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# **1. Introduction**

This TBW-101UB/TBW-102UB USB Bluetooth v2.0+EDR Dongle add Bluetooth technology to your existing USB computers or notebook. Simply plug it into the USB port of your machine for seamless connectivity with other Bluetooth devices, such as phones, computers, peripherals and other devices. The dongle features the industry's most extensive range of profiles available, ensuring a common application between two Bluetooth-enabled devices.

The dongle is fully compliant with the Bluetooth v2.0 specification and backward-compatible with Bluetooth version 1.1 or 1.2 standards. Moreover, it supports the new Bluetooth Enhanced Data Rate (EDR), providing raw bandwidth of 3Mbps for wireless applications. It also adopts dedicated interference avoidance technology to reduce possible disruption from nearby Wi-Fi® products, which operate in the same 2.4 GHz radio frequency as Bluetooth.

#### Features

- Compliant with Bluetooth v2.0 Specification with EDR (Enhanced Data Rate) support
- Backward compatible with Bluetooth v1.1 and v1.2 devices
- Up to 3Mbps Access Data Rate and Low Power consumption
- Compatible with Windows 98SE/ME/2000/XP & MCE (Media Center Edition) Operating Systems
- Built-in 128-bit encryption of secured data communications
- Enable computers to connect Bluetooth-enabled devices such as printers, headset, audio/video, basic images, PDAs, and mobile phone.
- Compliant with Class I (TBW-102UB) or Class II (TBW-101UB) Bluetooth Operations
- Communicates wirelessly up to 100 meters/328 feet (Class I) or 10 meters/ 32.8 feet (depends on the environment)
- Trouble-free Plug & Play installation
- 2-Year Warranty

# **Package Contents**

- TBW-101UB or TBW-102UB
- Multi-Language Quick Installation Guide
- Driver & Utility CD-ROM
- USB Type A male to female cable

## **System Requirements**

- CUP: 300MHz or above
- Memory: 256MB or above
- Operating System: Windows<sup>®</sup> XP, 2000, ME or 98SE
- Computer with an available USB 1.1 or 2.0 slot
- Windows XP/2000/ME/98SE

# 2. Installation

**Note:** Do not plug the USB Bluetooth v2.0+EDR Dongle to your computer before you install the provided software. You will prompted to plug the device during the installation.

- Insert the Bluetooth software installation CD into the CD drive of your computer. The setup program will start automatically. If not, locate and double-click the Setup.exe file in the Software folder to launch the setup program.
- 2. When the welcome screen appears, click Next.



3. Select I accept the terms in the license agreement and click Next.



4. You can select to install the program in default directory or click **Change** to specify another directory. After specifying the location, click **Next**.

	MM Bluetooth Software 5.1.0.1700
Destinati	
Click Ne>	tt to install to this folder, or click Change to install to a different folder.
	Install WIDCOMM Bluetooth Software 5.1.0.1700 to:
	C:\Program Files\WIDCOMM\Bluetooth Software\ Change
InstallShield –	
	< Back Next > Cancel

5. Click **Install** to begin the installation.

🔀 WIDCOMM Bluetooth Software 5.	1.0.1700		
Ready to Install the Program			KEEX
The wizard is ready to begin installation.			AL
Click Install to begin the installation.			
If you want to review or change any of exit the wizard.	your installation	settings, click Back.	Click Cancel to
InstallShield	< Back	Install	Cancel
			Cancer

6. If the **Driver Signature Notice** window appears, click **OK** to avoid keeping being prompted of signature warnings.

Driver Signature Notice
Currently Microsoft does not have a certification program in place for Bluetooth devices. As a result, at this time it is not possible to provide certified drivers for Bluetooth devices. In the event that Microsoft implements a Windows Logo certification process for Bluetooth devices, signed drivers will be made available.
To avoid receiving several prompts for signed drivers during the installation process, select OK to disable unsigned driver warnings, and proceed with the installation. The default warning option will be re-enabled at the completion of the installation of the Bluetooth drivers. This option is an effort to provide the best customer experience while using this product. If you select Cancel, the installation will continue without disabling the warnings and you will be required to select Continue at each prompt to proceed with the installation.
OK Cancel

7. When prompted, plug your Bluetooth dongle to your computer and then click **OK**.



8. Please wait while the software installs all the supported services. This may take several minutes.

If you are using operation systems other than Windows XP, reboot prompt may appear a couple of times. Just ignore the prompts and wait until the finish screen appears.

9. Click **Finish** to complete the installation.

🖟 WIDCOMM Bluetooth Software		
A A A A A A A A A A A A A A A A A A A	InstallShield Wizard Completed	
	The InstallShield Wizard has successfully installed WIDCOMM Bluetooth Software. Click Finish to exit the wizard.	
	< Back Finish Cancel	

10. If prompted, restart your computer to enable the settings.

**Note:** If Skype is installed on your computer, a Skype access dialog box will appear because the Bluetooth audio service is attempting to access Skype. Just select a proper option as required.

# **Complete Initial Bluetooth Configurations**

After you finish the installation and launch the Bluetooth application for the first time, the **Initial Bluetooth Configuration Wizard** will automatically launch to guide you through the initial configurations.

1. Select the locations you want the icon to appear and click **Next**.

Initial Bluetooth Configuration Wizard	
	Initial Bluetooth Configuration Wizard
	Before you can begin using Bluetooth on this computer you must perform some initial setup. This wizard will help you to configure a basic Bluetooth environment.
	You can access the Bluetooth features on this computer through the Bluetooth icon on the desktop or in the system tray. This icon can also appear in the following locations. Select the locations you want the icon to appear and click Next.
1	Add the icon to the Start menu
	Add the icon to the Programs menu
	Add the icon to My Computer
	<back next=""> Cancel</back>

2. Enter a unique name to identify your computer and select a computer type. Then click **Next**.

Bluetooth Configuration	
General Accessibility Discovery Local Services Client Applications Diagnostics	
WIDCOMM Bluetooth Software 5.1.0.1700	
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: SUPPORT Computer type: Laptop	
OK Cancel Apply Help	

3. Click **Next** to proceed.

Initial Bluetooth Configuration Wizard		
A A A A A A A A A A A A A A A A A A A	Initial Bluetooth Configuration Wizard	
	To configure the Bluetooth services that this computer will offer to other Bluetooth devices, click Next.	
	< Back Next > Cancel	

4. This screen allows you select the services you want to provide to other Bluetooth devices.

If you click **Cancel** at this point, all the services will not inactive unless otherwise specified via the **Local Services** tab on the **Bluetooth Configuration** panel. See "7. Providing Local Service" on page 44 for more information.

Bluetooth Service Selection		
To enal	e services that this computer will offer: le a service, place a check in the box next to the service name. lay the properties panel for a service, click Configure.	
v 53	PIM Item Transfer Allow remote Bluetooth devices to exchange business cards with this computer. Accept Personal Information Manager (Configure messages from remote Bluetooth devices.	
	PIM Synchronization File Transfer Network Access Dial-up Networking Bluetooth Serial Port	
	< Back Next > Cancel	

5. The wizard will proceed to help you establish a connection to other Bluetooth devices. You may follow the step-by-step instructions to set up the connections now or click **Skip** and set up later.

Initial Bluetooth Configur	ation Wizard
A A A	Initial Bluetooth Configuration Wizard
NUT I	This wizard can help you setup connections to Bluetooth computers, phones, headsets, etc.
	To setup a connection now, put the other device in pairing mode, and then click Next. (See the other device's documentation for assistance in preparing it to accept a connection).
	To setup connections later, click Skip.
	< Back Next > Skip Cancel

# 3. Quick Start Guide

This chapter provides you with the basic guidelines to get your Bluetooth dongle connected to a service provided by another Bluetooth-enabled device.

1. Double-click the Bluetooth icon in the notification area.



If the Bluetooth icon is blue in color with a red insert (<sup>8</sup>), make sure the dongle is properly plugged, right-click the dongle and select **Start the Bluetooth Device.** 

2. The utility will search for and display available Bluetooth devices in range. Double-click the target device that you want to connect to.

If you want to connect to a Bluetooth peripheral such as headset or imaging device, refer to the manual that came with the peripheral for instructions about how to make the device discoverable.



3. The utility will search for and display available services on the target device. Double-click the service that you want to use. (Ignore this step if you are connecting to a peripheral that offers single service.)



4. If pairing is required, type a PIN codes exactly the same in the **Bluetooth Security Code Request** window on both devices and then click **OK**.

If the peripheral has a fixed PIN code, you should refer to the manual that came with the peripheral for the PIN code.

Bluetoot	h Security Code Reques	t			
P	Device Name:	MICHELLEXP201			
Before a connection can be established, this computer and th listed above must be "paired."					
	Paired devices exchange a secret key each time they connect. T key is unique for each pair of devices; it is used to verify identity a encrypt the data that the devices exchange.				
To pair with this device, enter the device's security code an					
	Bluetooth security code:	••••			
	ОК	Cancel <u>H</u> elp			

5. If prompted, respond to the **Bluetooth Service Authorization** message to allow access the service. After that, you can start to use the Bluetooth service.

# 4. Basic Operations

# **Bluetooth Tray Icon**

The Bluetooth icon in the notification area, at the far right of the taskbar provides feedback about Bluetooth status as described in the table below.

lcon	Status
8	Bluetooth dongle found and enabled.
8	Bluetooth dongle not found or disabled.
*	Connected to a service.

The Bluetooth tray also provides fast access to most Bluetooth operations. You can double-click it to access **My Bluetooth Places** or right-click it to pop up the shortcut menu and access the provided functions.



# **Starting or Stopping Bluetooth**

To start Bluetooth - Right-click the Bluetooth icon and select **Start the Bluetooth Device**. The Bluetooth icon is blue in color with a white insert when Bluetooth is running.

To stop Bluetooth - Right-click the Bluetooth icon and select **Stop the Bluetooth Device**.

# **Creating a Connection**

#### **Option 1. Use Quick Connect via the Bluetooth Icon**

Right-click the Bluetooth icon in the system tray and select **Quick Connect** and then select the desired Bluetooth service.



#### a. If selected service is never connected:

- 1. Select **Find Devices** on the shortcut menu.
- The utility will search for devices that potentially provide the desired service. Highlight the desired one and click Next.

Bluetooth Device Selection	
Select a device Remote devices must be in Discoverable For assistance in making a remote device device's documentation.	
MICHELLE	
Cancel Search	Show computers
Searching for Bluetooth devices in the neighb	orhood, please wait
ø	Next > Cancel

3. The succeeding steps vary according to the service you selected. Just follow the on-screen prompts to proceed.

#### b. If selected service has been connected in the past:

The options on the shortcut menu are:

- The name(s) of any device(s) with which prior connections to this type of service have been established. Select a name from the list to re-establish the connection.
- Other Devices select this option to search for additional devices that potentially provide the desired service, select a device from the list, and then click **Next** to proceed.

#### **Option 2. Use the Bluetooth Setup Wizard**

You can open the setup wizard by either of these methods:

- Right-click the Bluetooth icon and select Add a Bluetooth Device
- Double-click the Bluetooth icon to open My Bluetooth Places and select Add a Bluetooth Device.

When the wizard window pops up, follow the on-screen instructions to proceed:

Bluetooth Setup				
Filler	Welcome to the Bluetooth Setup Wizard			
11-1-1	This Wizard will help you set up your Bluetooth environment.			
11	Remote devices must be in Discoverable mode for this computer to find them.			
	For assistance in making a remote device discoverable, refer to the device's documentation.			
1				
	< Back Next > Cancel			

# **Option 3. From the Entire Bluetooth Neighborhood**

- Double-click the Bluetooth icon to open My Bluetooth Places and select View Devices in Range.
- Available Bluetooth devices should appear in the right pane. If not, click Search for devices in range to start searching. Devices icons have three states. Refer to "Device and Service Icons" section on page 14 for details.



3. Double-click a desired Bluetooth device to display its available services.

If the selected device has added or reconfigured a service, or if the desired service is not an option in the shortcut menu, select the **Discover Available Services** option to update the list of services offered by the device.



4. Double-click the desired service to make the connection.



#### **Security and Pairing**

If **Secure Connection** is enabled for any of the Bluetooth services on either of the two devices that attempting to make a connection, they must exchange an identical PIN code upon the initial connection. The code request window on your computer is like the figure below. After the exchange, the two Bluetooth devices are allowed to exchange data in a secure way.

Bluetooth Security Code Request						
<b>۲</b>	Device Name: MICHELLEXP201 Before a connection can be established, this computer and the device listed above must be "paired." Paired devices exchange a secret key each time they connect. This key is unique for each pair of devices; it is used to verify identity and to encrypt the data that the devices exchange.					
	To pair with this device, enter the device's security code and click DK. Bluetooth security code:					
	OK Cancel Help					

# **Device and Service Icons**

#### **Device Icons**

Devices are physical things, such as computers, cameras, headsets, etc. Device icons vary according to device types and have three states:

- Normal this unadorned icon indicates the presence of a device in the vicinity. Each type of device is represented by a different icon.
- Connected devices that are have been connected to this computer before are represented by an icon with a green tint and/or a small butting arrows box added to them, regardless of whether they are turned on, in range, or in Discoverable mode.
- Paired devices that have been paired with this computer before are represented by a normal icon with a small check box added to it, regardless of whether they are turned on, in range, or in Discoverable mode.

The icons used to indicate device type, paired status, and connection status are illustrated in the table below. (There are some differences between the device and service icons used by Windows 98SE, ME, and 2000, and those used by Windows XP. The table is based on Windows XP.)

Type of Device	Icon Indicating Device Type, Paired Status, and Connection Status				
Type of Device	Not Paired	Paired	Connected		
Audio Gateway	<b>S</b>				
Headphones	Ģ		4		
Camera			++		
Desktop Computer	<u></u>				
Headset					
Keyboard	۵	<b>*</b>	in a start and a start		
Mouse	Õ	ð			
Modem	5	5	5		
Network Access Point	<b>\$</b>				
Laptop Computer					
Personal Digital Assistant					
Printer	È				
Cellular Phone	6		ia ee		
Unknown Device	8				

#### **Service Icons**

Services are what a Bluetooth device can do with other Bluetooth devices, such as access to a local area network, or the ability to send a fax. Some devices, such as headsets or network access points, may provide only a single service. Others, such as desktop and laptop computers, can potentially provide all of the Bluetooth services. Service icons vary according to services types and have three states:

- Normal this type of unadorned icon indicates that a specific service is potentially available from the selected device.
- Not Available this type of icon indicates that the service that it represents is not available. Services that are not available are represented by a normal icon with a small X box added to it.

**Note:** This type of icon only applies to the services on your Bluetooth device (which can be viewed via **My Bluetooth Places > View My Bluetooth service**. When you try discovering the services on a remote Bluetooth device, not available services will not be displayed.

Connected - this type of icon indicates that this computer is connected to this service. The icon has a green tint and/or a small butting arrows box added to it.

The icons used to indicate service type, availability, and connection status are illustrated in the table below. (There are some differences between the device and service icons used by Windows 98SE, ME, and 2000, and those used by Windows XP. The table is based on Windows XP.)

	Icon Indicating Service Type, Availability, and Connection Status				
Name of Service	Available	Not Available <sup>1</sup>	Connected		
Audio Gateway	<b>S</b>				
Headphones	6	S	4		
Headset					
File Transfer	1	N	<b>2</b>		
Bluetooth Imaging	1				
Network Access					
PIM Item Transfer	<b>F</b>				
PIM Synchronization	22				
Dial-up Networking	<b>S</b>				
Printer	è				
Bluetooth Serial Port		X			
Fax	Ē	N			

# **5. Configuring Your Bluetooth**

The **Bluetooth Configuration** panel provides access to settings for Bluetooth services, client applications, hardware, security, discovery, accessibility, default paths, event notification, and other Bluetooth related items.

You can open the **Bluetooth Configuration** panel by either of the following ways:

- Right-click the Bluetooth tray icon and select **Bluetooth Configuration**.
- Double-click the Bluetooth tray icon to open My Bluetooth Places and select View or modify configuration.

#### **General Settings**

The settings on the **General** tab determine information that is displayed to remote devices.

- Computer name enter a unique name to identify this computer to other Bluetooth devices in the vicinity; this field cannot be left blank.
- Computer type select either Desktop or Laptop from the shortcut menu to set the type of icon remote devices will use to represent this computer.

Bluetooth Configuration					
General Accessibility Discovery Local Services Client Applications Diagnostics					
WIDCOMM Bluetooth Software 5.1.0.1700					
Identity         Inter 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: SUPPORT Computer type: Laptop					
OK Cancel Apply Help					

# **Accessibility Settings**

The **Accessibility** tab lets you specify whether remote devices may access this computer, which remote devices have access, and whether an audio warning is played when a Personal Identification Number (PIN code) is required.

#### Allow Other Devices to Discover This Computer

Select Let other Bluetooth devices discover this computer to permit remote Bluetooth devices to find this computer. If Allow No devices (below) is selected, this option is not available.

# Control the Types of Devices Allowed to Connect to This Computer

From the **Devices allowed to connect to this computer** menu, select:

- No devices no remote devices are permitted to initiate a connection with this computer. However, this computer can still initiate connections with remote Bluetooth devices.
- All devices all remote devices are permitted to connect to this computer. Connections are subject to additional security restrictions, such as authentication and authorization, which may be required by the individual services provided by this computer.
- Only devices listed below only the listed devices are allowed to connect to this computer. Use Add Device and Delete buttons to edit the list.

#### **Choose an Audio Notification File**

When **Secure Connection** is enabled for any of the Bluetooth services on this computer, a PIN code is required before that service can be accessed. To chose a notification sound that will play when a remote device attempts to access a service that requires a secure connection, click **Select audio file** and select the sound (\*.wav) file to be played.

Bluetooth Configuration					
General Accessibility Discovery Local Services Client Applications Diagnostics					
Let other Bluetooth devices discover this computer     Devices allowed to connect to this computer					
Allow: All devices.					
Select the devices that may access this computer.					
Add Device         Delete           In addition to a visual notification, you may select an audio notification when a security code is requested.         Select audio file					
OK Cancel Apply Help					

# **Discovery Settings**

The **Discovery** tab determines whether this computer looks for other Bluetooth devices automatically, how often it looks for devices, and what type of devices it looks for.

Bluetooth Configura	tion				
General Accessibility	Discovery	Local Services	Client Applications	Diagnostics	
Select specific devices, classes of devices or types of devices within a class that this computer should discover and report.					
Look for other B	luetooth dev	vices	Every 10	minutes	
Report all Bluetoo	th devices	~			
Filter Type De	tails				
		Ad	d Device De	elete	
	ОК	Cancel	Apply	Help	

#### **Periodic Search for Devices**

When **Look for other Bluetooth devices** is selected, Bluetooth automatically searches for devices every X minutes. X is a whole number between 1 and 60.

#### **Determine the Devices That Will Be Reported**

By default, this computer will discover and report all the Bluetooth services. The Bluetooth software can be configured to report only specific devices, specific classes of device, or specific types of device within a class.

To do this, select **Report only selected Bluetooth devices** from the drop-down list and click **Add Device**.

At the **Discoverable devices...** window, you can limit the remote devices reported.

- Specific devices an individual computer or Bluetooth cellular telephone are examples of specific devices.
- Specific class of device computer is an example of a class of devices.
- Specific type of device within a class laptop is an example of a specific type of device within the computer class of devices.

The devices to be discovered can be mixed and matched; you can discover one or more specific devices, classes of devices and types of devices within a class at the same time.

Discoverable devices ?X				
Select specific devices that this computer is able to discover:				
O Allow this computer to discover only these devices.				
WEN Nokia N72 WEN MICHELLEXP201				
<ul> <li>Allow this computer to discover all devices of a specific class or a specific device within a specific class.</li> </ul>	pecific			
Class: Computer Vige: All	~			
OK Car	ncel			

# **Local Services Settings**

This tab allows you to select the services that your computer will provide to other Bluetooth devices. You can also double-click a service name to set its properties or click **Add Serial Service** to add serial service. For more information on providing local services, refer to the "7. Providing Local Service" section on page 44.

Bluetooth Configuration						
General Accessibility Discovery Lo	ocal Service	Client Applications	Diagnostics			
Select the services that this computer will provide to other Bluetooth devices.						
Double-click a service name to set its	security, sta	art-up options and prop	erties.			
Service Name	Startup	Secure Connection	COM Port			
Printer	Manu	Required				
Bluetooth Imaging Audio Gateway Headset PIM Synchronization Fax File Transfer PIM Item Transfer Dial-up Networking Network Access Bluetooth Serial Port	Auto Auto Auto Auto Auto Auto Auto Auto Auto	Required Required Required Required Required Required Required Required Required	COM4			
Properties	Cano	Add Serial Service	Delete			

# **Client Applications**

This tab specifies how your computer will access services on other Bluetooth devices. For more information on accessing client applications, refer to the "6. Using Bluetooth Applications" section on page 26.

Cluetooth Configuration General Accessibility Discovery Specify how this computer will acc Double-click an application name	cess services on other Blue		
Application Name	Secure Connection	COM Port	
Bluetooth Imaging Human Interface Device Printer Audio Gateway Headset PIM Synchronization Fax File Transfer PIM Item Transfer Dial-up Networking Network Access Bluetooth Serial Port	Required Not Required Required Required Required Required Required Required Required Required Required		
Properties	Add COM port	Delete	e COM port
OK	Cancel	Apply	Help

# **Diagnostics**

This tab allows you to view the Bluetooth dongle information and verify if your dongle is working properly.

If more than one Bluetooth dongles (excluding the dongle of other brand) are plugged to one computer, a prompt will appear indicating only one of them can be active and you will be guided to this tab. Here you can disable the unwanted dongle and specify a preferred Bluetooth dongle on your computer.

Bluetooth Configurat	ion				
General Accessibility	Discovery	Local Services	Client Applications	Diagnostics	
Devices:					
Name			Status	Туре	
😪 Broadcom 2045 Bl	uetooth 2.0	USB Device	Active	USB	
C Device Properties					
Device Status:	The sele	ected device is w	orking properly.		
Manufacturer:	Manufacturer: Broadcom Corporation				
Firmware Revision:	Version 2.3.14.0				
Device Address:	00:01:A	4:00:00:49			
HCI Version:	Bluetooth HCl 2.0				
HCI Revision:	HCI Revision: 4000				
LMP Version:	Bluetool	th LMP 2.0			
LMP Sub Version:	430E				
Refresh	Disable		iet Preferred		
(	OK	Cancel	Apply	Help	

# **Security and Pairing**

By default, the properties of all Bluetooth services on this computer and the Bluetooth applications (except Human Interface Device) that this computer uses are set to require a secure connection. When **Secure Connection** is enabled for any of the Bluetooth services on this computer, the two devices that attempting to make a connection must exchange a Personal Identification Number (PIN) code upon the initial connection. After the exchange, the two Bluetooth devices are allowed to exchange data in a secure way. As this Bluetooth dongle supports 8 to 128-bit encryption, the length of the PIN code can vary between 1 and 16 alphanumeric characters. Hence, the length is restricted by the device you want to connect to. For example, some Bluetooth devices only support a PIN code of 1 to 4 characters.

Bluetoot	h Security Code Request				
<b>1</b>	Device Name: MICHELLEXP201 Before a connection can be established, this computer and the device listed above must be "paired." Paired devices exchange a secret key each time they connect. This key is unique for each pair of devices; it is used to verify identity and to				
	encrypt the data that the devices exchange. To pair with this device, enter the device's security code and click OK.				
	Bluetooth security code:				
	OK Cancel Help				

# 6. Using Bluetooth Applications

This chapter describes how to use the Bluetooth services on other Bluetooth devices with your Bluetooth-enabled computer.

The services on remote Bluetooth devices are referred to as **Client Applications** in the **Bluetooth Configuration** panel. Some client applications are not required to configure unless you want to change the application name or the security settings while some is provided with detailed settings. To configure a client application, go to **Bluetooth Configuration Panel > Client Applications > Printer > Properties**. Refer to the ensuing sections for the descriptions of each client application.

Bluetooth Configuration			
General Accessibility Discovery Lo Specify how this computer will access Double-click an application name to se	services on other Blue		
Application Name	Secure Connection	COM Port	
Bluetooth Imaging Human Interface Device Printer Audio Gateway Headset PIM Synchronization Fax File Transfer PIM Item Transfer Dial-up Networking Network Access Bluetooth Serial Port	Required Not Required Required Required Required Required Required Required Required Required Required Required		
Properties	Add COM port	Delete COM port	
ОК	Cancel	Apply Help	

## **Printer**

The Bluetooth Printer application allows this computer to use a Bluetooth printer.

The Bluetooth Configuration Panel > Client Applications > Printer > Properties > General tab provides options to configure the application name and enable or disable secure connection. **Note:** The secure connection depends on the Bluetooth printer you want to connect to. If the Bluetooth printer's paring function is in-activated, you should always disable the secure connection service.

# Install a Bluetooth Printer

#### Option One:

- Go to My Bluetooth Places > View devices in range and right-click a Bluetooth printer, select Add Printer from the shortcut menu and follow the on-screen instructions.
- Select the printer manufacturer and model at the prompt. If your printer is not in the list of options, click **Have Disk...**, insert the driver disk for the printer, and then navigate to the drive and directory that contains the driver initiation file (\*.inf) for the printer.
- 3. Follow the on-screen instructions to complete the installation.

#### **Option Two:**

- From the Windows Control Panel, select Printers and Faxes > Add a Printer > Next > Local printer > Next.
- 2. On the **Select a Printer Port** window of the wizard:
  - Select Create a new port.
  - In the **Type of port** menu, select **Bluetooth Printer Port**, and then click **Next**.
- 3. On the next screen, select the printer by name, and then click **Connect**.
- 4. Install the driver: Select the printer manufacturer and model at the prompt. If your printer is not in the list of options, click **Have Disk...**, insert the driver disk for the printer, and then navigate to the drive and directory that contain the driver initiation file (\*.inf) for the printer.
- 5. Follow the on-screen instructions to complete the installation.

# Imaging

The Bluetooth Imaging application allows this computer to **send images to remote devices** that provide the Bluetooth imaging service. Possible uses include the transfer of images to a Bluetooth camera, camera/phone, or any other device that offers the Bluetooth Imaging service. The supported image formats are:

- BMP
- GIF



JPG

## **Image Format Conversion**

Some devices, particularly battery-powered devices such as phones and cameras, may only be able to accept images in one format and at a single fixed resolution. In that case, the image is converted to the required format and resolution before it is transferred to the remote device.

## **Sending Images to Remote Imaging Devices**

Imaging application connections are created automatically on an as-needed basis.

You can send an image to the remote imaging device by either of the methods:

- If a shortcut to the remote device's imaging service exists in My Bluetooth Places, drag and drop, or, copy and paste, to that shortcut.
- Go to My Bluetooth Places > View devices in range and drag and drop the image file onto the destination's device icon.



After copying an image file in Windows Explorer, go to My Bluetooth Places > View devices in range, right-click the destination device and select Paste.



**Note:** Battery-powered remote devices, such as a cell phones or cameras, may require that Bluetooth be specifically enabled before they can accept an image; see the battery-powered device's documentation for more information.

# **Voice Gateway**

The **Voice Audio Gateway** application allows a remote Bluetooth device to use this computer's microphone and speakers as the remote device's audio input and output devices. For example, if your Bluetooth cellular phone supports audio gateway service, you can redirect the phone's conversation to your computer's speakerphone.

To connect to an Voice Gateway service enabled device:

- 1. Open **My Bluetooth Places** and discorver the **Audio Gateway** service provided by the remote Bluetooth device. Then double-click the service to make the connection.
- 2. If required, on the remote Bluetooth device respond to the **Bluetooth Service Authorization** message to allow the access.

Once the connection is established, remote device's audio will be redirected to your computer.

# Headset

The Bluetooth Headset application allows this computer to use a Bluetooth headset as the audio input and output device for this computer. When a Bluetooth headset is connected to this computer, it functions as a wireless microphone and speaker for an audio application, such as an Internet soft phone or Instant Messaging software.

## **Connect to a Bluetooth Headset**

- 1. Make a Bluetooth headset discoverable. Refer to the manual that came with the headset for instructions about how to make the device discoverable.
- 2. Open **My Bluetooth Places** and discover the **Headset** device provided by the remote Bluetooth device. Then double-click the device to make the connection.
- If the headset has a fixed PIN code and sends out a paring request, type that PIN code in the **Bluetooth Security Code Request** window, and then click **OK**. Refer to the manual that came with the headset device for the PIN code.
- 4. Once the connection is established, you will be notified that the connection has been made.

#### **Verifying Bluetooth Headset Installation**

Once the Bluetooth headset is installed, it will automatically take over the function of microphone and speakers of your PC. To verify the installation, go to **Control Panel > Sounds and Audio Devices** (or **Sounds and Multimedia**) **> Audio**. Your Bluetooth audio device will be identified as **Bluetooth Hands-free Audio**, **Bluetooth Stereo Audio** or other name according to the device.

Sounds and Audio Devices Properties	
Volume Sounds Audio Voice Hardware	
Sound playback	
Bluetooth Hands-free Audio	
Volume Advanced	)
Sound recording	51
Default device:	
🔗 Bluetooth Hands-free Audio	
Volume Advanced	
MIDI music playback	5
Default device:	
Microsoft GS Wavetable SW Synth	1
Volume About	J
Use only default devices	
OK Cancel Appl	y

# **PIM Synchronization**

The PIM Synchronization application is used to synchronize the Personal Information Manager (PIM) database of this computer with the PIM database of a remote Bluetooth device. The supported PIMs are:

- Microsoft Outlook
- Microsoft Outlook Express
- Lotus Notes

The supported data types are:

- Business cards
- Calendar items
- Email (with or without attachments)
- Notes

#### **Configure PIM Synchronization**

The Bluetooth Configuration > Client Applications > PIM Synchronization > General tab provides options to configure. Click the PIM you want to synchronize (if any) in each of the data type lists.

The data item types that can be synchronized are:

- Business cards
- Calendar items
- Email (with or without attachments-see below)
- Notes



#### To Synchronize the PIM Database

To synchronize the PIM database on this computer with the PIM database of another Bluetooth device:

- 1. Open **My Bluetooth Places** and discorver the **PIM Synchronization** service provided by the remote Bluetooth computer. Then double-click the service to make the connection.
- 2. If pairing is required, type a PIN code exactly the same in the **Bluetooth Security Code Request** window on both computers, and then click **OK**.
- 3. On the remote computer, respond to the **Bluetooth Service Authorization** message to allow access the PIM Synchronization service.
- 4. You will get a message when synchronization is done.

#### Fax

The Bluetooth Fax service allows this computer to send a fax using a Fax/Modem that is physically connected to a remote Bluetooth device. To send a Fax:

- 1. Open **My Bluetooth Places** and discorver the **Fax** service provided by the remote Bluetooth computer. Then double-click the service to make the connection.
- Open or create the document to be faxed, and then select the Print, Send to Fax Recipient or a similar command that is available in most applications.
## **File Transfer**

The Bluetooth File Transfer application allows this computer to access, send files to or copy files from another Bluetooth device.

### Send Files on This Computer to Remote Bluetooth Device

To send files on this computer to another Bluetooth device:

#### Option 1

- 1. In Windows Explorer, open the folder where the file or folder you want to send is located.
- 2. Right-click the file or folder name, point to **Send To**, point to **Bluetooth,** and then click the name of the destination Bluetooth device.



#### **Option 2**

- 1. Open **My Bluetooth Places** and discover the **File Transfer** service on the destination Bluetooth device.
- Double-click the File Transfer shortcut. The utility will open the Bluetooth Exchange Folder on the other Bluetooth device and get its file list.
- 3. You can now explore the **Bluetooth Exchange Folder** of the other Bluetooth device. Copy or drag-and-drop the file/folder to the desired location on the destination Bluetooth device.

**Note:** When you send folders to another Bluetooth device, if the **Secure Connection** property of the **File Transfer** service of the other Bluetooth device has been set, the operator of the other Bluetooth device must be available to allow access unless the **Always allow this device access to my computer's File Transfer service** check box in **Bluetooth File Transfer Authorization** is selected. Otherwise, the file transfer fails.

Bluetooth File Transfer Access Authorization			
Bluetooth device 'MICHELLEXP201' has requested permission to copy file 'C:\Documents and Settings\PMTest\My Documents\Bluetooth Exchange Folder\version log.txt' to your computer. Click OK to authorize or Cancel to deny access.			
Allow a	access or the current task		
🗖 Fo	or the next 5 Minutes		
Always allow this device access to my computer's File Transfer service.			
OK Cancel			

#### **PIM Item Transfer**

The Bluetooth PIM Item Transfer application allows this computer to send and receive Personal Information Manager items between this computer and other Bluetooth device.

The supported items are:

- Business cards (\*.vcf or \*.vcd)
- Notes (\*.vnt)
- Email (\*.vmg) (with or without attachment)
- Calendar (\*.vcs)

#### **Electronic Business Cards Operations**

#### To send a business card to remote Bluetooth device

- 1. Double-click the **PIM Item Transfer** service on a remote device. This service is also referred to as Object Push Service on other Bluetooth device.
- 2. Select a business card that will be sent to other device.
- 3. On the remote computer, respond to the **Bluetooth Service Authorization** message to allow the transfer.

Sele	ct a Bluetooth Business Ca	ard (	? 🗙		
Sel	Select the business card that will be sent to other devices.				
۲	<ul> <li>Select a business card from your Personal Information Manager</li> </ul>				
	Select the Personal Information Manager from which to get the business card.				
	Outlook Express		*		
	Name	E-Mail	^		
	Jonny Kelly Abby Wala	hinshr3@ms1.gsn.gov.tw la@carry.com.tw jayle06@yahoo.com.tw 904102000@yahoo.com			
	Cindy	aodiniae@yahoo.com.tw lilu.ch@carru.com.tw	~		
	<		>		
Select a business card from a file (*.vcf, *.vcd)					
	Browse				
	Set this as my default Business Card				
	OK Cancel				

#### To configure business card settings

To configure which business card to send and where to store the received business card,

# Go to **Bluetooth Configuration** > **Client Applications** > **PIM Item Transfer** to configure required settings.

Bluetooth Properties			
General			
PIM Item Transfer			
Secure Connection			
Send My Business Card			
Choose a business card as needed			
Received Business Cards			
Business Cards Save to Folder			
When email is sent or received by this computer Include attachments with email that is sent or received by this computer			
OK Cancel Apply			

Secure Connection: If the Secure Connection property is set on either device, the receiving party must be available to allow access when an access request is received. Otherwise, the PIM transfer fails.

Bluetooth PIM Item	Transfer Access Authorization
	evice 'MICHELLEXP201' has sent an electronic business card accept the business card or Cancel to refuse.
Allow access	ask
For the next	5 Minutes
Always allow thi	e device access to my computer's PIM Item Transfer service.
	OK Cancel

- Send My Business Card: Specifies how your business card is handled when it is requested by a remote device.
- **Received Business Cards:** Specifies where to store received business cards.

**Note:** The selected **Received Business Cards** option is influenced by the local PIM Item Transfere settings. For example, if local setting is configured to **Do Not Accept** business cards, the sending request from remote Bluetooth device fails.

Bluetooth Properties	
General Notifications	
PIM Item Transfer	
Startup Automatically Business card requests  Startup Automatically Choose a business card as nee	Secure Connection rd, which is stored on this computer. Bluetooth Properties
Received items Items received by this computer may be stor Bluetooth Exchange Folder Business Cards Calendar Items Save to Folder All Other Types Bluetooth exchange folder location : C:\Documents and Settings\Administra Email Attachments Me Include attachments with email that is se	General PIM Item Transfer Client Application PIN Secure Connection Send My Business Card Select the business card that will be sent to other devices. Choose a business card as needed Choose a business card as needed
Local setting takes over the client application settings.	When email is sent or received by this computer Include attachments with email that is sent or received by this computer OK Cancel Apply

Email attachments: The only option is to include or not to include attachments with email that is sent or received on the computer using this service.

#### **To Send Notes, Emails and Calender Entries**

To send note, email or calender, just select one or moer target items and then, from the **File** menu of the PIM (e.g., Outlook), select **Send to Bluetooth**. You can also drag-and-drop a supported item directly from your PIM to the PIM Item Transfer service icon of a remote device. Note that :

- If synchronization is enabled for a specific item type, but is not enabled for that item type on the remote device, synchronization will not take place for that item.
- Not all choices are available for all items. For example, Note items can only be synchronized in Microsoft Outlook. Therefore Lotus Notes and Outlook Express are not displayed as options in the **Notes** item shortcut menu. Personal Information Managers that are not installed on this computer are not displayed as options in the shortcut menus.

## **Dial-up Networking**

The Bluetooth Dial-up Networking application allows this computer to use a modem that is physically connected to a remote device to access the Internet or log on to a remote network.

Open a connection to the **Dial-up Networking** service that is provided by another Bluetooth device, following the instructions in "Creating a Connection" on page 11.

After the Bluetooth dial-up networking connection is established, a virtual Bluetooth modem will be installed on your computer and a **BluetoothConnection** icon will be added to **Dial-up Connection** group. You can double-click the icon to make the connection.



The connection can be used the same way as any other networking connection. For example, you can open a browser and explore the World Wide Web, if the remote computer has Internet access. To close a dial-up networking connection, just go to **My Bluetooth Places**, right-click the service name and select **Disconnect**.

#### **Network Access**

The Bluetooth **Network Access** application allows this computer to join a Personal Area Networking (PAN) or Local Area Network (LAN). The type of network connection that is available is determined by the configuration of the remote Bluetooth device.

#### Joining a Personal Area Networking (PAN)

PAN provides ad hoc network between Bluetooth devices. If a remote Bluetooth device provides ad hoc network service, then you can connect to it by these steps:

- 1. Open **My Bluetooth Places** and discover the **Network Access** service provided by the remote Bluetooth device. Then double-click the service to make the connection.
- 2. On the remote Bluetooth device respond to the **Bluetooth Service Authorization** message to allow network access.
- To establish the connection, Windows uses Automatic Private IP Addressing (APIPA) to assign addresses to the computers in an ad hoc network. You don't need to configure the TCP/IP networking.

To view the APIPA address, type **ipconfig** at a command prompt, and then press **ENTER**. You should get an output that is similar to the following on both of the Bluetooth devices:

```
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix .:
Autoconfiguration IP Address . : 169.254.125.34
Subnet Mask . . . . . . : 255.255.0.0
Default Gateway . . . . . :
```

Once the connection is made, the computers on the same ad hoc network should be able to locate each other and use the network service such as file sharing.

#### Accessing LAN or Internet via Remote Computer

When a remote Bluetooth computer is connected to the Internet/LAN and configured to sharing that connection, your Bluetooth-enabled device can connect to the Internet/LAN using the remoter Bluetooth computer as the intermediary.

We will use the following example to describe the setup procedures:



Example: BT Client A is physically conncted to the Internet/LAN via a Ethernet network adapter. It's Bluetooth-enabled and connect to BT Client B over Bluetooth connection. BT Client B will use BT Client A as the intermediary to connect to the Internet/LAN.

#### BT Client A (The computer connected to the Internet/LAN)

- Go to Bluetooth Configuration panel > Local Services > Network Access > Properties..
- 2. Enable the **Startup Automatically** checkbox and select **Allow other devices to access the Internet/LAN via this computer** and click **OK**.

etooth Properties	
eneral Notifications	
<b></b>	
Network Access	
🗹 Startup Automatically	Secure Connection
Select the type of service to offer remote devices	
Allow other devices to access the Internet/LAN via this c	omputer. 🔽
	Configure Network Adapter
To allow a connection, when the authorization prompt ap Bluetooth icon in the Windows system tray. To deny the request, ignore the prompt.	pears, click the prompt of the
Connection Sharing	
Connection Sharing Before this computer can share a network connection it m Sharing.	nust be setup for Internet Connection
Before this computer can share a network connection it m	·
Before this computer can share a network connection it m Sharing.	·

3. Go to **Network Connections**, right-click the network adapter that is connected to the Intertet/LAN and select **Properties**.



4. On the **Advanced** tab, enable the **Internet Connection Sharing** option as shown below and click **OK**.



5. When IP address prompt appears, just click **Yes**. This will automatically assign your Bluetooth adapter a virtual IP address.

Local N	etwork 🛛	
When Internet Connection Sharing is enabled, your LAN adapter will be set to use IP address 192.168.0.1. Yo computer may lose connectivity with other computers on your network. If these other computers have static addresses, you should set them to obtain their IP addresses automatically. Are you sure you want to enable Internet Connection Sharing?		
	Yes No	

6. You will return to the **Network Connections** window and find a hand appended to the network connection icon.

LAN or High-Speed Internet



To view the IP address of your Bluetooth network adapter (e.g., Local Area Connection 2), type **ipconfig** at a command prompt, and then press **ENTER**. You should get an output that is similar to the following:



BT Client B (The computer connected to Client A via Bluetooth)

Providing that Bluetooth Client B is using Windows 2000:

1. Open **My Bluetooth Places** and discorver the **Network Acces** service provided by the remote Bluetooth device. Then double-click the service to make the connection.



2. On the remote Bluetooth device (i.e. Client A in our example) respond to the **Bluetooth Service Authorization** message to allow network access.



3. Wait a moment for the connection to be made.

The Bluetooth network adapter will be automatically assigned an IP address. To view the assignment, type **ipconfig** at a command prompt, and then press **ENTER**. You should get an output that is similar to the following on both of the Bluetooth devices:

```
Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix .:

Autoconfiguration IP Address . : 192.168.0.190

Subnet Mask . . . . . . : 255.255.255.0

Default Gateway . . . . . : 192.168.0.1 	The IP address of Bluetooth

adapter on Client A
```

If you want to enable Internet Connection Sharing (ICS) on Windows 98SE, ME, you should run the Network Setup Wizard from the CD or floppy disk. As this manual only describes a very typical connection method, actual connection method varies according to your network environment and a computer's operation system. For more information please refer to Windows online help or your network administrator.

## **Bluetooth Serial Port**

The Bluetooth **Serial Port** application allows this computer to establish a wireless serial connection with a remote Bluetooth device.

The applications on both this computer and the remote device must be configured to send and receive data to and from the respective communications port (COM port) assigned to the Bluetooth serial port. The wireless serial connection may then be used by the applications as though a physical serial cable connected the devices.

To establish a virtual serial port connection between this computer and another Bluetooth device:

- 1. Open **My Bluetooth Places** and discorver the **Serial Port** service on the destination Bluetooth device.
- 2. Double-click the **Serial Port** shortcut to make the connection.
- 3. If secure option is enabled, the operator of the other Bluetooth device must be available to respond to any authorization requests.
- 4. You will be prompted of the COM port name that is associated with the connection. Now you can configure programs to use that port.

## **Bluetooth Human Interface Device**

The Bluetooth Human Interface Device application allows this computer to use a Bluetooth keyboard, mouse, or other human interface device

- 1. Verify that the keyboard, mouse or other human interface device (HID) contains batteries, that the batteries are inserted properly and are fully charged, and that you know where the Connect button is to make the device discoverable.
- 2. Open **My Bluetooth Places** and discorver the HID.
- 3. Double-click the **HID** shortcut to make the connection.
- If the HID is a keyboard, using the keyboard, type the Bluetooth security code that is in the Bluetooth security code box, and then press ENTER.
   -or-

If the HID is a Bluetooth mouse or other Bluetooth pointing device, use the Bluetooth mouse or other Bluetooth pointing device to click **Click here** if confirmation is required.

You can now use the Bluetooth HID.

# 7. Providing Local Service

Local services are the services that your Bluetooth-enabled computer provides to other Bluetooth devices. Your computer can offer one or more services, which can be configured via the **Local Services** tab in the **Bluetooth Configuration** panel.

luetooth Configuration			
General Accessibility Discovery Lo	ocal Service	es Client Applications	Diagnostics
Select the services that this computer will provide to other Bluetooth devices. Double-click a service name to set its security, start-up options and properties.			
Service Name	Startup	Secure Connection	COM Port
Printer Bluetooth Imaging Audio Gateway Headset PIM Synchronization Fax File Transfer PIM Item Transfer Dial-up Networking Network Access Bluetooth Serial Port	Manu Auto Auto Auto Auto Auto Auto Auto Auto Auto	Required Required Required Required Required Required Required Required Required Required	COM4
Properties		Add Serial Service	Delete
ОК	Can	cel Apply	Help

#### **Common Configuration Settings**

These properties can be set individually for each Bluetooth service:

- **Service Name** the default name of each service can be changed.
- Secure Connection requires that remote devices provide proof of identity and that all data be encrypted.
- Startup Automatically starts the service automatically when Bluetooth is started.
- Notifications provides visual and/or audio notification that a remote device is attempting to connect (or has connected) to a service on this computer.

## Printer

The Printer service allows other Bluetooth devices to use a printer that is physically connected to your computer.

To provide this service, the local printer should be physically connected to this computer by a USB or parallel cable, is set as the default printer and is turned on.

Note if the secure connection property for the printer has been set on either computer, the operators of both computers must be available to allow access and to supply the Bluetooth security code when requested. Thereafter, access is granted automatically and it is not necessary to supply the security code.

## **Bluetooth Image Transfer**

The Bluetooth image transfer service allows this computer to *accept* images from remote devices that support Bluetooth image transfer.

The supported image formats are:

- BMP
- GIF
- PNG
- JPG

Received images are stored in **My Documents > Bluetooth Exchange Folder**.

#### Audio Gateway/Headset

The Audio Gateway/Headset service redirects this computer's audio to another Bluetooth device. For example, if this computer is connected to a Bluetooth audio device and other computer is connected to this computer's audio gateway service, the audio is directed to the Bluetooth audio device.

#### **PIM Synchronization**

The PIM Synchronization service can be used by a remote device to synchronize its Personal Information Manager (PIM) database with the PIM database of this computer.

Four data types are supported:

Business cards

- Calendar items
- Email messages
- Notes

Whether an individual item is accepted and where it is stored, after it is accepted, is configured in the **PIM Item Transfer** service. If that service is not configured to store a particular data type in Outlook, then that data type cannot be synchronized.

Microsoft Outlook permits duplicate entries, so all duplicates may not be exchanged in the synchronization process.

**Note:** Only Outlook's default contacts folder is synchronized. Items in sub-folders are not synchronized. Items that are moved from the default folder to a sub-folder will not be displayed the next time synchronization takes place.

#### Fax

The Fax service allows other Bluetooth device to use this computer's Fax modem to send a fax. To provide this service, your computer must be physically connected to a modem offering fax function.

Bluetooth Properties	X
General Notifications	
Fax  Startup Automatically  Startup Automatically	
Modems: Agere Systems AC'97 Modem 💙	
OK Cancel Apply	

#### **File Transfer**

The File Transfer service allows other Bluetooth devices to explore this computer's Bluetooth exchange folder and send files to or copy from that folder.

To configure your local file transfer service, go to **Bluetooth Configuration** > **Local Services** > **File Transfer**. Here you can specify your defalut exchange folder location and remote user access permissions.

Bluetooth Properties	×	
General Notifications	_	
File Transfer		
Startup Automatically Secure Connection		
Bluetooth exchange folder location		
C:\Documents and Settings\Adm Browse		
Remote users may modify Read Only files and folders.           Remote users may access Hidden files or folders.		
OK Cancel Apply		

**Note:** If you set the **Secure Connection** property of the **File Transfer** service of this computer, you must be available to respond to the **Bluetooth Security Code Request** sent by the other device when the other device initially attempts to connect to this computer. Otherwise, the pairing process fails. After the two device are paired, the other device can access the files on this computer without having to obtain access permissions.

## **PIM Item Transfer**

The PIM Item Transfer service allows to exchanges Personal Information Manager items between this computer and other Bluetooth devices.

In addition to the configuration options common to all Bluetooth services, this service also has settings that determine:

- How business card requests are handled.
- Where to store inbound data items, on an individual basis.
- Whether to send/receive attachments with email.

Bluetooth Properties				
General Notifications				
PIM Item Transfer				
V Startup Automatically V Secure Connection				
Business card requests     Business card, which is stored on the     Business card, which is stored on the	is computer.			
Choose a business card as needed				
Received items Tems received by this computer may be stored in a PIM or stored as files in the Bluetooth Exchange Folder.				
Business Cards Do Not Accept 💽 Ernail Outlook E:	press 🔽			
Calendar Items Save to Folder 🛛 Votes Save to Fo	lder 🔽			
All Other Types Save to Folder				
Bluetooth exchange folder location :				
C:\Documents and Settings\Administrator\My Documents\Bluetoot} Browse				
Email Attachments				
OK Can	el Apply			

## **Dial-Up Networking**

The Dial-Up Networking service allows other Bluetooth devices to use this computer's modem to access the Internet or a remote network. To provide this service, your computer must be physically connected to a modem offering fax function.

## **Network Access**

The Network Access service allows other Bluetooth devices to:

Create a personal area network (PAN) with this computer. To provide a PAN service, select Allow other devices to create a private network with this computer from the drop down list. Windows will use Automatic Private IP Addressing (APIPA) to assign addresses to the computers in an ad hoc network. You don't need to configure the TCP/IP networking.

-or-

Access the Internet/LAN through this computer. To provide this function, select Allow other devices to access the Internet/LAN via this computer from the drop down list. In addition, this computer must be configured to share the Internet connection. For more information, refer to the "Accessing LAN or Internet via Remote Computer" section on page 38.

Bluetooth Properties	X	
General Notifications		
<b></b>		
Network Access      Startup Automatically	Secure Connection	
Select the type of service to offer remote devices		
Allow other devices to access the Internet/LAN via this compu	ıter. 💌	
	Configure Network Adapter	
Network connections may permit the remote device to For security reasons, each connection must be authoriz To allow a connection, when the authorization prompt appear Bluetooth icon in the Windows system tray. To deny the request, ignore the prompt.	zed.	
Connection Sharing Before this computer can share a network connection it must b Sharing.	be setup for Internet Connection	
Refer to the Bluetooth help file, Internet Connection Sharing, for assistance.		
Click Configure Connection Sharing to proceed.	Configure Connection Sharing	
ОК	Cancel Apply	

## **Bluetooth Serial Port**

The Bluetooth Serial Port service allows other Bluetooth devices to establish a wireless serial connection with this computer.

In addition to the configuration options common to all Bluetooth services, this service also has setting for specifying a COM port.

**Note:** Unless you have a specific reason to do so, DO NOT CHANGE the default COM port setting.

Bluetooth Properties	×
General Notifications	
Bluetooth Serial Port	
Startup Automatically	Secure Connection
COM Port: COM4 💌	
ОК	Cancel Apply

# 8. Troubleshooting

#### Q1: Windows is unable to recognize my hardware. What should I do?

- A1: First, make sure your computer meets the minimum requirements as specified in Section 1 of this quick installation guide. Second, you must install the Bluetooth utility **BEFORE** you physically install your Bluetooth Adapter. Third, plug the adapter into a different USB slot.
- Q2: The Bluetooth software is unable to detect my Bluetooth-enabled device. What should I do?
- A2: First, disable any software firewall programs such as ZoneAlarm or Norton Internet Security. If your have Windows XP installed on your computer, make sure to disable the built-in XP firewall. Second, make sure Bluetooth device is powered on.
- Q3: I cannot pair my Bluetooth device to the TBW-101UB/TBW-102UB USB Adapter. What should I do?
- A3: First, make sure that Bluetooth device is powered on. Second, make sure that your Bluetooth device is in pairing mode. Third, make sure to put in the same **Bluetooth security code** on both devices.

#### Q4: I am not receiving 3Mbps data rate through the adapter. What should I do?

A4: In order to get the full data rate, your Bluetooth device must support Bluetooth v2.0 with Enhanced Data Rate (EDR)

# 9. Specifications

Item	Description
Interface	USB 1.1 compliant A type female connector
Supported OS	Windows XP, 2000, ME and 98SE
Frequency Band	2.400–2.4835 GHz
Spread Spectrum	Frequency hopping spread spectrum (FHSS)
Data Rate	3 Mbit/s, 2 Mbit/s (EDR) and 1 Mbit/s
Transmission Power	TBW-101UB 3 dBm typical, Power Class 2 with dynamic power control TBW-102UB 12 dBm typical, Power Class 1 with dynamic power control
Receive Sensitivity	–80 dBm maximum
Antenna	PCB antenna
Operating Range	TBW-101UB: 10 meters TBW-102UB: 100 meters
Operating Temperature	0°C to 55°C
Operating Humidity	95% maximum (no condensing allowed)
Storage Temperature	–20°C to 85°C
Security	8~128-bit encryption
Standard	Bluetooth v2.0 + EDR
Compliance	FCC, CE, BQB

\*Specifications are subject to change without notice.

## **Limited Warranty**

TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase.

TBW-101UB / TBW-102UB - 2 Years Warranty

If a product does not operate as warranted above during the applicable warranty period, TRENDnet shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product. All products that are replaced will become the property of TRENDnet. Replacement products may be new or reconditioned.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

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