BT-0240 RS232 Adapter

USER'S GUIDE

VERSION 1.0

(6



FC Tested To Comply With FCC Standards FOR HOME OR OFFICE USE

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WELCOME

Thank you for your purchase of the BT-0240 RS232 Adapter. Featuring Bluetooth wireless technology, BT-0240 RS232 Adapter creates cable-free RS232 connections between your PCs and other RS232 peripherals. BT-0240 RS232 Adapter is compatible with all Bluetooth v1.1-certified devices and you can connect your computers and RS232 devices 100 meters away without cables in your working environments.

FEATURES

- Compliant with Bluetooth standard version 1.1.
- Support for Microsoft Windows 98SE, Me, 2000 and XP.
- Operating distance of up to 100 meters in free space.
- Bluetooth Class I (20 dbm).
- SPP profile supported.
- Easy operation and setting up.
- Both DTE and DCE interfaces are available.

SYSTEM REQUIREMENTS

- PCs can optionally have a Bluetooth device installed, such as a Bluetooth USB dongle. It allows you to communicate with BT-0240 RS232 Adapter.
- Windows Systems : Win 98/Me/2000/XP.

BEFORE YOU START

1. Confirm Box Contents







7.5V DC Power Adapter



RS232 Extension Cable





EXTENSION CABLE

A RS232 Extension Cable provides you to connect your BT-0240 (DTE/DCE) Adapter to your RS232 device easier. Please refer to Appendix A for its pinout assignments.



RS232 (DTE) connector

GETTING TO KNOW YOUR BT-0240 RS232 ADAPTER

- 1). RS232 Connector:
 - DTE Connect to any DCE device (such as a modem).
 - DCE Connect to any DTE device (such as a PC).
- 2). Mode Button:

Push it to change operation between Configure/Data Mode.

- 3). Apply power to BT-0240 RS232 Adapter by using the power adapter accompanied.
- 4). Set the slide switch position to right (toward 9-pin connector).

(**Option :** Set it to left position (away from 9-pin connector) features NO DC Power Adapter is needed. A DC 5V power must be applied to BT-0240 Adapter through pin-9 of RS232 connector).

5). A one-to-one RS232 Extension Cable allows you to extend the connection if needed.

FUNCTION OF LEDS DURING PRINTING

POWER LED

 Power LED turns on when POWER is applied to BT-0240 RS232 adapter.

BLUETOOTH LED

- Bluetooth LED is ON when Bluetooth is paired and linked.
- Bluetooth LED is OFF when Bluetooth is not linked.
- Bluetooth LED is blinking when there is data transmitted/received between two paired and linked devices.
- MODE LED
- MODE LED is ON when BT-0240 is staying at Configuration mode.
- MODE LED is OFF when BT-0240 is staying at normal DATA mode.

WIDCOMM BLUETOOTH SOFTWARE DRIVER

NOTE : This driver is needed only if you are using a USB Bluetooth Dongle, and you want to use it to communicate with BT-0240 RS232 Adapter. Skip this section if you are not using it.

This software is not included in our BT-0240 RS232 Adapter package. We assume you already purchased a Bluetooth USB dongle and it is already bundled with this software. We also assume you already installed this driver in your PC. If NOT, please read the following messages to learn how to do it.

This Widcomm Driver is accompanied with the Bluetooth USB dongle product you purchased. Try to download the latest version.

There are other Bluetooth services which Widcomm driver provides. We will only emphasize on the cable replacement service, and you may try to know other services by you own.

The following steps tell you how to install the Widcomm driver.

Step 1 : Find **Setup.exe** from the given Widcomm Driver CD or down-loaded driver files, and double click on it to install Widcomm Bluetooth Software. It opens the InstallShield Wizard dialog box, then click **Next**.

Step 2 : Accept the software license agreement. Click Next.



| 🥵 WIDCOMM Bluetooth Software 1.4.2 Build 10 - InstallShield Wizard 💦 🔀 |
|---|
| License Agreement Please read the following licence agreement carefully |
| |
| WIDCOMM, INC. ("WIDCOMM") IS WILLING TO LICENSE THE WIDCOMM SOFTWARE ACCOMPANYING THIS LICENSE AGREEMENT (THE "SOFTWARE") TO YOU ONLY ON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS IN THIS AGREEMENT. PLEASE READ THE TERMS CAREFULLY. BY CLICKING ON THE "I ACCEPT THE TERMS OF THIS LICENSE AGREEMENT" BUTTON YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT AND AGREE TO BE |
| ⊙ I accept the terms in the license agreement ○ I do not accept the terms in the license agreement |
| InstallShield < Back Next > Cancel |

Step 3 : Select destination folder, you can choose the default or change to your favorite.



Step 4 : Click **Install** to start the installation.

If you have not plugged in Bluetooth Dongle onto your PC before, one reminding window will pop up to ask you to plug it in before installation can be finished.

Step 5 : Click **OK** to continue the installation.



Step 6 : Installation is complete . My Bluetooth Places should appear on your desktop and a similar icon also appears on the lower right corner of your screen. You can double click on desktop or right click on the lower right hand task bar of your screen, then click "Explore My Bluetooth Places" menu to start "My Bluetooth Places" program.



MY BLUETOOTH PLACES

NOTE : Read this chapter only if you have a USB Bluetooth Dongle in your PC, and you want to look for other Bluetooth devices in the neighborhood. Push the MODE button to let the BT-0240 RS232 Adapter stay at the Configuration mode first.

Step 1:

Method 1 : Double click 🚯 on your desktop. Click Folder on the toolbar. Folder window will appear on left side of your screen.

Method 2:

Right click (3) on the lower right hand corner of your screen. Select Explore My Bluetooth Places.

Two folders appear on the window. They are :

Entire Bluetooth Neighborhood and My Device.

Step 2 :

Click Entire Bluetooth Neighborhood to search for devices available to you. Once Bluetooth devices are found, their icons together with device names will be displayed on the screen.



| Explore My Bluetooth Places | |
|-----------------------------|---|
| Bluetooth Setup Wizard | |
| Advanced Configuration | |
| Quick Connect | Þ |
| Stop the Bluetooth Device | |



| 😂 My Bluetooth Places | | | |
|--|---------------|----------|----------|
| File Edit View Bluetooth Favorite: | s Tools Help | 100 M | 1 |
| 🕝 Back 🔹 🌍 🔹 🏂 🔎 Sea | rch 😥 Folders | • | |
| Folders × | Name | Comments | |
| Image: Second system Image: Second system <td></td> <td>¢,</td> <td></td> | | ¢, | |

You also may start a search for devices by clicking Bluetooth from the toolbar.

| 😂 My Bluetooth | Places | | | | | | |
|---|--|--|---------------------|--------------|---------------|------|----------|
| File Edit View | Bluetooth F | avorites | Tools | Help | 1.1 | 1917 | 1 |
| Back Control Back | Search For Advanced C Bluetooth H Bluetooth E Bluetooth S Bluetooth S Bluetooth S Places etooth Neighbol | Devices Configurati elp Topics xchange F etup Wiza | ion Folder rd | olders Cc | THE TRANSPORT | | |

Step 3 :

In this example, one serial adapter Bluetooth device is found in your Bluetooth neighborhood.

| My Bluetooth Places\Entire | Bluetooth N | leighborhood | |
|--|-------------------|--------------------------------------|------------------------|
| File Edit View Bluetooth Favorites | Tools Help | | |
| Address 🔮 My Bluetooth Places\Entire Bluet | ooth Neighborhood | | 💌 🛃 Go |
| Folders × | Device Name | Type Unknown: Major(31), Minor(0) | Additional Information |
| | < | | |

* Note :

BT-0240 Adapter can be easily found if it is staying at Configuration or DATA/Slave mode. If it is staying at DATA/Master mode, because it will keep sending request to find a paired device to establish a link, at this moment, it can not be found.

The "My Bluetooth Places" program provides an easy way to find different application services through Bluetooth connections. A variety of Bluetooth services and explanations can be found in the "Help" file of the "My Bluetooth Places" program.

BT-0240 ADAPTER INSTALLATION

HARDWARE INSTALLATION :

There are two kinds of RS232 devices in the market : DTE - Data Terminal Equipment (such as a PC). DCE - Data Communication Equipment (such as a Modem).

Depending on what kind of the RS232 device your BT-0240 adapter is going to connect, you can choose appropriate DTE or DCE BT-0240 adapter to work with it.

At DCE device side :

Connect a BT-0240 DTE Adapter to the remote DCE RS232 device (such as a Modem).

At DTE device side :

Connect a BT-0240 DCE Adapter to any DTE device, such as a PC.

Take a remote Modem for example, you can connect it with a BT-0240 DTE Adapter. While at PC side, you can either connect a BT-0240 DCE Adapter to it, or If no BT-0240 DCE Adapter is available, you also can connect a Bluetooth USB dongle to your PC.

SOFTWARE INSTALLATION :

Before you want to use your BT-0240 RS232 Adapter as a Cable Replacement tool, you must PAIR it with another Bluetooth device first. There is a software RS232 Adapter Utility - **BT232Config.exe** which must be run first to configure your BT-0240 RS232 Adapter.

The utility is to prepare the hardware parameters for pairing, they are :

- Role.
- Security Personal Identification Number (PIN).
- UART Configure COM port hardware parameters.
- Adapter Name.

CONFIGURING BT-0240 ADAPTER

All the BT-0240 RS232 Adapters 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, BT-0240 RS232 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.

There are two ways to configure your BT-0240 RS232 Adapter :

- Local Setting Up.
- Remote Setting Up.

1. LOCAL SETTING UP :

Local setting up can be done by connecting a BT-0240 RS232 Adapter to your PC. You can connect PC COM port to a BT-0240 DCE Adapter directly or to a BT-0240 DTE Adapter through a RS232 converter cable as shown in Appendix A.

If you forgot any setting which was done before, LOCAL SETTING UP is also the only way which allows you to recreate the setting again.

1.1 Preparation :

Step 1 :

Connect a BT-0240 RS232 Adapter to a PC COM Port (COM1, COM2 or any other).

Step 2 :

Apply power to BT-0240 Adapter by using the accompanied 7.5V Power Adapter.

Step 3 :

Push **Mode Button** until the MODE LED lights (yellow color), it then enters Configuration Mode. In this mode, BT-0240 Adapter is working at Slave state which is waiting to be linked with other Bluetooth devices.

Step 4 :

Launch RS232 Adapter Utility - BT232Config.exe on PC.

Step 5:

Select the PC COM Port which BT-0240 Adapter is connected.

If it is the first time you are configuring this BT-0240 Adapter, you can choose the default Baud Rate : 115200. Press Connect Button.

| guration 📃 🗖 🔀 |
|-------------------------------|
| Connect Disconnect |
| Please Select Function to Set |
| |

Local PC will use this baud rate to connect with your BT-0240 Adapter.

* Note :

The connection will fail if wrong COM port is connected or Baud Rate is not correct, see section 1.4 for more detail on baud rate setting.

1.2 Start Configuration :

Role - Master or Slave (Default).

Depending on the applications, there are two states which BT-0240 Adapter can operate in DATA mode. They are Master and Slave states. If you are using a USB Bluetooth Dongle to pair with a BT-0240 adapter, then BT-0240 Adapter can be set to either Master or Slave state. If you are using two BT-0240 Adapters to pair together, then one of them shall be set to Master and another shall be set to Slave.

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. 000272b00900) which this BT-0240 Adapter will be pairing and connecting with. Default is none.

| 🍠 BT RS232 Serial Adapter Co | onfiguratio | n (| |
|---|---|--|--|
| COM Port COM1 Baud Rate 115200 Function Set | Y | Connect Disconnect | |
| Role Security Uat Configure Local Device Name | Master Remo 0002 C Slave □ D | ote BT Address : 272b00900 iscoverable | |
| Save | F R | emote BT Address Set | |

Note : Remote Bluetooth Address can be found by searching your Entire Bluetooth Neighborhood as mentioned in page 6. Or you can check if there is any label showing MAC address on the remote Bluetooth device.

Slave State : (Default)

Discoverable (Default) - If Discoverable is enabled, BT-0240 Adapter can be found by searching Entire Bluetooth Neighborhood on PCs. If it is disabled, then it can not be found. This feature will prevent other Bluetooth devices to create a link with it accidently if it has already been configured to pair with another device before.

Remote MAC Address - Enable this feature, you can enter Bluetooth MAC Address of the remote Bluetooth device (e.g. 000272b00900) which this BT-0240 Adapter will be linking with. If it is disabled or MAC addrss is left empty, then any remote Bluetooth device can pair with this BT-0240 Adapter.

Press Save Button. Press Yes Button. Press OK.

Security.

Secure Connection (Default, PIN = 1234) - Disable this function will allow other Bluetooth devices to connect with this BT-0240 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.



| 🍠 BT RS232 Serial Adapter Co | onfiguratio | n (. | |
|---|------------------|-----------------------|--|
| COM Port COM1 Baud Rate 115200 Function Set | Y | Connect Disconnect | |
| Role Security Uart Configure Local Device Name | C Master Remo | ote BT Address : | |
| Save | | emote BT Address Set | |



| 🍠 BT RS232 Serial Adapter Co | onfiguratio | n | |
|---|-------------|-----------------------|--|
| COM Port COM1 Baud Rate 115200 Exerction Set | Y | Connect Disconnect | |
| Role Security Uart Configure Local Device Name | Pin C | e Connection ode : | |
| Save | | | |

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.

| 🍠 BT RS232 Serial Adapter | Configuratio | n (| |
|---|----------------------------|----------------------------|--|
| COM Port COM1 | T | Connect | |
| Baud Rate 115200 | - | Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | I▼ Secure Pin C 1234 | e Connection ode : I | |
| Save | | | |

UART Configure.

Change UART parameters, BT-0240 Adapter will use them to connect with a RS232 device later.

Baud Rate:

9600~ 460800 (Default 115200)

Stop Bit:

One/Two (Default One)

Parity Bit:

None/Odd/Even (Default None) Press Save Button.

| J BT RS232 Serial Adapter C | onfiguratio | n 🔳 | |
|---|-----------------------------------|--------------------------|--|
| COM Port COM1 Baud Rate 115200 | Y | Connect Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | Baud Ra Stop Bit Parity Bit | te 115200 one None | |
| Save | | | |

* Note :

Maximum Baud Rate can go up to 460.8 Kbps. Guaranteed is 230.4 Kbps.

Adapter Name (Default : Serial Adapter).

Enter a Device Name for your BT-0240 Adapter (length <= 31 alphanumeric characters). For example, "Serial Adapter A". Press Save Button.

| 🍠 BT RS232 Serial Adapter Configuration | | | | |
|---|-----------------------|-----------------------|--|--|
| COM Port COM1 Baud Rate 115200 | Y | Connect Disconnect | | |
| Function Set Role Security Uart Configure Local Device Name | Device N Serial Ad | ame Japter A | | |
| Save | | | | |

1.3 Automatic Connection :

Press **Disconnect** button.

Remove your BT-0240 Adapter from PC COM port, and connect it to a RS232 device.

Push MODE button to change from Configuration mode to DATA mode. MODE LED will be off.

Now, automatic connection will begin. If configured at Master state, BT-0240 Adapter will scan its neighborhood to see if there is any Bluetooth device which has the matched MAC address and PIN code. If found, they will establish the wireless link automatically, and Bluetooth LED (blue color) of BT-0240 Adapter will light. If configured at Slave state, BT-0240 Adapter will wait for other Bluetooth device to create a link with it.

1.4 More Detail on Initial Baud Rate Setting :

1). When power is applied to a BT-0240 Adapter, it will try to link (Master) or be linked (Slave) with another Bluetooth device with matched MAC address or PIN code. A link will finally be built between them. If another Bluetooth device can not be found (e.g. its power is turned off), then the initial baud rate of this BT-0240 Adapter will be set to 115200 defaultly.

If you forgot any previous setting of BT-0240 Adapter, and you want to reconfigure it. You can turn off power of other Bluetooth devices, then power on your BT-0240 Adapter individually. At this moment, because it is impossible for your BT-0240 Adapter to establish a link with its paired Bluetooth device (it is turned off), so the baud rate of the BT-0240 Adapter is set to 115200 defaultly.

You can then use 115200 baud in Step 5 of section 1.1, to connect BT-0240 Adapter with your PC, then change its settings accordingly.

2). When power is applied to a BT-0240 Adapter, if its paired Bluetooth device is found and automatic connection has been made between them (i.e. they are pairly connected), then the BLUE Bluetooth LED on BT-0240 Adapter will light, and the baud rate of the BT-0240 Adapter will be the value which was previously input in UART Configure of section 1.2.

For your BT-0240 Adapter, when its **BLUE** Bluetooth LED lights, and you want to local set up your BT-0240 Adapter, after entering into Configuration mode (both blue and yellow LEDs light now), you must remember this baud rate and use it to **Connect** with COM port as mentioned in Step 5 of section 1.1.

3). When power is applied to a BT-0240 Adapter, and a new baud rate is entered and saved in UART Configure step. If you then push MODE button to get into DATA mode, then push MODE button again to enter Configuration mode, baud rate will be the new one just entered.

1.5 Example :

Supposed there is a configured BT-0240 Adapter which is connected to a RS232 modem remotely, and its paired device is another BT-0240 Adapter which is connected to your PC. You can then use PC to wirelessly control the operations of the modem.

Please refer to page 21 - APPLICATION 1 for detail.

2. REMOTE SETTING UP :

This setup could happen when you remotely connect a BT-0240 Adapter to a RS232 device (e.g. a Modem), and you want to configure it by a local

PC. Local PC can have a USB Bluetooth Dongle plus Widcomm driver installed. In the following paragraphs, we will give you an example.

At first, we must know Bluetooth MAC address of the local USB Bluetooth Dongle first.

The following paragraphs also can refer to page 6 :

Method 1 :

Double click (3) on your desktop. Click Folder on the toolbar. Folder window will appear on left side of your screen.

Method 2:

Right click 😵 on the lower right hand corner of your screen. Select Explore My Bluetooth Places.

Two folders appear on the window. They are :

Entire Bluetooth Neighborhood and My Device.

Right click on My Device, select Properties, local Bluetooth Configuration screen will show up.

Click on Hardware tab, read the Device Address :

000272B0A220



| Bluetooth Configuration |
|--|
| General Accessibility Discovery Local Services Client Applications Hardware |
| WIDCOMM Bluetooth Software 1.4.2 Build 10 |
| Image: Identity Enter a unique name for this computer. This name will be displayed to other Bluetooth devices if this computer is configured to allow itself to be discovered. Select a computer type from the drop-down menu. This selection determines the icon that represents this computer on remote devices. Computer name: Computer type: Personal Computer |
| OK Cancel Apply Help |

| Bluetooth Configuratio | on | | ? 🗙 |
|-------------------------|--------------------------|---------------------|----------|
| General Accessibility D | iscovery Local Services | Client Applications | Hardware |
| Devices: | | | |
| Name | | Туре | |
| CSR USB Bluetooth | n Device | USB | |
| Device Properties | | | |
| Device Status: | The selected device is w | orking properly. | |
| Manufacturer: | Cambridge Silicon Radio | | |
| Firmware Revision: | Version 525 | | |
| Device Address: | 00:02:72:B0:A2:20 | | |
| HCI Version: | Bluetooth HCI 1.1 | | |
| HCI Revision: | 020D | | |
| LMP Version: | Bluetooth LMP 1.1 | | |
| LMP Sub Version: | 020D | | |
| | | | |
| Retest | | | |
| | OK Cancel | Apply | Help |

2.1 Preparation :

Step 1 :

Apply power to a BT-0240 Adapter by using the accompanied 7.5V Power Adapter.

Step 2 :

Push **Mode Button** until the MODE LED (yellow color) lights, it then enters Configuration Mode.

Step 3 :

Double click (3) on your desktop. Click Folder on the toolbar. Folder window will appear on left side of your screen.



Step 4 :

Click Bluetooth from the toolbar, then click Search For Devices to search for Bluetooth devices available to you. Once Bluetooth devices are detected, their icons together with device names will be displayed on the screen.



Step 5:

If the remote BT-0240 Adapter is the first time being configured, then its device name is factory default to "Serial Adapter". Otherwise, previous setting of the device name will be found and displayed.

| My Bluetooth Places\Entire | Bluetooth Neighborhood | |
|---|--|--|
| File Edit View Bluetooth Favorites | Tools Help | ala an |
| 🚱 Back 🝷 🌍 🚽 🏂 🔎 Search 🛛 | Folders 🔢 - | |
| Address 👰 My Bluetooth Places\Entire Bluet | ooth Neighborhood | 👻 🛃 Go |
| Folders | Device Name Type | Additional Information |
| 🕝 Desktop | Senal Adapter Unknown: Major(31), Minor(0) | |
| My Documents My Computer | | |
| 🗉 🧐 My Network Places | | |
| Recycle Bin Mu Blusteath Diagon | | |
| Wy Bluetooth Places We Bluetooth Neighborhood | | |
| 🗉 🧣 Serial Adapter | | |
| Sector My Device | | |
| | | |
| | | |
| | | |
| | | |
| | < | > |

Step 6:

Right click on device name Serial Adapter, then click on Discover Available Services.

| File Edit View Bluetooth Favorites Tools Help Image: Second Seco | My Bluetooth Places\Entire | Bluetooth Neighborhood | |
|---|--|---|------------------------|
| Folders X Device Name Type Additional Information Desktop My Documents Serial Adapter Uscover Available Services My Network Places Recycle Bin My Network Places Pair Device My Decuments Pair Device My Network Places Pair Device My Device Pair Device | File Edit View Bluetooth Favorites | Tools Help | |
| | Folders × Image: Sector of the sector of | Device Name Type Type (Information (31), Minor(0), Explore Open Open Discover Available Services Pair Device Paste Properties | Additional Information |

Step 7:

You can find the service this BT-0240 Ny Bluetooth Places\Entire Bluetooth Neighborhood\Serial Adapter Adapter provided is "RS-232 Cable Replacement".



Step 8:

Right click on device name Serial Adapter, click on Pair Device.

Step 9:

PC will ask you to input Bluetooth PIN code.

If the remote BT-0240 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.



| Bluetooth PIN Code Request 🛛 🔹 💽 🔀 | | | | | |
|------------------------------------|--|---|--|--|--|
| P | Device Name: | Serial Adapter | | | |
| | Before a connection can be establis above must be "paired." | shed, this computer and the device | | | |
| | The Bluetooth pairing procedure cre future connections between these t encrypt the data that these devices | eates a secret key that is used in all wo devices to establish identity and exchange. | | | |
| | To create the paired relationship, er | nter the PIN code and click OK. | | | |
| | Bluetooth PIN Code: | | | | |
| | ОК | Cancel Help | | | |

Step 10 :

After pairing is done, right click on device name Serial Adapter, then click on Connect RS232 cable replacement.

A connection between local PC Bluetooth Dongle and remote BT-0240 Adapter will be built.

| My Bluetooth Places\Entire | Bluetooth N | leighborhood | |
|--|-------------|---|----------------------------------|
| File Edit View Bluetooth Favorites Stack - - - - - Address My Bluetooth Places\Entire Blueto | Tools Help | | |
| Folders × | Device Name | Type Unknown: Major(31), Minor(0) Explore Open Connect RS-232 cable replacer Discover Available Services Unpair Device Paste Properties | Additional Information Paired |

An icon will be displayed to inform you that a successful connection has been created, and Bluetooth LED on remote BT-0240 Adapter will light.



Step 11 :

Click My Bluetooth Places, Widcomm driver will inform you that a virtual COM port (**COM3** in this case) is used by your PC (USB Bluetooth Dongle) to communicate with the remote BT-0240 RS232 Adapter. Press OK.

| ו | RS-232 cable replacement |
|---|---|
| 4 | The Bluetooth serial port COM3 is now configured to connect to the device Serial Adapter . |
| L | The Application that will use this connection must be configured to use COM3. |
| 0 | The application may be started at any time. |
| | Do not display this message again |
| | OK |

Step 12 :

Serial Adapter is paired and connected.

| 😂 My Bluetooth Places\Entire Bluetooth Neighborhood | | | | | |
|--|----------|------------------------|-------------------------|--|---------|
| File Edit View Bluetooth | Favor | ites Tools Help | | The second s | |
| 🕞 Back 🔹 🌍 - 🎓 Search 🎼 Folders 🛄 🔹 | | | | | |
| Address 🔮 My Bluetooth Place | s\Entire | Bluetooth Neighborhood | ł | | 💌 🔁 Go |
| Folders | × | Device Name | Туре | Additional Information | |
| Image: Second Secon | hborhoc | Serial Adapter | Unknown: Major(31), Min | Paired, Connected | |

2.2 Start Configuration Mode :

Launch RS232 Adapter Utility - **BT232Config.exe** on PC.

Select COM Port (COM3 in this case) Press **Connect** Button.

Local PC will use this COM port to connect with your BT-0240 Adapter. Baud rate setting is irrelevant.

Role. (Master/Slave)

Select Discoverable and Slave state. Enter Bluetooth MAC Address of the Bluetooth device (e.g. USB Bluetooth Dongle 000272b0a220) which this BT-0240 Adapter will be pairing and connecting with. Press Save Button.

Note : In this case, we input PC Dongle MAC address, because we want them paired and linked later. If you want BT-0240 Adapter to pair with another Bluetooth device, you shall input its MAC address, and not the MAC address of PC Dongle.

Security.

Select Secure Connection. Enter PIN code (length <=12 digits), default PIN code is "1234"

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.

| 🝠 BT RS232 Serial Adapter Configuration | | | |
|---|-------------------------------|--|--|
| COM Port COM3 Baud Rate 115200 | Connect Disconnect | | |
| Function Set Role Security Uart Configure Local Device Name | Please Select Function to Set | | |
| Save | | | |

| 📱 BT RS232 Serial Adapter Configuration | | | | |
|---|------------------------------|-------------------------------------|--|--|
| COM Port COM3 Baud Rate 115200 | Y | Connect Disconnect | | |
| Function Set Role Security Uart Configure Local Device Name | C Master Remo | te BT Address : | | |
| | ତ Slave I D I D I R | iscoverable emote BT Address Set | | |
| Save | 0 | 0027260a220 | | |

| 🍠 BT RS232 Serial | Adapter Configuratio | on 💶 🛛 🗙 |
|---|---------------------------|-----------------------------|
| COM Port COM3 Baud Rate 115200 | Y | Connect Disconnect |
| Function Set Role Security Uart Configure Local Device Name | I▼ Secur Pin 0 [123 | e Connection Code : 4 |
| Save | | |

UART Configure.

Change UART parameters, BT-0240 Adapter will use them to connect with a RS232 device later.

Baud Rate:

9600~ 460800 (Default 115200) Stop Bit: One/Two (Default One) Parity Bit:

None/Odd/Even (Default None) Press Save Button.

Adapter Name. (Local)

Enter a Device Name for your BT-0240 Adapter (length <= 31 alphanumeric characters). For example, "Serial Adapter". Press Save Button.

2.3 Automatic Connection :

Press **Disconnect** button.

Connect your BT-0240 Adapter to a RS232 device (e.g. a Modem).

Push MODE button to change from Configuration mode to DATA mode. MODE LED will be off.

Now, automatic connection will begin. In this example, PC Dongle will set up the wireless link with your BT-0240 Adapter automatically, and Bluetooth LED of BT-0240 Adapter will light.

2.4 Example :

Supposed there is a remotely configured BT-0240 DTE Adapter which is connected to a RS232 modem, 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 modem.

| 🍠 BT RS232 Serial Adapter | Configuratio | n | |
|--|-----------------------------------|--------------------------|--|
| COM Port COM3 Baud Rate 115200 | Y | Connect Disconnect | |
| Function Set Role Security Lat Configure Local Device Name | Baud Ra Stop Bit Parity Bit | te 115200 one None | |
| Save | | | |

| 🍠 BT RS232 Serial Adapter Co | onfiguratio | n | |
|---|-----------------------|-----------------------|--|
| COM Port COM3 Baud Rate 115200 | + | Connect Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | Device N Serial Ad | lame Japter | |
| Save | | | |

APPLICATION 1

In this application, we will show you how to transfer files between two PCs by using Hyper-Terminal program. Each PC has a BT-0240 DCE Adapter attached, and we still keep their pairing PIN code to be "1234".

Bluetooth MAC addresses : BT-0240 Adapter 1 : 000272b0089e (in Master state) BT-0240 Adapter 2 : 000272b00900 (in Slave state)

3.1. Configuring BT-0240 Adapter on PC1 :

Step 1 :

Connect a BT-0240 DCE Adapter to COM1 Port of PC1. Apply power to it.

Step 2 :

Push **Mode Button** until the MODE LED lights, it then enters Configuration Mode.

Step 3:

Launch RS232 Adapter Utility - BT232Config.exe on PC1.

Step 4 :

Select COM1 Port which BT-0240 Adapter is connected.

We assume it is the first time you are configuring this BT-0240 Adapter, you can choose the default Baud Rate :115200. Press Connect Button.

Step 5:

Select Role, select Master, enter Bluetooth MAC Address of the second Bluetooth device (e.g. 000272b00900) which will be pairing and connecting with. Press Save Button.

| 🍠 BT RS232 Serial Adapter Co | nfiguration | |
|---|-------------------------------|--|
| COM Port COM1 Baud Rate 115200 | Connect Disconnect | |
| Function Set Role Security Uat Configure Local Device Name Save | Please Select Function to Set | |

| 🍠 BT RS232 Serial Adapter | Configuratio | n 📃 🗆 🔀 | | |
|---|---|-----------------------|--|--|
| COM Port COM1 Baud Rate 115200 Europien Sat | Y | Connect Disconnect | | |
| Role Security Uart Configure Local Device Name | Master Remote BT Address : 000272b00900 Slave Discoverable | | | |
| Save | | Remote BT Address Set | | |

Select Security, select Secure Connection, input PIN code "1234".

| 🍠 BT RS232 Serial Adapter | Configuratio | n | |
|--|----------------------------|----------------------------|--|
| COM Port COM1 Baud Rate 115200 | Y | Connect Disconnect | |
| Function Set Role <u>Security</u> Uatt Configure Local Device Name | I▼ Secure Pin C 1234 | e Connection ode : ; | |
| Save | | | |

Input RS232 parameters -Baud Rate: 115200. Stop Bit:One. Parity Bit: None. Press Save Button.

| COM Port COM1 | T | Connect | |
|---|-------------------------------------|-------------------------|---|
| Baud Rate 115200 | v | Disconnect | |
| - Function Set Role Security Uart Configure Local Device Name | Baud Rate Stop Bit Parity Bit | e 115200 one None | • |
| Save | | , | |

| Enter a Device Name "Serial Adapter | | J BT RS232 Serial Adapter Configuration | | | |
|--|--|---|----------|---------------------------------|--|
| A". Press Save Button. | | COM Port COM1 Baud Rate 115200 | v | Connect Disconnect | |
| | | Function Set Role Security Uart Configure Local Device Name | D | levice Name Serial Adapter A | |
| These RS232 parameters will be used by PC1 to communicate with your BT-0240 Adapter A later. | | Save | | | |

Step 6:

Push **Mode Button** to exit Configuration Mode and enter DATA mode. BT-0240 Adapter 1 will try to link with BT-0240 Adapter 2 (its MAC address is "000272b00900"). Because we have not configured BT-0240 Adapter 2 yet, so the link can not be built now.

3.2. Configuring BT-0240 Adapter on PC2 :

Step 1:

Connect a BT-0240 DCE Adapter to COM1 Port of PC2. Apply power to it.

Step 2:

Push **Mode Button** until the MODE LED lights, it then enters Configuration Mode.

Step 3 :

Launch RS232 Adapter Utility - **BT232Config.exe** on PC2.

Step 4 :

Select COM1 Port which BT-0240 Adapter is connected.

We assume it is the first time you are configuring this BT-0240 Adapter, you can choose the default Baud Rate :115200. Press Connect Button.

Step 5:

Select Role, select Slave, enable Discoverable, enter Bluetooth MAC Address of the first Bluetooth device (e.g. 000272b0089e) which will be pairing and connecting with. Press Save Button.

Select Security, select Secure Connection, input PIN code "1234".

| J BT RS232 Serial Adapter Cor | nfiguration |
|---|-------------------------------|
| COM Port COM1 Baud Rate 115200 | Connect Disconnect |
| Function Set Role Security Uart Configure Local Device Name | Please Select Function to Set |
| Save | |

| 🍠 BT RS232 Serial Adapter | Configuratio | n | |
|---|---------------------------|-------------------------------------|--|
| COM Port COM1 Baud Rate 115200 | V | Connect Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | C Master Remo Slave | te BT Address : iscoverable | |
| Save | | emote BT Address Set 00272b0089e | |

| J BT RS232 Serial Adapter | Configuratio | n | |
|---|---------------------------|----------------------------|--|
| COM Port COM1 Baud Rate 115200 | Y | Connect Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | I Secure Pin C 1234 | e Connection ode : L | |
| Save | | | |

Input RS232 parameters -Baud Rate: 115200. Stop Bit:One. Parity Bit: None. Press Save Button.

These RS232 parameters will be used by PC2 to communicate with your BT-0240 Adapter B later.

| 🍠 BT RS232 Serial Adapter | Configuratio | n | |
|---|-----------------------------------|-----------------------|--|
| COM Port COM1 Baud Rate 115200 | Y | Connect Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | Baud Ra Stop Bit Parity Bit | te 115200 one | |
| Save | | | |

| Enter a Device Name "Serial Adapter | J BT RS232 Serial Adapter Configuration | | | |
|-------------------------------------|---|-------------------------------|------------|---|
| В". | COM Port COM1 | T | Connect | 1 |
| Press Save Button. | Baud Rate 115200 | - | Disconnect | Ī |
| | Function Set Role Security Uart Configure Local Device Name | Device Name Serial Adapter | r B | |
| | Save | | | |

Step 6 :

Push **Mode Button** to exit Configuration Mode and enter DATA mode. BT-0240 Adapter 1 will try to link with BT-0240 Adapter 2, the link between them finally builds.

When link is built, **BLUE** Bluetooth LEDs on both BT-0240 Adapters will light. It is to inform you that a cable-like wireless link is built.

If any one of the Bluetooth LEDs does not light, it means the link can not be built. You may input a wrong Remote MAC address, or PIN code is set wrong, you can reconfigure your BT-0240 Adapters, then try again.

Normally, it will spend less than 30 seconds for a link to build. If it takes more than that, you can turn off your BT-0240 Adapter, and turn it on to try again.

3.3. Start Hyper Terminal File Transfer :

On PC1 :

Step 1: Click Start. Select Program. Select Accessories. Select Communications. Select HyperTerminal. Enter "TestBT" as the project name.

Press OK.

Step 2 :

Choose COM1, because BT-0240 Adapter 1 is connected to COM1 port of PC1.

Press OK.





Step 3:

Input RS232 parameters as the same which you configured in previous 3.1 section (page 22) :

Configuring BT-0240 Adapter on PC1.

Please select "Hardware" Flow Control.

Press OK.



Step 4 :

On PC2 : Repeat the same steps as done on PC1 from Step 1 to Step 3.

Step 5:

On PC1, click Transfer on toolbar, click Send File.



Step 6:

Browse the file you want to transfer then click Send.

| r, | 🗢 TestBT - HyperTerminal 📃 🗖 🗙 |
|----|--|
| | File Edit View Call Transfer Help |
| | D 🚔 🍘 🕉 🗈 🖰 🖀 |
| | · · · · · · · · · · · · · · · · · · · |
| | Send File |
| | Folder: C:\ |
| | Filename: |
| | C:\TestFile.txt Browse |
| | Protocol: |
| | Zmodem with Crash Recovery |
| | Send Close Cancel |
| | |
| | |
| | |
| | Connected 0:00:57 Auto detect Auto detect SCROLL CAP |

Now, you will find transferring file using Bluetooth wireless technology is just like transferring file using a hardwired cable.

BT-0240 Bluetooth RS232 Adapter is the best tool to relieve your life in a cable surrounded environment. You can easily connect a RS232 modem at a remote side, it then is reachable within 100 meters (free space) in your office or home by using Bluetooth Cable Replacement technology.

APPLICATION 2

In this application, we will show you how to transfer files between two PCs by using Hyper-Terminal program. PC1 has a BT-0240 DCE Adapter attached, and PC2 is using a USB Bluetooth Dongle. W still keep their pairing PIN code to be "1234".

Bluetooth MAC addresses : BT-0240 Adapter : 000272f00920 (in Master state). USB Bluetooth Dongle : 000272b0a220 (in Master/Slave state).

4.1. Configuring BT-0240 Adapter on PC1 :

Step 1:

Connect a BT-0240 DCE Adapter to COM1 Port of PC1. Apply power to it.

Step 2 :

Push **Mode Button** until the MODE LED lights, it then enters Configuration Mode.

Step 3 :

Launch RS232 Adapter Utility - **BT232Config.exe** on PC1.

Step 4 :

Select COM1 Port which BT-0240 Adapter is connected.

We assume it is the first time you are configuring this BT-0240 Adapter, you can choose the default Baud Rate :115200.

Press Connect Button.

Step 5:

Select Role, select Master, enter Bluetooth MAC Address of the USB Bluetooth Dongle (e.g. 000272b0a220) which will be pairing and connecting with. Press Save Button.

| 🍠 BT RS232 Serial Adapter Co | nfiguratio | n | |
|---|--|--|--|
| COM Port COM1 Baud Rate 115200 Function Set | Y | Connect Disconnect | |
| Role Security Uart Configure Local Device Name | Master Remo 0002 C Slave □ D | ate BT Address : 272b0a220 iscoverable | |
| Save | | emote BT Address Set | |

| 🍠 BT RS232 Serial Adapter Cor | nfiguration |
|---|-------------------------------|
| COM Port COM1 | ▼ Connect |
| Baud Rate 115200 | ▼ Disconnect |
| Function Set Role Security Uart Configure Local Device Name | Please Select Function to Set |
| Save | |

Select Security, select Secure Connection, input PIN code "1234".

| BT RS232 Serial Adapter Configuration | | | | | |
|---|---------------------------|------------------------------|--|--|--|
| COM Port COM1 Baud Rate 115200 | Y | Connect Disconnect | | | |
| Function Set Role Security Uatt Configure Local Device Name | I Secure Pin C 1234 | e Connection iode : \$ | | | |
| Save | | | | | |

Input RS232 parameters -Baud Rate: 115200. Stop Bit:One. Parity Bit: None. Press Save Button.

These RS232 parameters will be used by PC1 to communicate with your BT-0240 Adapter later.

Enter a Device Name "Serial_0920". Press Save Button.

| J BT RS232 Serial Adapter Co | nfiguratio | n 🔤 🗉 | |
|--|-----------------------------------|-----------------------|--|
| COM Port COM1 Baud Rate 115200 | V | Connect Disconnect | |
| Function Set Role Security Uat Configure Local Device Name | Baud Ra Stop Bit Parity Bit | te 115200 one None | |
| Save | | | |

| Baud Bate Hitspoo | | | |
|---|--------------------------|------------|--|
| 115200 | - | Disconnect | |
| Function Set Role Security Uart Configure Local Device Name | Device Nar Serial_092 | ne 20 | |
| | | | |

Step 6 : Stay at Configuration Mode.

Stay at this mode so Bluetooth Dongle can easily find it later. In DATA (Master) mode, BT-0240 Adapter keeps looking for another pairing device, and can not be found.

4.2. Configuring USB Bluetooth Dongle on PC2:

At first, we must know some information of the USB Bluetooth Dongle first.

The following paragraphs also can refer to page 6 :

Method 1 :

Double click (3) on your desktop. Click Folder on the toolbar. Folder window will appear on left side of your screen.

Method 2:

Right click (*) on the lower right hand corner of your screen. Select Explore My Bluetooth Places.

Two folders appear on the window. They are :

Entire Bluetooth Neighborhood and My Device.

Right click on My Device, select Properties, local Bluetooth Configuration screen will show up.

Click on Hardware tab, read the Device MAC Address :

000272B0A220



| covery Local Services | Client Applications | Hardware |
|--------------------------|--|---|
| | | |
| | - - | |
| | lype | |
|)evice | USB | |
| | | |
| The selected device is w | orking properly. | |
| Cambridge Silicon Radio | | |
| Version 525 | | |
| 00:02:72:80:A2:20 | | |
| Bluetooth HCI 1.1 | | |
| 020D | | |
| Bluetooth LMP 1.1 | | |
| 020D | | |
| | | |
| OK Cancel | Apply | Help |
| | The selected device is w Cambridge Silicon Radio Version 525 00:02:72:B0:A2:20 Bluetooth HCI 1.1 020D Bluetooth LMP 1.1 020D OK Cancel | The selected device is working properly. Cambridge Silicon Radio Version 525 00:02:72:B0:A2:20 Bluetooth HCI 1.1 020D Bluetooth LMP 1.1 020D |

Click on Local Services tab, this shows the COM port which Dongle (in Slave state) uses to be connected by others.

COM5 - Remember this port as it will be used later by USB Bluetooth Dongle to communicate with BT-0240 Adapter.

Click Properties...

(COM5 will be used in page 34).

| Bluetooth Configuration | | | ? 🛛 |
|---|---|--|------------------------------|
| General Accessibility Discovery Lo Select the services that this computer Double-click a service name to set its | ocal Services will provide to security, start-r | Client Applications other Bluetooth devi up options and prope | Hardware ices. erties. |
| Service Name Audio Gateway Headset PIM Synchronization Fax File Transfer PIM Item Transfer Dial-up Networking Network Access Bluetooth Serial Port | Startup S Auto N. Auto R. Auto R. Auto R. Auto R. Auto R. Auto R. Manu N. | ecure Connection ot Required equired equired equired equired equired equired equired ot Required ot Required | COM Port |
| Properties | | Add Serial Service | Delete |
| ОК | Cancel | Apply | Help |

Mark Startup Automatically.

This allows USB Bluetooth Dongle to start the pairing and linking with other Bluetooth devices automatically.

Unmark Secure Connection.

Click OK.

Click on Client Applications tab, this shows the COM6 port which Dongle (in Master state) uses to connect with other Bluetooth devices.

| Didetootii Properties | |
|-------------------------|-------------------|
| General Notifications | |
| Bluetooth Serial Port | |
| V Startup Automatically | Secure Connection |
| | |
| COM Port: COM5 💌 | |
| | |
| | |
| | |
| ОК | Cancel Apply |

?×

| Human Interface Device Not Required Printer Not Required Audio Gateway Not Required Headset Not Required PIM Synchronization Required Fax Required File Transfer Required PIM Item Transfer Required Dial-up Networking Required Network Access Required | Application Name | Secure Connection COM Port |
|--|--|--|
| Bluetooth Serial Port Bequired COM6 | Human Interface Device Printer Audio Gateway Headset PIM Synchronization Fax File Transfer PIM Item Transfer Dial-up Networking Network Access Bluetooth Serial Port | Not Required Not Required Not Required Required Required Required Required Required Required Required |

Click Properties...

(Note : If Dongle is configured as a Master device, while BT-0240 Adapter is configured as a Slave device, you must replace COM5 to COM6 in page 34). Unmark Secure Connection. If Secure is set, other Bluetooth devices are not allowed to connect

Click OK.

with Dongle.

Click OK to exit Bluetooth Configuration.

| Bluetooth Properties | ? 🛛 |
|-----------------------|-------------------|
| General | |
| Bluetooth Serial Port | |
| Startup Automatically | Secure Connection |
| COM Port: COM6 🗸 | |
| | Cancel Applu |

Click Entire Bluetooth

Neighborhood. to find Bluetooth Devices near by. We find :

Serial_0920 : BT-0240 Adapter on PC1.

Right Click Serial_0920 Adapter, Select Pair Device.

This action allows Bluetooth Dongle to establish a PAIR relationship with Serial_0920.

| 😂 My Bluetooth Places\En | tire Bluet | ooth Neighborh | ioo d | |
|--------------------------|------------|----------------|-------------------------|------------------------|
| File Edit View Bluetooth | Favorites | Tools Help | . P | |
| 🕒 Back 🔹 🕥 🕤 🏂 | 🔎 Sear | th 🄀 Folders | | |
| Folders | × | Device Name | Туре | Additional Information |
| | hborhood | Serial_0920 | Unknown: Major(31), Min | |
| ⊌ My Device | | < | ш | > |

| a my bractoorm r tases tentine b | uetooth Neighb | or hoo d | |
|----------------------------------|-----------------|--|------------------------|
| File Edit View Bluetooth Favo | ites Tools Help | | |
| 🕒 Back 🔹 🕥 🕤 🏂 🔎 | iearch 😥 Folde | rs 💷 🗸 | |
| olders | C Device Name | Туре | Additional Information |
| | d | Explore Open Connect RS-232 cable replaceme Discover Available Services Pair Device Paste | int |

Input PIN code : 1234. Click OK.



Screen will show Serial_0920 BT-0240 My Bluetooth Places VEntire Bluetooth Neighbor Adapter is paired.



Push MODE button on Serial_0920 BT-0240 Adapter, let it exit Configuration mode and enter DATA mode.



Wait for a while, Bluetooth LED on Serial_0920 BT-0240 Adapter will light, and PC2 screen shows that Serial_0920 Adapter is connected with USB Bluetooth Dongle.



Bluetooth device 'Serial_0920' is connected to the 'Bluetooth Serial Port' service on this computer.

x

4.3. Start Hyper Terminal File Transfer :

On PC1 : **Step 1 :** Click Start. Select Program. Select Accessories. Select Communications. Select HyperTerminal. Enter "TestBT" as the project name.

Press OK.

Step 2 :

Choose COM1, because Serial_0920 BT-0240 Adapter is conected to COM1 port of PC1.

Press OK.





Step 3:

Input RS232 parameters as the same which you configured in previous 4.1 section (page 27) : Configuring BT-0240 Adapter on PC1.

Please select "Hardware" Flow Control.

Press OK.



On PC2 : **Step 4 :** Click Start. Select Program. Select Accessories. Select Communications. Select HyperTerminal. Enter "TestBT" as the project name.

Press OK.

Step 5:

Choose COM5, because USB Bluetooth Dongle is acting at a Slave state and using this port for Local Services. (see Page 30).

Press OK.



| 🍓 TestBT - Hy | perTerminal | |
|----------------|--|---------|
| File Edit View | Call Transfer Help | |
| 🗅 🖻 🍘 🖉 | 🗈 🖰 🖆 | |
| Connec | t To 🤶 🔀 | ^ |
| | TestBT | |
| Enter de | etails for the phone number that you want to dial: | |
| Country | /region: United States (1) | |
| Area co | de: 021 | |
| Phone | number: | |
| Connec | t using: COM5 💽 | |
| | OK Cancel | × |
| Disconnected | Auto detect Auto detect SCRO | LL CAPS |

Step 6 : Input RS232 parameters.

Press OK.



On PC2, click Transfer on toolbar, click Send File.



Step 6 :

Browse the file you want to transfer, then click Send.

| 🌯 TestBT - HyperTerminal 📃 🗖 🔀 |
|---|
| File Edit View Call Transfer Help |
| D 🚔 🍘 🕉 🗈 🖰 😭 |
| · · · · · · · · · · · · · · · · · · · |
| Send File |
| Folder: C:\ |
| Filename: |
| C:\TestHie.bd |
| Protocol: |
| Zmodem with Crash Recovery |
| Send Close Cancel |
| |
| |
| × |
| |
| Connected 0:00:57 Auto detect Auto detect SCROLL CAPS |

Now, you will find transferring file using Bluetooth wireless technology is just like transferring file using a hardwired cable.

| Zmodem w | rith Crash Recovery file receive for TestBT |
|-------------|---|
| Receiving: | NOTE.DOC |
| Storing as: | C:\Documents and Settings\Spring\NOTE Files: 1 of 1 |
| Last event: | Receiving Retries: |
| Status: | Receiving |
| | |
| File: | 226K of 36/K |
| Elapsed: | 00:00:25 Remaining: 00:00:15 Throughput: 9004 cps |
| | |
| | Cancel Skip file cps/bps |

1. Sympton :

Push MODE button can not get into Configuration mode.

Answer :

Turn off the power of BT-0240 Adapter, remove it from your RS232 device, apply power to it, and try again (like a hardware RESET).

2. Sympton :

Data is not correctly set and saved.

Answer :

- 1. Check if it is staying at Configuration mode.
- 2. If it is in local setting up, check if settings of connecting COM port and Baud Rate are correct.
- 3. If it is in remote setting up, check if its connecting virtual COM port is correct.

3. Sympton :

In DATA mode, automatic link can not be established.

Answer :

- 1. Check if remore 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.

4. Sympton :

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

Turn off the power of BT-0240 Adapter, remove it from your RS232 device, apply power to it, and try again (like a hardware RESET).

For a Master BT-0240 Adapter, it keeps sending a linking request to find another Slave device, while a Slave BT-0240 Adapter is waiting to receive any linking request. If you configure both two BT-0240 Adapters 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.

5. Sympton :

Garbage code is received.

Answer:

Wrong RS232 parameters were set, such as baud rate or parity bit. Configure your BT-0240 Adapter to a correct setting again.

6. Sympton :

Mass data transmission will stop midway or receive garbage code. **Answer :**

Please select "Hardware" in flow control setting.

7. Sympton :

Can not connect the BT-0240 Adapter when in Remore Setting Up. Answer :

Check to see if BT-0240 Adapter is staying at DATA mode. If YES, please disconnect its link first. This can be done by turning off the power of another Bluetooth device which this BT-0240 Adapter is linked with.

Turn off power of BT-0240 Adapter, then turn it on. Push MODE button to get into Configuration mode.

8. Sympton :

Want to reconfgure BT-0240 Adapter, but forgot its previous baud rate setting.

Answer :

Turn off power of BT-0240 Adapter, then turn it on. Push MODE button immediately before it automatically links with other Bluetooth device (i.e. let the link NOT be built). At this moment, baud rate is defaultly set to 115200, you then can use this baud rate to get into Configuration mode.

9. Sympton :

Which mode BT-0240 Adapter is staying when in Configuration state? Answer :

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

APPENDIX A BT-0240 (DTE/DCE) Adapter Pinout Definitions :

BT-0240 (DTE device)

| Pin No. | DTE | | |
|---------|------|--------|--|
| | Name | I/O | |
| 1 | DCD | input | |
| 2 | RX | input | |
| 3 | TX | output | |
| 4 | DTR | output | |
| 5 | GND | Ground | |
| 6 | DSR | input | |
| 7 | RTS | output | |
| 8 | CTS | input | |
| 9 | RI | input | |

BT-0240 (DCE device)

| Din No | DCE | | |
|-----------|------|--------|--|
| T III NO. | Name | I/O | |
| 1 | DCD | output | |
| 2 | TX | output | |
| 3 | RX | input | |
| 4 | DTR | input | |
| 5 | GND | Ground | |
| 6 | DSR | output | |
| 7 | RTS | input | |
| 8 | CTS | output | |
| 9 | RI | output | |

RS232 Extension Cable : (Included in the package)

| Din No | D | TE | D | CE | Din No |
|--------|------|--------|------|--------|----------|
| | Name | I/O | Name | I/O | FIII NU. |
| 1 | DCD | input | DCD | output | 1 |
| 2 | RX | input | TX | output | 2 |
| 3 | TX | output | RX | input | 3 |
| 4 | DTR | output | DTR | input | 4 |
| 5 | GND | Ground | GND | Ground | 5 |
| 6 | DSR | input | DSR | output | 6 |
| 7 | RTS | output | RTS | input | 7 |
| 8 | CTS | input | CTS | output | 8 |
| 9 | RI | input | RI | output | 9 |

RS232 converter cable which can be used to change a DTE device

to become a DCE device : (User can purchase from other place)

| | Din No | D | CE | |
|---|-----------|------|--------|----|
| | FIII INU. | Name | I/O | 1 |
| | 1 | DCD | output | |
| | 2 | TX | output | |
| | 3 | RX | input | |
| | 4 | DTR | input | |
| | 5 | GND | Ground | |
| _ | 6 | DSR | output | |
| | 7 | RTS | input | |
| | 8 | CTS | output | |
| | 9 | RI | output | ┣— |

Shorted

| | D | Din No | |
|----------|------|--------|----------|
| | Name | I/O | FIII NO. |
| | DCD | output | 1 |
| - | TX | output | 2 |
| <u> </u> | RX | input | 3 |
| / | DTR | input | 4 |
| | GND | Ground | 5 |
| | DSR | output | 6 |
| | RTS | input | 7 |
| <u> </u> | CTS | output | 8 |
| | RI | output | 9 |

Shorted

APPENDIX B Specifications :

| Product Name | Bluetooth RS232 Adapter |
|-----------------------|--|
| Model Name | BT-0240 |
| Certification | FCC, CE, BQB |
| Standard | Bluetooth v1.1 |
| Bluetooth Profile | Series Port Profile (SPP) V1.1 |
| Frequency Band | 2.4~2.4835GHz unlicensed ISM band |
| Spread Spectrum | FHSS (Frequency Hopping Spread Spectrum) |
| Transfer Rate | 9600~ 460800 bits per second |
| RF Output Power | Class 1; 13 dBm typical |
| Antenna | Embedded printed antenna |
| Working Distance | Up to 100 meters* in free space |
| Sensitivity | <-88dBm at < 0.1% BER |
| Input Power | 7.5VDC |
| COM Port Interface | DTE and DCE |
| LEDs Indicator | Power / Bluetooth active /Mode active |
| Operation temperature | 0 oC ~ + 60 oC |
| Storage temperature | -10 oC ~ +70 oC |
| Humidity | 5 ~ 90% non-condensing |
| Size | 81 (L) x 54(W) x 21(H) mm |

APPENDIX C

Safety Guide :

- Read and follow all instructions and warnings provided.
- Save these instructions for future use.
- When service or replacement of parts is required, ensure work is done by a qualified technician.
- Do not use this unit near water or in a rainy/moist environment.
- Use supplied cables only.
- Do not attempt to service this product yourself. Doing so will expose you to various hazards including dangerous voltage.
- This unit is suitable for a 110V to 230V AC power supply (Autodetect).
- Disconnect the power cable (pull plug) and USB cable in the following situations :
 - In the event of service.
 - Power cable/plug becomes damaged.
 - Unit is exposed to excess moisture/rain
 - Unit has been dropped.
 - Unit is being cleaned.
- Unit must be used with adult supervision at all times. Children must not be allowed to handle any of the cables.
- Never insert any objects other than CDs in the trays.
- Never insert any objects through ventilation holes.

Remember !

Any electrical equipment is hazardous if handled improperly.

FCC COMPLIANCE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning:

To meet FCC requirements, a shielded power cord is required in order to prevent interference. It is essential that only the supplied power cord is to be used. Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not approved by the party responsible for compliance could void your authority to operate the equipment.

One Year Limited Warranty

- This device is guaranteed against manufacturing defects for one full year from the original date of purchase.
- This warranty is valid at the time of purchase and is non-transfer able.
- This warranty must be presented to the service facility before any repair can be made.
- Sales slip or other authentic evidence is required to validate warranty.
- Damage caused by accident, misuse, abuse, improper storage, and/or uncertified repairs is not covered by this warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- Do not send any product to service center for warranty without a RMA (Return Merchandise Authorization) and proof of purchase. Ensure a trackable method of delivery is used (keep tracking number).
- Warranty is valid only in the country of purchase.
- We assumes no liability that may result directly or indirectly from the use or misuse of these products.

IMPORTANT

" This warranty will be voided if the device is tampered with, improperly serviced, or the security seals are broken or removed"