

Bluetooth to Serial Adapter

Version 2.0

User Manual





Contents

1.0 Features	P.2
2.0 Package Content.....	P.2
3.0 Hard Drives Requirement	P.2
4.0 Specifications.....	P.3
5.0 Pin Assignment.....	P.5
6.0 Hardware Guide.....	P.6
7.0 Configure Bluetooth to Serial Adapter.....	P.10
8.0 Operate Bluetooth to Serial Adapter.....	P.18
9.0 Application.....	P.22
10.0 Trouble Shooting.....	P.23
11.0 Appendix.....	P.26

Introduction

Thank you for your purchase of the Bluetooth-to-Serial (RS-232 or RS-422/485) Adapter. Featuring Bluetooth wireless technology, the serial adapter provides cable-free Serial connections between your Bluetooth equipped PC and serial devices. Bluetooth-to-Serial Adapter is compliance to Bluetooth v2.1 and you can connect your computer and RS-232 or RS-422/485 devices 100 meters apart without cables in your working environments.

1.0 Features

- Link Serial (RS-232 or RS-422/485) device to a Bluetooth communication (Product dependant)
- Supports Bluetooth Class 1 version 2.1 standard
- Operating distance of up to 100 meters in free space
- Supports baud rate up to 921.6 Kbps
- Compact sized and easy operation design with User-friendly Windows configuration software
- Intelligent draw/provide 5VDC power to/from the device through the 9th-pin
- Powered by external power adapter or USB port on hosting device
- Bluetooth configuration utility supports Microsoft Windows 2000, XP, Vista, and 7.

2.0 Package Content

Check if the following items are present and in good condition upon opening your package. Contact your retailer if any of the items is damaged or missing.

1. Hardware:

* Bluetooth to Serial Adapter:

Bluetooth to RS-232 or Bluetooth to RS-422/485 × 1 (Product dependant)

* Power Adapter:

5V / 1A 1.3mm 

* Console Cable

2. CD Driver

3. User's Manual (This document)

3.0 Hard Drives Requirements

- PC should have a Bluetooth host installed, such as a Bluetooth USB dongle. It allows you to communicate with Bluetooth to Serial Adapter.
- Windows System : Win 2000, XP, Vista, or 7.

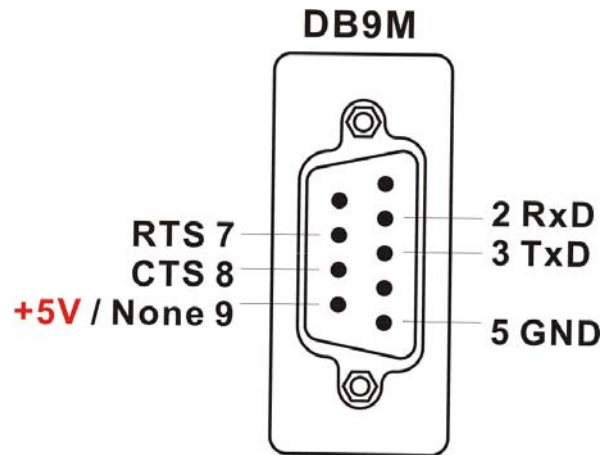
4.0 Specifications

Model Name	Bluetooth to RS-232 Adapter
Standard	Bluetooth V2.1+EDR
Frequency Band	2402 ~ 2480 MHz
Services Supported	Series Port Profile (SPP)
Transfer Rate	1200~ 921,600 bps Baud
RF Output Power	Class 1
Antenna	2.5dBi External Antenna
Working Distance	Up to 100m in free space
TX Output Power@ DH5	10~15dBm
RX Sensitivity	≤ -82dBm
Power Consumption	Tx Typical: 115mA
	Rx Typical: 75mA
	Standby Mode: 15mA
Input Power	+5V DC
I/O Interface	RS-232 DTE Mode
Connector	DB9 Male
Signal	RxD, TxD, RTS, CTS, GND
LEDs Indicator	Power / Bluetooth Link / Mode active
Case Material	ABS
Environment	Operation temperature: 0 °C ~ + 40 °C (50-104°F)
	Storage temperature: -10 °C ~ +85 °C (14~176°F)
	Humidity: 5 ~ 90% non-condensing
Size	109 (L) x 34(W) x 18(H) mm
Weight	150 ± 2 g
Utility Supports	Windows 2000/XP/Vista/7

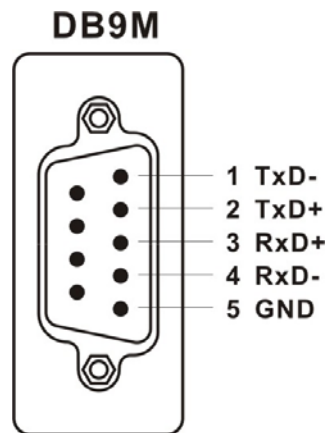
Model Name	Bluetooth to RS-422/485 Adapter
Standard	Bluetooth V2.1+EDR
Frequency Band	2402 ~ 2480 MHz
Services Supported	Series Port Profile (SPP)
Transfer Rate	1200~ 921,600 bps Baud
RF Output Power	Class 1
Antenna	2.5dBi External Antenna
Working Distance	Up to 100m in free space
TX Output Power@ DH5	10~15dBm
RX Sensitivity	≤ -82dBm
Power Consumption	Tx Typical: 115mA
	Rx Typical: 75mA
	Standby Mode: 15mA
Input Power	+5V DC
I/O Interface	RS-422/485 DTE Mode
Connector	DB9 Male
Signal	RS-422: Rx D_{\pm} , Tx D_{\pm} , GND
	RS-485: Data \pm , GND
RS-422/485 Select	RS-422/485 Auto Identify and Switch Technology
RS-485 Data Control	ADDM (Auto Data Direct Match)
LEDs Indicator	Power / Bluetooth Link / Mode active
Case Material	ABS
Environment	Operation temperature: 0 °C ~ + 40 °C (50-104°F)
	Storage temperature: -10 °C ~ +85 °C (14~176°F)
	Humidity: 5 ~ 90% non-condensing
Size	109 (L) x 34(W) x 18(H) mm
Weight	150 ± 2 g
Utility Supports	Windows 2000/XP/Vista/7

5.0 Pin Assignment

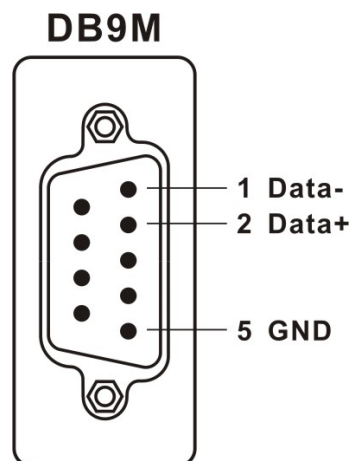
◆ RS-232 (Product dependant)



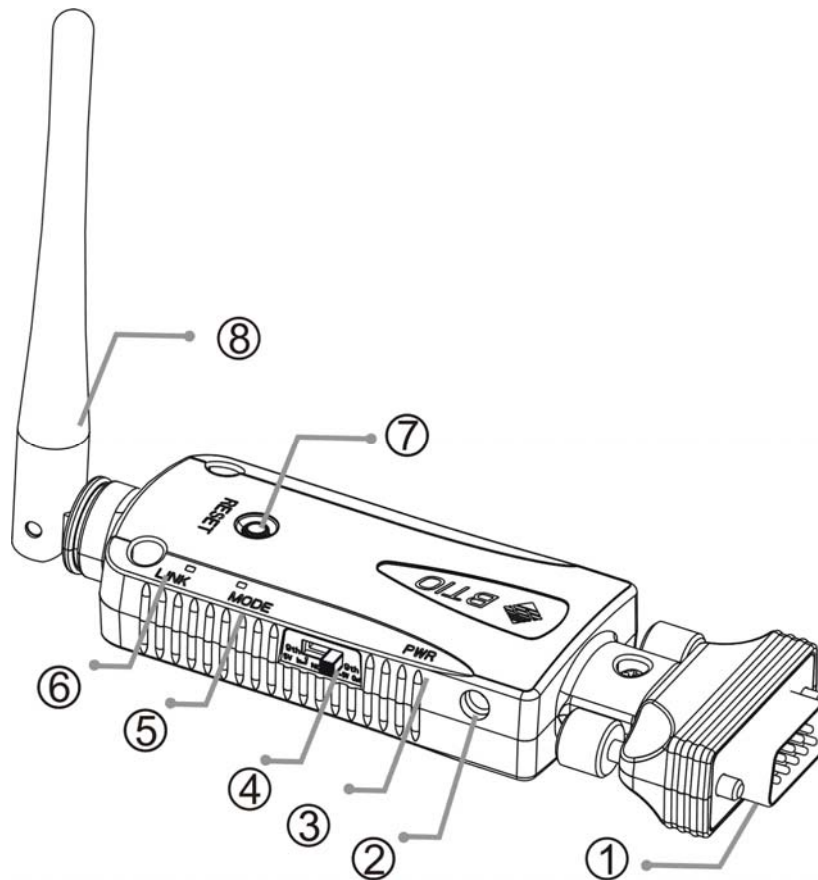
◆ RS-422 (Product dependant)



◆ RS-485 (Product dependant)



6.0 Hardware Guide



① Serial DB9M Connector:

Serial UART (RS-232 or RS-422/485) DB9 Male Connector

② DC Jack:

Apply power to Bluetooth to Serial Adapter by using the power adapter accompanied.

Power Output: 5VDC @ 1A



Connector: Concentric Barrel Type

Connector's Outer Diameter: 3.5±0.3mm

Connector's Inner Diameter: 1.35±0.3mm

Connector Length: 9±0.3mm

⑧ Antenna

Frequency: 2.4GHz

Antenna gain: 2.5dBi

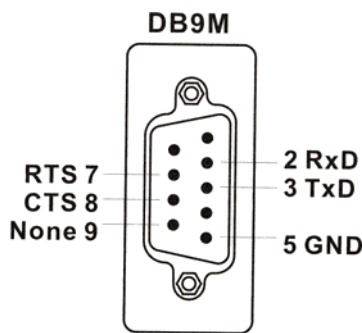
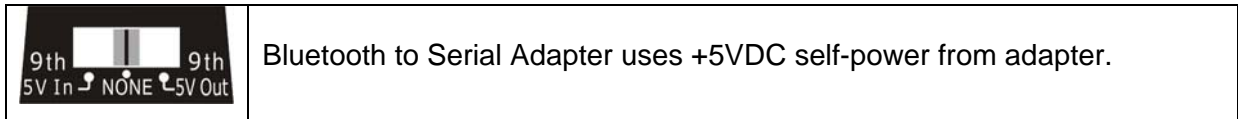
Impedance: 50Ω

④ **Switch:** (Product dependant)

There are three states for the 9th pin on the DB9 Male connector, selectable by switch depend on user's application. The three states are as follow:

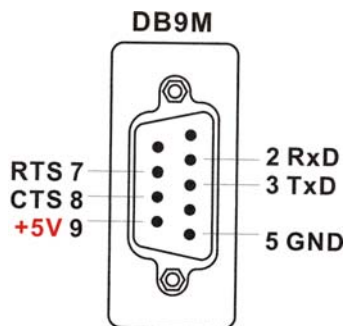
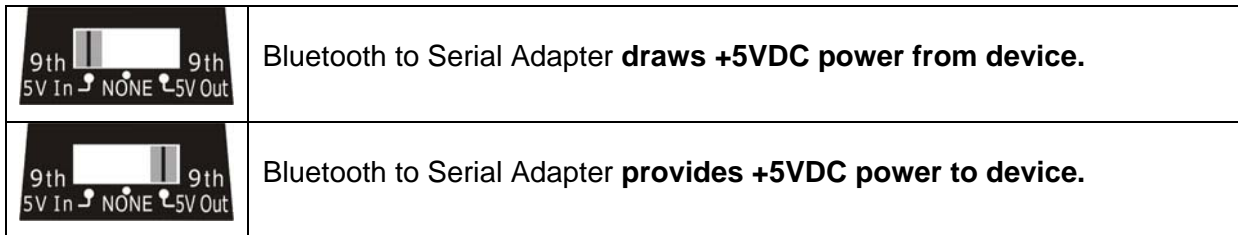
◆ None : (Default)

Setting the switch to “**NONE**” position, the DB9M 9th-pin connector is useless.



◆ 5V input / output :

Setting the switch to “**5V**” position, the adapter can either draw/provide DC 5V power to/from the device through the 9th-pin of the connector depends on the following scenario,



1. If the device equips 5V self-power features (e.g. barcode scanner with 5V power adapter input), Bluetooth to Serial Adapter can work successfully without any power. A DC 5V power will be applied to Bluetooth to Serial Adapter through DB9M 9th-pin connector from the device.
2. If Bluetooth to Serial Adapter with 5V power adapter input, a DC 5V power will output to the device (e.g. barcode scanner) through DB9M 9th-pin connector from Bluetooth to Serial Adapter.



CAUTION: Take caution not to let any of the following situations happen while the switch is set to "5V" position, or damages may occur to both your device and the Bluetooth Adapter:

1. Do NOT plug in DC 12V power required devices.
2. Do NOT use DC 5V power adapters on both sides at the same time.
3. Your device MUST support power in/output toward DB9M 9th-pin connector.

Application

1. If Bluetooth to Serial Adapter with 5V power adapter input, a DC 5V power will output to the device (e.g. barcode scanner) through DB9M 9th-pin connector from Bluetooth to Serial Adapter.






2. If the device equips 5V self-power features (e.g. barcode scanner with 5V power adapter input), Bluetooth to Serial Adapter can work successfully without any power. A DC 5V power will be applied to Bluetooth to Serial Adapter through DB9M 9th-pin connector from the device.





③⑤⑥ LED Indication:

There are three LEDs indicate Bluetooth to Serial Adapter working status.

LED	Status	Indication
③ Power LED RED 	ON	Power is applied to this adapter.
	OFF	There's no power to this adapter.
⑤ Mode LED GREEN 	ON	Adapter is set to configure mode. (Mode green LED will act, when Link blue LED off)
	OFF	Adapter is set to normal DATA Communication mode.
⑥ Link LED BLUE 	OFF	Adapter goes to configure mode. (Mode green LED will act, when Link blue LED off)
	Blinking Fast	Adapter's Bluetooth communication is waiting for paired connection.
	Blinking Slow	Adapter's Bluetooth communication pair connection link successfully and data transmitting / receiving between the linked devices.

⑦ Reset Button:

Push it to change operation between **Configure** and **Data** Mode.

Mode	LED	Indication
Configure Mode	 Green	User can configure adapter's UART and Bluetooth settings under this mode.
Data Mode	 Blue	Adapter runs normal data communication mode.



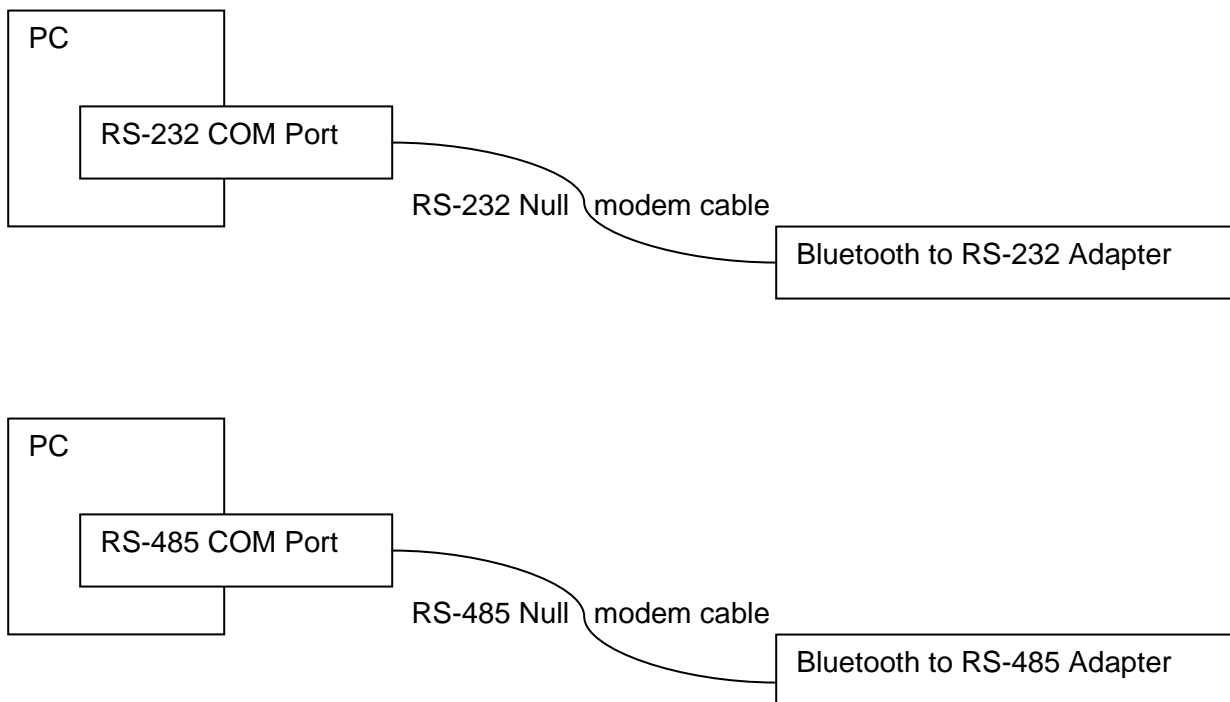
Be sure to push down this button before configuring Bluetooth to Serial Adapter.
After configuration finish, re-push it again.

7.0 Configure Bluetooth to Serial Adapter

This chapter explains how to configure the Bluetooth-to-Serial Adapter. All the Bluetooth to Serial Adapter must be configured first before they can be used. The purpose of configuration is to pair two Bluetooth devices for an exclusive connection between them, and pairing is done by utilizing [Bluetooth Address](#) and [PIN code](#).

After pairing process is done and power is on, Bluetooth to Serial Adapter will **AUTOMATICALLY** try to link (Master) or to be linked (Slave) with another paired Bluetooth device wirelessly, just like there is a cable connected between them.

Before going to configure Bluetooth to Serial Adapter setting, please connect Bluetooth to Serial Adapter to PC's COM port over console cable (null-modem cable that includes in the package).



7.1 Local Setting Up (Console mode)

Local setting up can be done by connecting a Bluetooth to Serial Adapter to your PC. You can connect PC COM port to a Bluetooth to Serial Adapter directly or through a RS-232 or RS-422/485 converter cable as shown in Appendix (chapter10). Be sure to click Reset Button on Bluetooth to Serial Adapter when you want to configure Bluetooth to Serial Adapter with console mode.

7.1.1 Preparation :


Step 1 :

Connect this Bluetooth to Serial Adapter to your PC COM Port, such as COM1, COM2 or any other.

Step 2 :

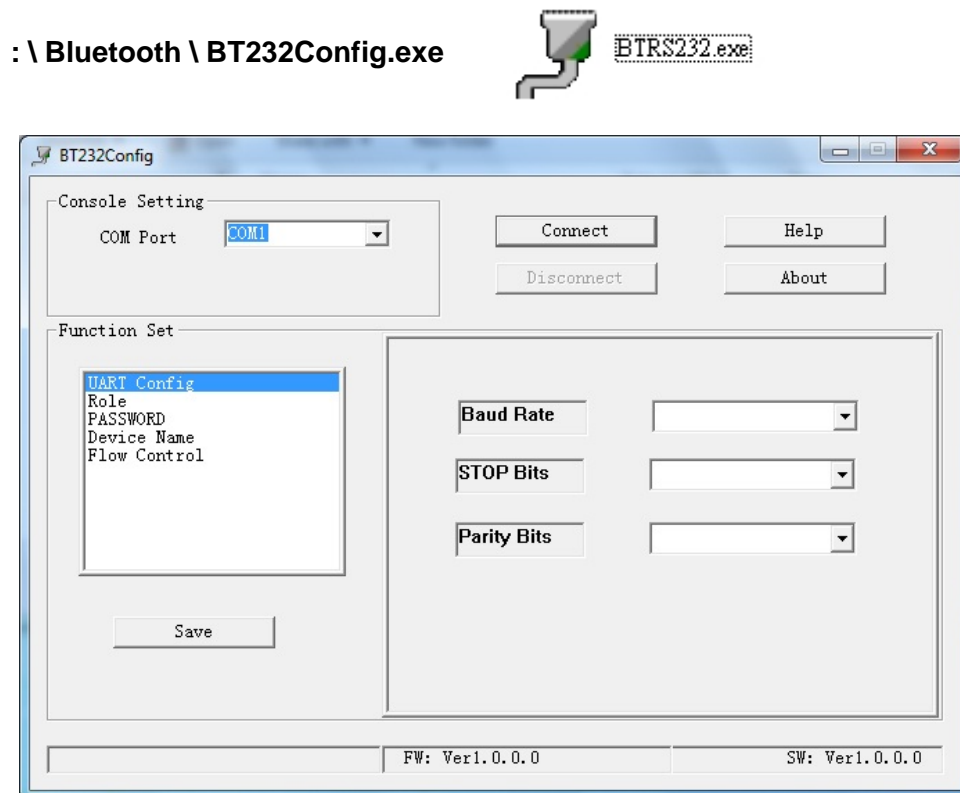
Apply power to Bluetooth to Serial Adapter by using the accompanied +5VDC Power Adapter.

Step 3 :

Click the **Reset Button** on Bluetooth to Serial Adapter, and then **MODE LED lights**  (green color), which indicates that the adapter is in the Configure Mode. (This is necessary step when you want to configure Bluetooth to Serial Adapter with console mode)

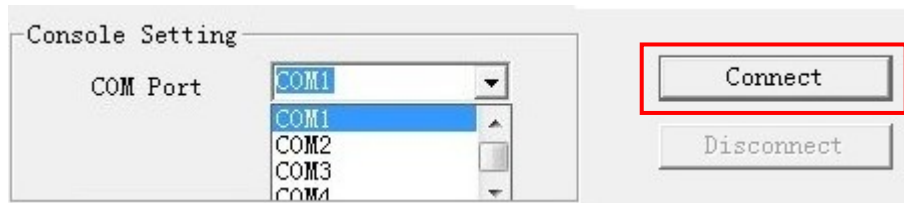
Step 4 :

Launch Bluetooth to Serial Adapter Utility - **BT232Config.exe** in the accompanied CD driver :



Step 5 :

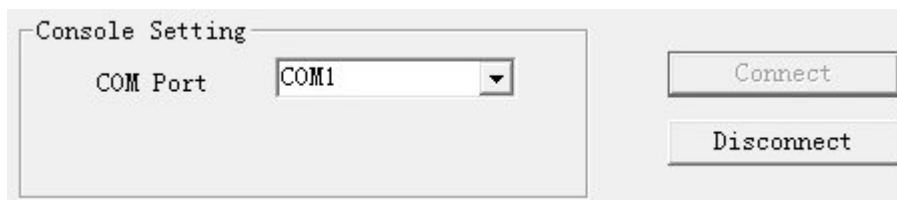
Select the PC COM Port which Bluetooth to Serial Adapter is connected (e.g. COM1), and click “**Connect**” to connection PC and adapter.



Note :

Local PC COM port will use 115200 baud rate to connect with your Bluetooth to Serial Adapter.

It takes 3~5 seconds making connection between PC and adapter. If connection link successfully, “**Disconnect**” button will highlight and then you can configure Bluetooth to Serial Adapter settings. User can click “**Disconnect**” button to disconnect PC and adapter link.



Q&A :

Q. What kind of parameter should be set for my Bluetooth to Serial Adapter??

A. Supposed there is a remotely configured Bluetooth to Serial Adapter DTE Adapter which is connected to a serial printer, and its paired device is a USB Bluetooth Dongle connected to your PC. You then can use PC to wirelessly control the operations of the remote printer.

Bluetooth to Serial Adapter setting must matches with your serial device. For example, please set 9600,N,8,1 parameter for your Bluetooth to Serial Adapter that matches with your printer. Please read next session to know the operation steps.



7.1.2 Start Configuration:

■ UART Configure.

Change UART parameters, Bluetooth to Serial Adapter will use them to connect with a RS-232 or RS-422/485 device later.

Baud Rate:

1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, and 921600 (Default: 9600)

Stop Bit:

1 and 2 (Default: 1)

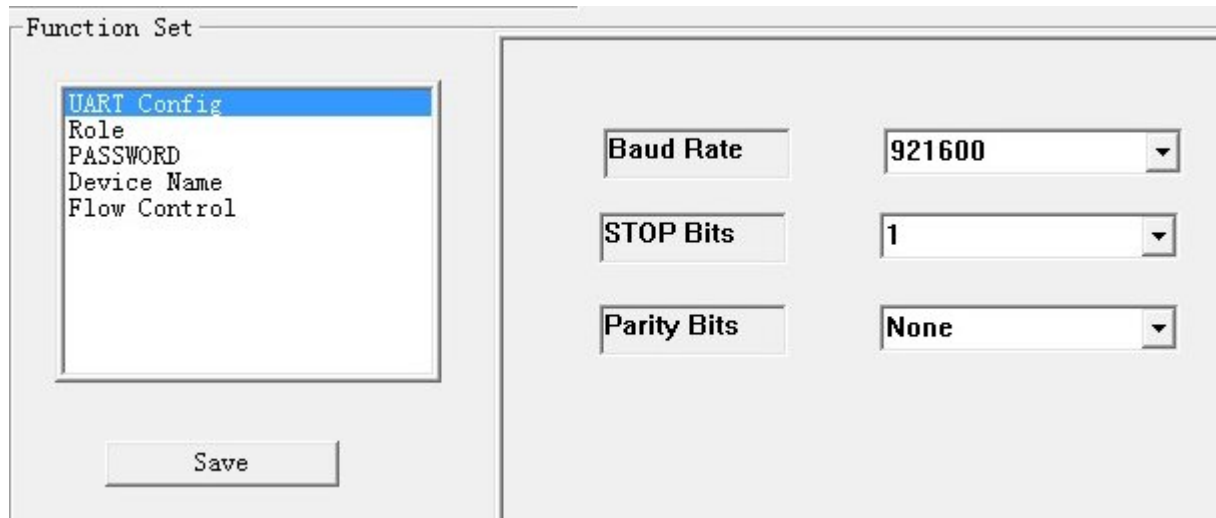
Parity Bit:

None, Odd, and Even (Default: None)

Data bit:

8 (Default: 8, Does NOT support 5, 6, or 7 bit)

Press [Save](#) Button.



The screenshot shows a software window titled "Function Set". On the left, there is a list of configuration options: "UART Config" (highlighted in blue), "Role", "PASSWORD", "Device Name", and "Flow Control". Below this list is a "Save" button. On the right side of the window, there are three dropdown menus for configuration: "Baud Rate" is set to "921600", "STOP Bits" is set to "1", and "Parity Bits" is set to "None".

■ Role - Master or Slave (Default)

Depending on the applications, there are two states which Bluetooth to Serial Adapter can operate in DATA mode. They are Master and Slave states. If you are using a USB Bluetooth Dongle to pair with a Bluetooth to Serial adapter, then Bluetooth to Serial Adapter can be set to either Master or Slave state. If you are using two Bluetooth to Serial Adapter to pair together, then one of them shall be set to Master and another shall be set to Slave. Please refer to chapter9 for user application.

Master - Trying to link with other Bluetooth devices.

Slave - Waiting to be linked with other Bluetooth devices.

Master State:

If you choose this state, then you **must** enter Bluetooth MAC Address of the **remote** Bluetooth device (e.g. 000272463b86) which this Bluetooth to Serial Adapter will be pairing and connecting with.

The screenshot shows a dialog box titled "Function Set". On the left, there is a list of options: "UART Config", "Role", "PASSWORD", "Device Name", and "Flow Control". The "Role" option is selected and highlighted in blue. Below this list is a "Save" button. On the right side of the dialog, there are two radio buttons: "Master" (which is selected) and "Slave". Below the "Master" radio button is a text input field containing the MAC address "000272463b86". Below the "Slave" radio button is a checkbox labeled "Discoverable" which is unchecked, and an empty text input field below it.

Slave State: (Default)

Discoverable (Default) - If Discoverable is enabled, Bluetooth to Serial Adapter can be found by searching **Bluetooth Device** on PCs. If it is disabled, then it can not be found. This feature will prevent other Bluetooth host or devices to create a link with it accidentally if it has already been configured to pair with another device before.

The screenshot shows the same "Function Set" dialog box. The "Role" option is still selected in the list on the left. On the right side, the "Slave" radio button is now selected. The "Discoverable" checkbox is now checked. The text input field below the "Slave" radio button now contains the MAC address "000272463b86". The text input field below the "Discoverable" checkbox is empty.

Remote MAC Address –

Enable this feature, you can enter Bluetooth MAC Address of the **remote** Bluetooth device (e.g.000272463b86) which this Bluetooth to Serial Adapter will be linking with. If it is disabled or MAC address is left empty, then any **remote** Bluetooth device can pair with this Bluetooth to Serial Adapter. (Default: None)

■ Password

Password (Default, PIN = 1234) Disable this function will allow other Bluetooth devices to connect with this Bluetooth to Serial Adapter without checking any PIN code. If it is enabled, then you should enter a PIN code (length <=12 digits). Default is enabled and PIN code is “**1234**” .

PIN stands for Personal Identification Number. Enter the PIN code, keep it the same as the remote Bluetooth device, so pairing can be done between these two devices.

Press [Save](#) Button.

Function Set

- UART Config
- Role
- PASSWORD**
- Device Name
- Flow Control

Password Enable

1234

Save

■ Device Name

Enter a Device Name for your Bluetooth to Serial Adapter (length <= 31 alphanumeric characters).
For example: “Bluetooth to RS-232 Adapter”.

Press [Save](#) Button.

Function Set

- UART Config
- Role
- PASSWORD
- Device Name**
- Flow Control

NAME Bluetooth to RS-232 Adapter

Save

■ Flow Control

In data communications, flow control is the process of managing the pacing of data transmission between two nodes to prevent a fast sender from outrunning a slow receiver. Bluetooth to Serial Adapter supports enable RTS / CTS pins to handshake between two nodes. Be sure to check your serial device supports hardware flow control, before enable this feature. (Default: Disable)

RTS (Request To Send) / CTS (Clear To Send)

Press [Save](#) Button.



Note:

1. Be sure to execute "**Save**" button in each modify parameter.
2. After connecting PC and adapter successfully, you can read MAC address, FW, and software utility information on the button of console utility.

MAC:001C971F4B21

FW: Ver1.0.0.0

SW: Ver1.0.0.0

3. Please refer to chapter10 Trouble Shooting for the error message analysis.

7.1.3 Finish Configuration:

After configure settings finish, press **Disconnect** button. Remove your Bluetooth to Serial Adapter from PC COM port, and connect it to your RS-232 or RS-422/485 device.



Push Reset button to change from Configuration mode to DATA mode.

MODE LED ● (green color) will be off.

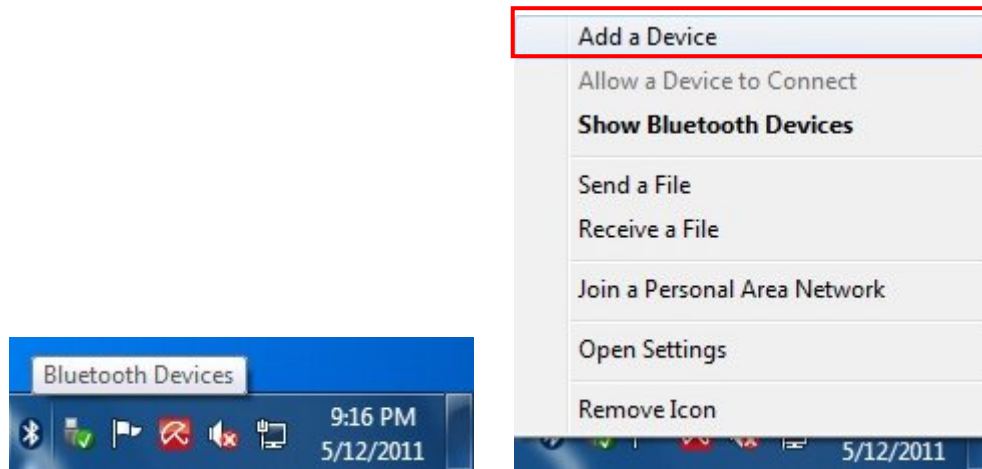
Now, automatic connection will begin. If configured at Master state, Bluetooth to Serial Adapter will scan its proximity see if there is any Bluetooth device which has the matched MAC address and PIN code. If found, it will establish the wireless link automatically and Link LED ● (blue color) of Bluetooth to Serial Adapter will light. If configured at Slave state, Bluetooth to Serial Adapter will wait for other Bluetooth device to create a link with it.

8.0 Operate Bluetooth to Serial Adapter

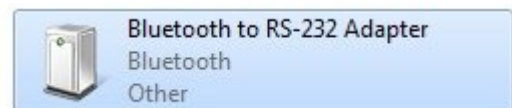
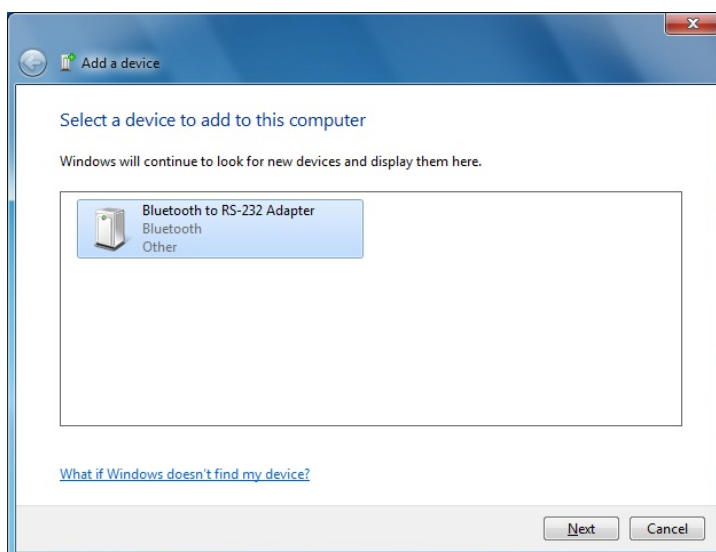
This chapter explains how to pair Bluetooth-to-Serial Adapter with a Bluetooth USB Dongle. **Please note that Bluetooth USB Dongle is NOT included in the package. We assume that you have already installed Bluetooth USB Dongle and bound software in your PC successfully. The following demonstration is the process of pairing steps with Microsoft embedded Bluetooth driver on Windows 7.**

Step 1 :

Enable Bluetooth wireless radio function (USB Bluetooth Dongle or embedded Bluetooth module) on your PC system. Then you can discovery Bluetooth logo in the system tray taskbar. Right click on you mouse and select **“Add a Device”**.

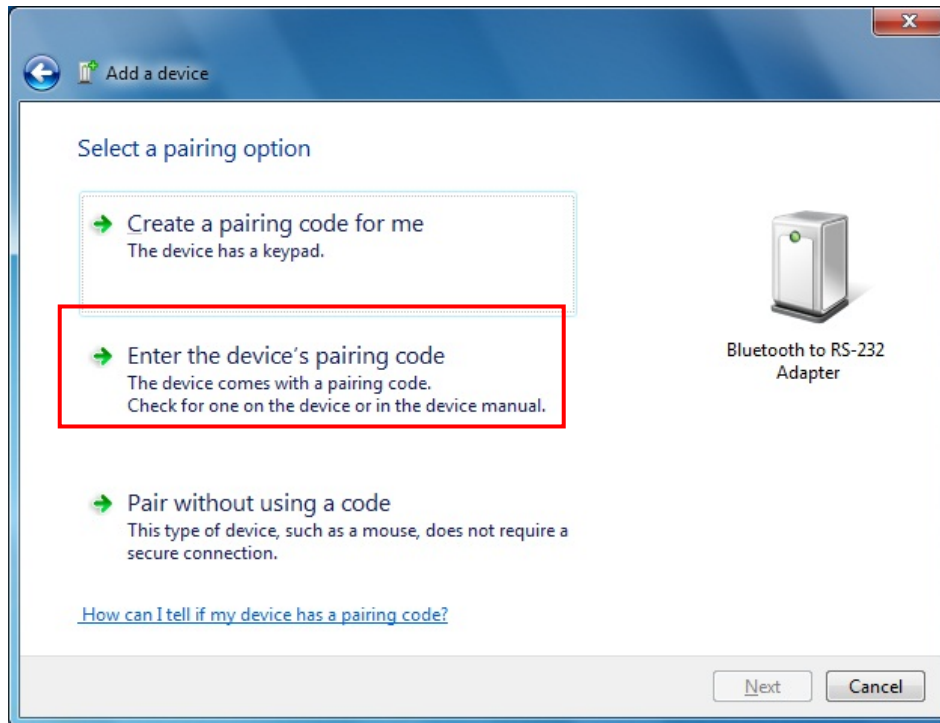


Windows Bluetooth Device Wizard will find one **“Bluetooth to RS-232 Adapter”** device shown in the table. Click (select) this new device and press **“Next”** to continue.



Step 2 :

Please select “**Enter the device’s pairing code**” to pair connect to Bluetooth-to-Serial Adapter.



System will ask you to input Bluetooth to Serial Adapter PIN code. If this Bluetooth to Serial Adapter is the first time being configured, then its PIN code is factory default to “**1234**”. Enter “1234” in this step. If PIN code was configured before, then previous setting of PIN code must be entered.

Click **Next** to continue.

Enter the pairing code for the device

This will verify that you are connecting to the correct device.

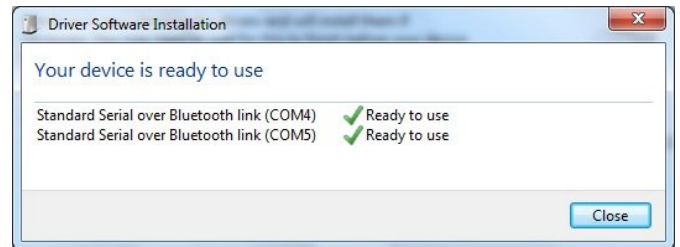
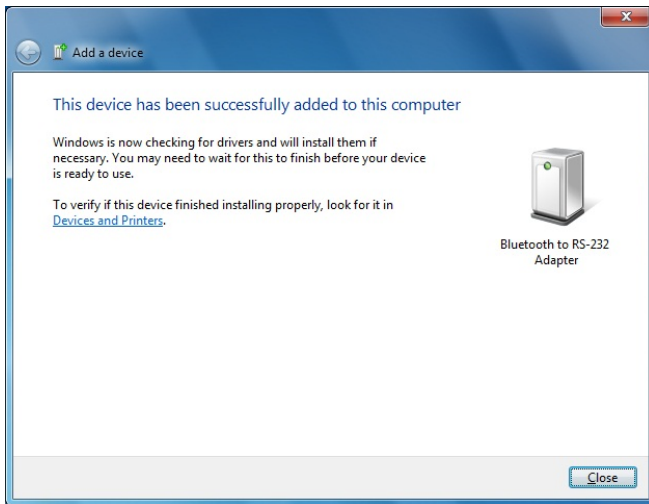
The code is either displayed on your device or in the information that came with the device.

Note :

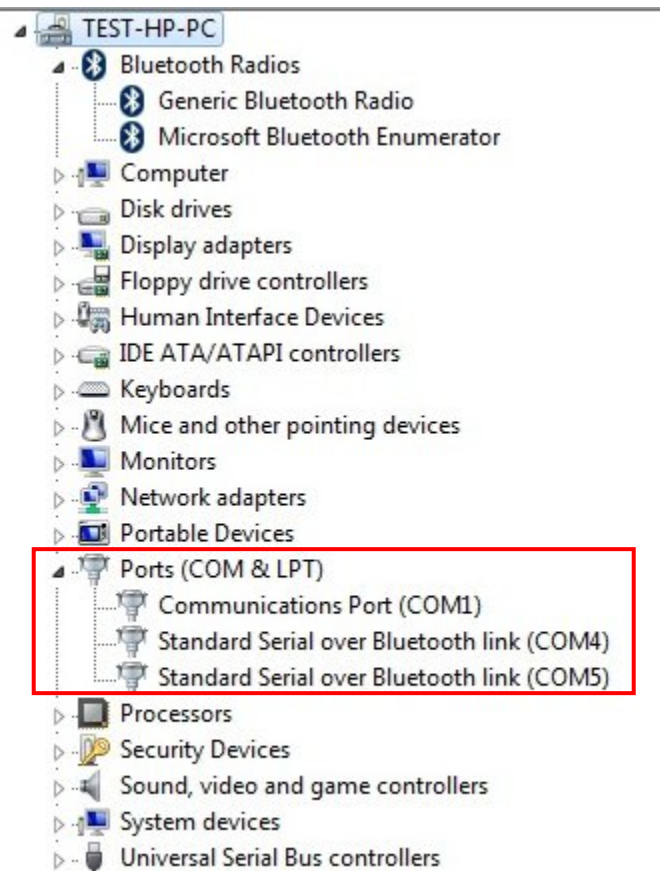
If your PIN code is not correct, two Bluetooth devices will not pair together. Bluetooth to Serial Adapter default PIN code is “**1234**”. If you had modified it before and forgot the PIN code, please reset your Bluetooth to Serial Adapter and follow 7.1.2 section to configure the PIN code.

Step 3 :

System will verify your PIN code!! If your pin code is correct, Bluetooth to Serial Adapter and USB Bluetooth Dongle will pair together. Then click “**Close**” to finish pairing steps.

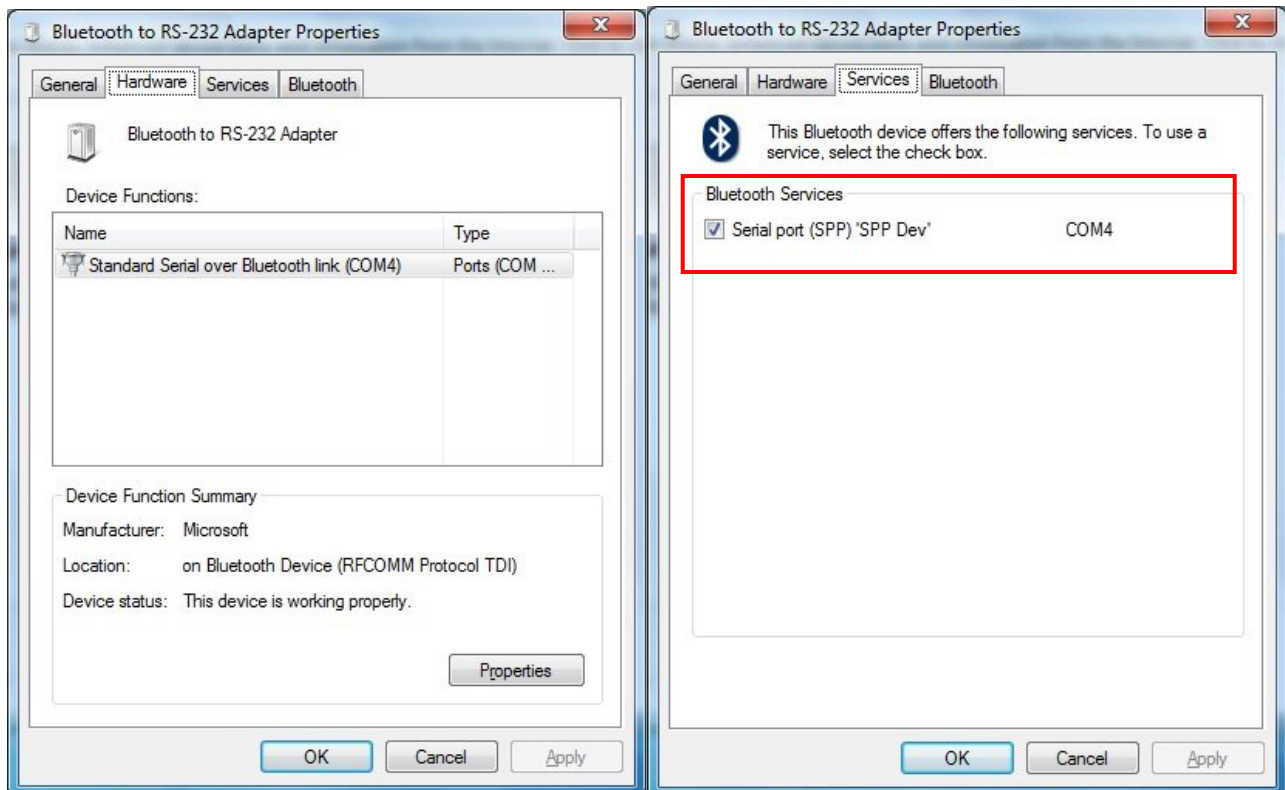
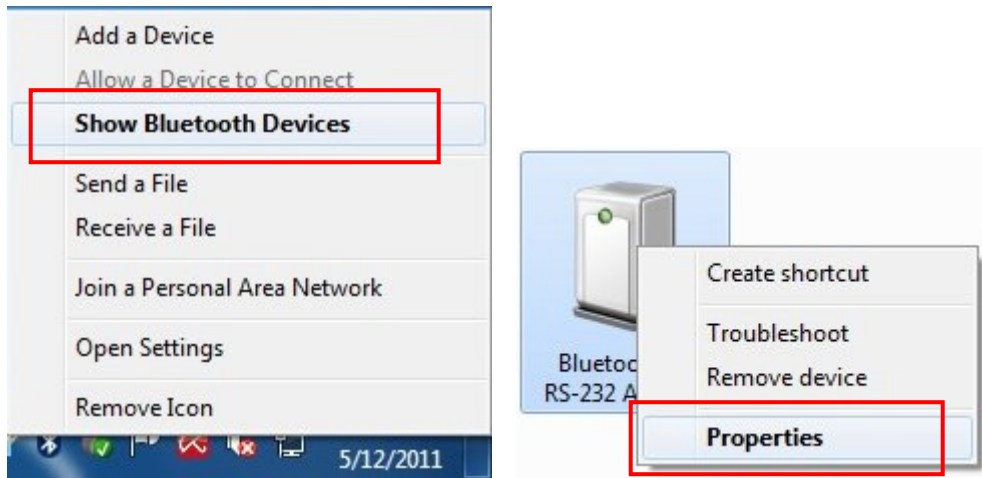




System will create COM ports in the device manager. (e.g. COM4 and COM5)
Please open first COM port (e.g. COM4) for serial data receive/transmitting.



Step 4 :

System will record Bluetooth to Serial Adapter in Bluetooth devices table list. You can configure it by click **“Properties”**.



After opening COM successfully, the Link LED  (blue color) will blink slowly. If your Bluetooth pair communication drops, Link LED  (blue color) will blink fast. Due to Window embedded driver limitation, even if you lost Bluetooth pair communication, Bluetooth to Serial Adapter icon still exists in the Bluetooth devices table list. **Please remove it and re-pair connect it again.** Bluetooth devices table will show all Bluetooth devices that you had connected before.

9.0 Application

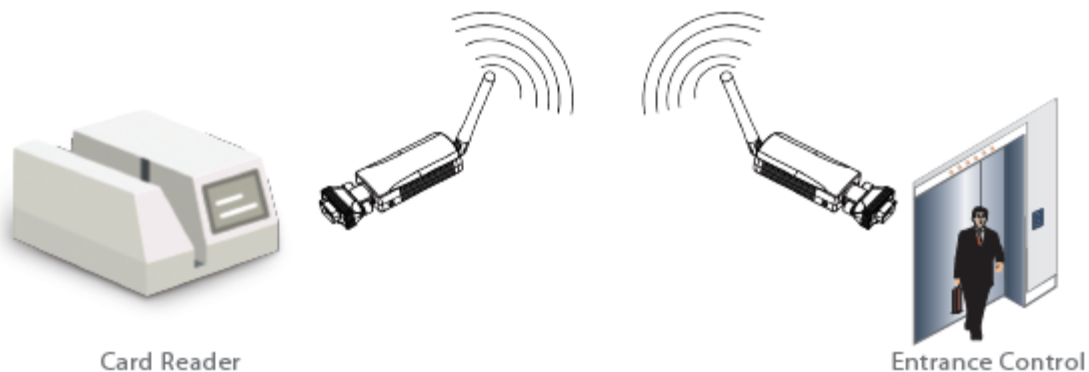
9.1 Host Control Mode:

User can control maximum 7 Bluetooth to serial adapters via one USB Bluetooth Dongle or embedded Bluetooth module on PC host. After establishing an exclusive connection by utilizing Bluetooth MAC Address and PIN code, Bluetooth to serial adapter will automatically try to link (Master) or to be linked (Slave) with another paired Bluetooth device wirelessly, just like there is a cable connected between them.



9.2 Pair Connection Mode:

User can pair two Bluetooth to serial adapters with different RS-232 or RS-422/485 devices without any PC host controlling. After pairing process is done and power is on, two Bluetooth to serial adapters will automatically establish an exclusive connection with each other, just like there is a RS-232 or RS-422/485 cable connected between them.



10.0 Trouble Shooting

1. Why I can not get into Configure Mode when pushing Reset button?:

A: Turn off the power of Bluetooth to Serial Adapter, and remove it from your serial (RS-232/422/485) device. Then apply power to it, and try again (like hardware RESET).

2. Data is not correctly set and saved.

A: 1. Check your adapter running DATA Mode, instead of Configure Mode

2. If it is in local setting, check if settings of connecting COM port and Baud Rate are correct.

3. Check the COM ports settings (parameter) are the same between PC and serial device. For example Bluetooth to Serial Adapter setting must matches with your serial device. For example, please set 9600,N,8,1 parameter for your Bluetooth to Serial Adapter that matches with your printer.



3. Garbage code is received.

A: Wrong RS-232/422/485 parameters were set, such as baud rate or parity bit. Configure your Bluetooth to Serial Adapter to a correct setting again.

4. In DATA mode, automatic link can not be established.

A: 1. Check if remote MAC address is set correctly.

2. Check if PIN code is set to the same.

3. Repeat the pairing processes. That is, repeat the configuration processes for two devices again to make sure nothing wrong was done.

5. Configuration is OK, but automatic link can not be established.

A: Turn off the power of Bluetooth to Serial Adapter, remove it from your serial (RS-232/422/485) device, apply power to it, and try again (like hardware RESET).

For a Master Bluetooth to Serial Adapter, it keeps sending a linking request to find another Slave device, while a Slave Bluetooth to Serial Adapter is waiting to receive any linking request. If you configure both two Bluetooth to Serial Adapter to all Master states, or to all Slave states, then they can not link together.

Bluetooth Dongle is staying at Master or Slave state randomly, in a moment, it acts as a Master device and sends linking request wirelessly, while in another moment, it acts as a Slave device and is waiting for other Master devices to link with it. Once the link is built, it will stay at the proper mode which it should be.

6. Mass data transmission will stop midway or receive garbage code.

A: Please enable "Hardware Flow Control" in the setting. Be sure to check your serial device supports hardware flow control also.

7. Can configure my Bluetooth to Serial Adapter over COM port.

A : 1. Please check you cable connection is correct, including using null-mode console cable.

2. Be sure to push Reset button and MODE LED ●(green color) will turn on.

3. Turn off power of Bluetooth to Serial Adapter, and then turn it on. Push MODE button to get into Configure mode.

8. Which mode Bluetooth to Serial Adapter is staying when in Configuration state?

A: In Configuration state, it is always staying at Slave mode. The difference between Master and Slave modes only exists in DATA state.

9. How to check the MAC address of USB Bluetooth Dongle and Bluetooth to Serial Adapter?

A: USB Bluetooth Dongle or Module MAC address will show in the hardware manager device settings.

Bluetooth to Serial Adapter MAC address will show in the utility

MAC:001C971F4B21	FW: Ver1.0.0.0	SW: Ver1.0.0.0
------------------	----------------	----------------

10. Can two Bluetooth to Serial Adapters which connected to devices communication with each other without any PC configuration? For example one is connected to barcode scanner and the other is connected to serial printer.

A: No!! Bluetooth to Serial Adapters is a RS-232 or RS-422/485 cable replacement equipment. Devices will not communication with each other without PC's programming.

11. What's meaning of the warning message?

A: a. COM port is used!!

- COM port is occupied by other software, so this COM port can not be used.
You can reboot your PC to release this COM port.



b. Open COM port failed!!

- User does not connect PC's COM and adapter properly. Please check console cable, power, or link connection.
- Please push Reset button, and let Bluetooth to Serial Adapter going to Configure Mode.
MODE LED ● (green color) will turn on and then you can configure Bluetooth to Serial Adapter.

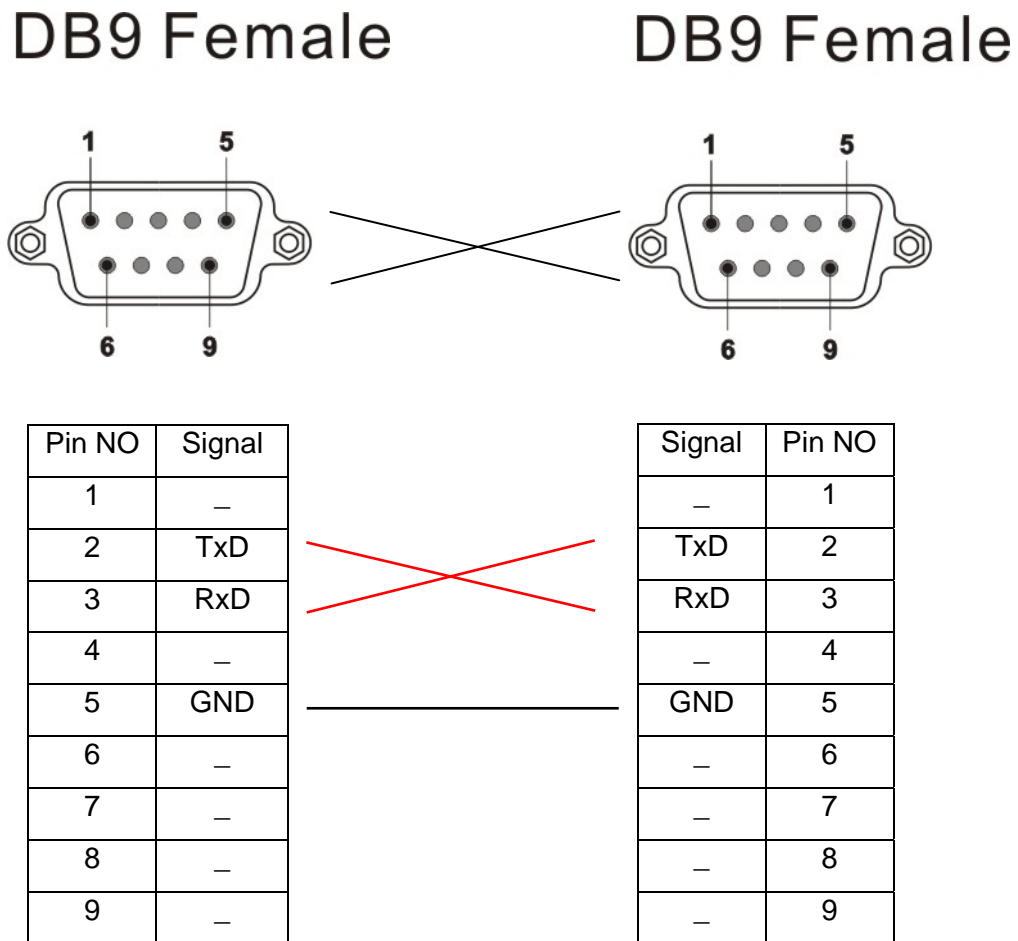


11.0 Appendix

11.1 RS-232, RS-422 and RS-485 converter (null modem) cable

This DB9 female to DB9 female converter cable will be used when using local setting up mode. User can purchase this cable from your vendor or make by yourself.

◆ RS-232



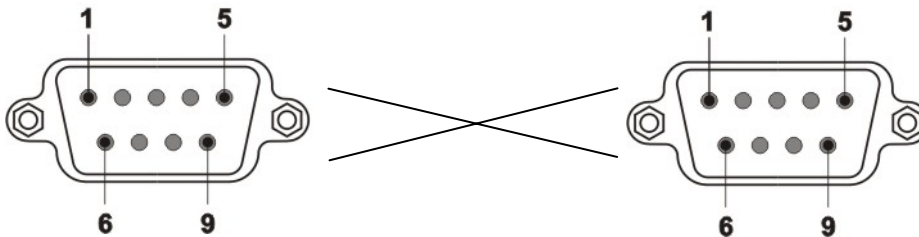
Note:

You can not use the RS-422 or RS-485 converter cable connecting between Bluetooth to RS-422/485 Adapter and PC directly. Because most of PCs only equip RS-232 COM port, you should use RS-232 to RS-422/485 converter to complete it.

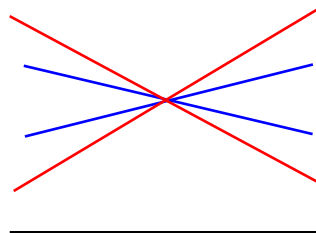
◆ RS-422

DB9 Female

DB9 Female



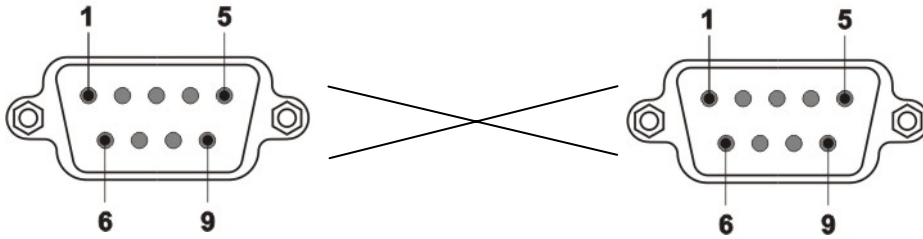
Pin NO	Signal
1	TxD-
2	TxD+
3	RxD+
4	RxD-
5	GND
6	-
7	-
8	-
9	-



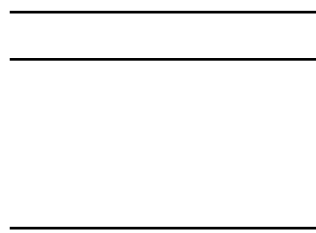
Signal	Pin NO
TxD-	1
TxD+	2
RxD+	3
RxD-	4
GND	5
-	6
-	7
-	8
-	9

DB9 Female

DB9 Female



Pin NO	Signal
1	Data-
2	Data+
3	-
4	-
5	GND
6	-
7	-
8	-
9	-



Signal	Pin NO
Data-	1
Data+	2
-	3
-	4
GND	5
-	6
-	7
-	8
-	9

11.2 Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose. The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or updates. For further inquiries please contact vendor you bought.

11.3 Regulatory Compliance

FCC Conditions

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received. Including interference that may cause undesired operation.

Important! Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment. Use an approved phone set.

CE

This equipment is in compliance with the requirements of the following regulations:

EN 55022: CLASS B

WEEE Information

For EU (European Union) member users: According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.



THIS PAGE LEFT INTENTIONALLY BLANK

THIS PAGE LEFT INTENTIONALLY BLANK

Data subject to change without notice
Printed in China

Ver1.0 JUN.2011



771-BTS1109A0-N01