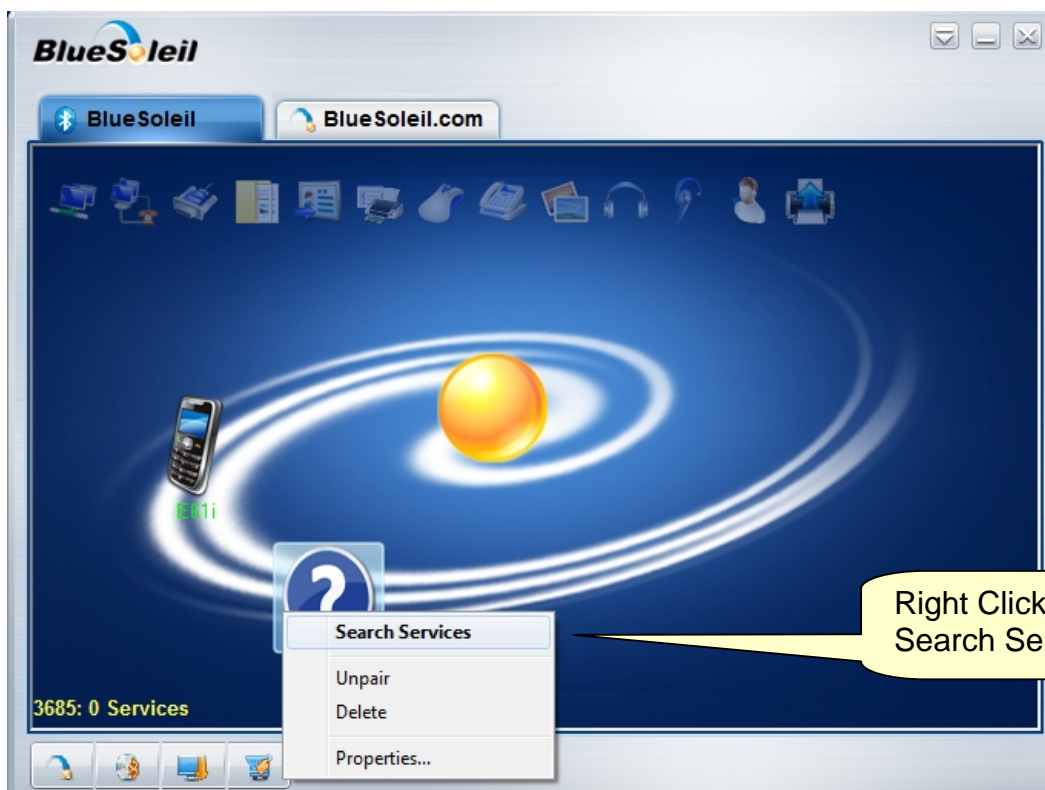
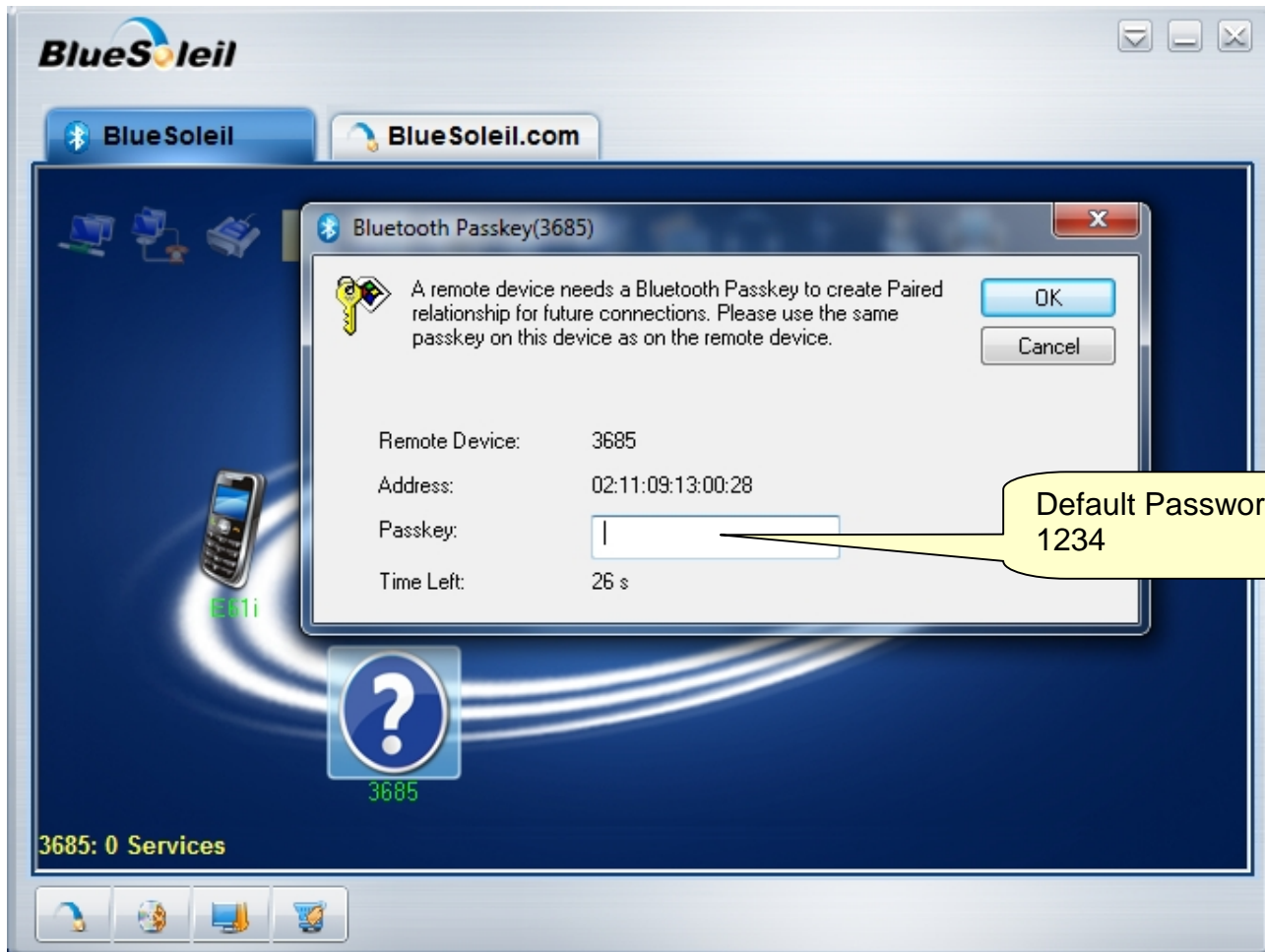
Step 1: Open BlueSoleil software and right click the yellow ball in the centre screen, right click "Search Devices", an icon named 3685 will appear after few seconds. The 3685 is the Bluetooth module

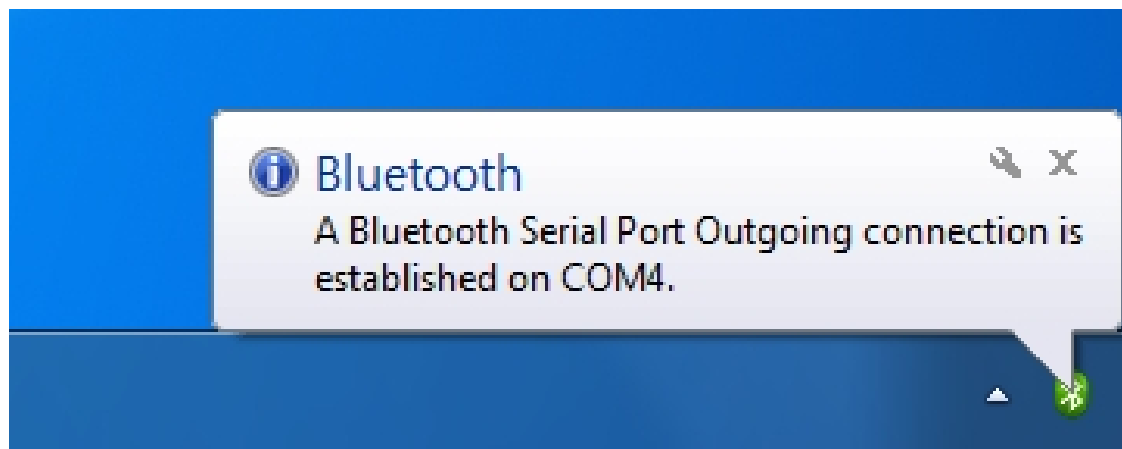
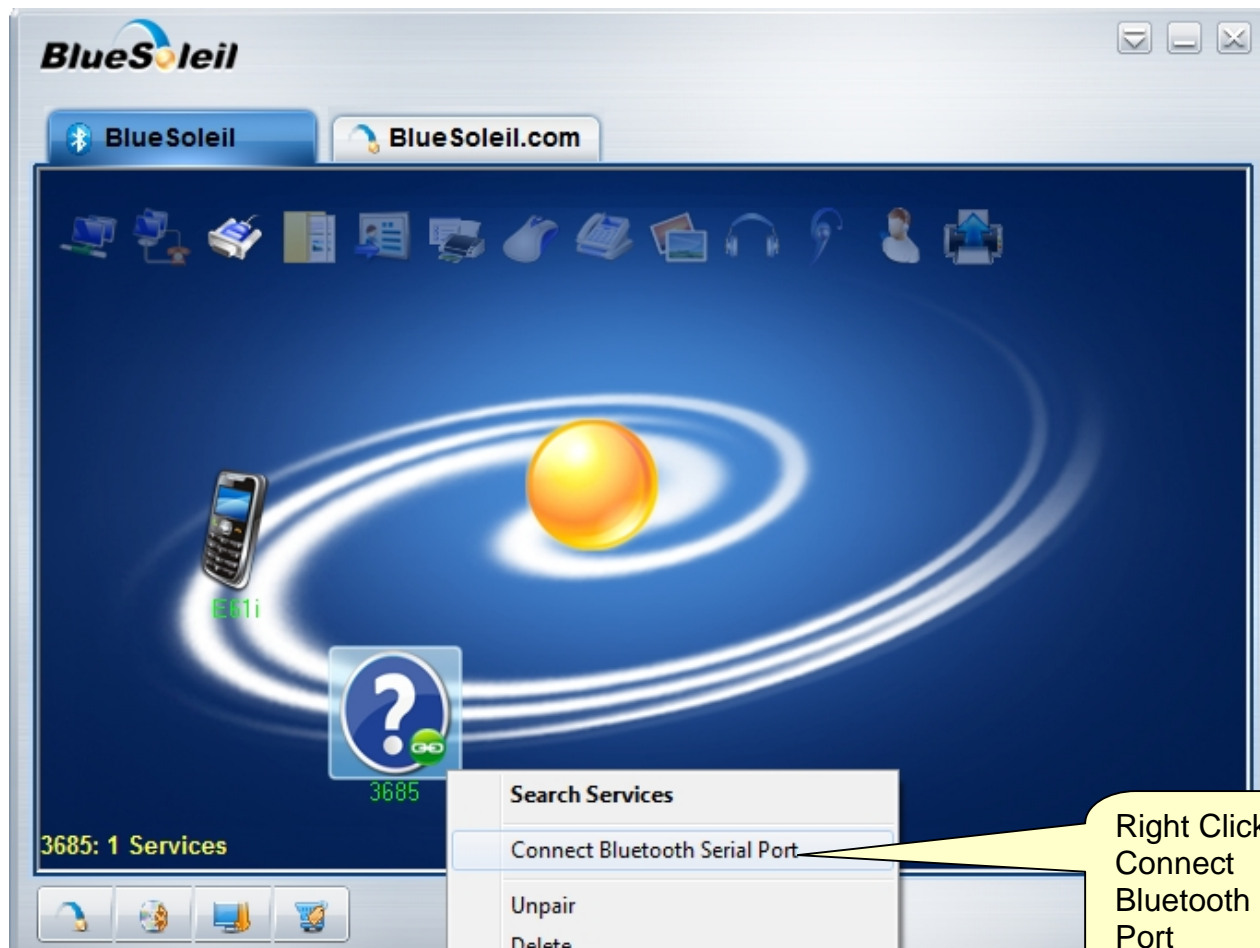




Step 2: Right click 3685 icon, click "Pair". A window will popup ask for PassKey which is "1234" by default.







Use any terminal software to transmit/receive serial data. We recommend Terminal software which you can download from this link <http://www.sunrom.com/files/Terminal.exe>