TRENDNET

User's Guide

TBW-104UB

Table Contents

Introduction

The TBW-104UB is a class 1 Bluetooth v2.0 compliant USB adapter. This Bluetooth device utilizes Enhanced Data Rate (EDR) technology to support data rates up to 3Mbps. The TBW-104UB can communicate with other Bluetooth devices to form a "Piconet". The TBW-104UB provides a fully compliant Bluetooth system for data and audio applications.

The TBW-104UB features advanced wireless technology allowing it to coexist with 802.11b/g devices. The TBW-104UB utilizes EDR technology to communicate with other Bluetooth v2.0 standard compliant devices at high speed to provide various applications, such as Bluetooth ready DSC (digital camera), PDA data sync, mobile phone, Access Point, printer, keyboard, mouse, etc. The Bluetooth adapter can easily connect to your Bluetooth-enabled devices up to 100 meters away (depending on application environment and condition)

Key Features

• Support full-speed Bluetooth operation with full Piconet support

• Bluetooth v2.0 complaint with EDR (Enhanced Data Rate)

• Backward compatible with Bluetooth v1.1 & v1.2

• Coexist with IEEE 802.11b/g devices

• Support AFH (Adaptive Frequency Hopping) and fast connection

• Up to 100 meters radio coverage distance (depending on application environment and condition)

• Up to 3 Mbps access data rate

• Low power consumption

• Bundle with the IVT BlueSoleil Software.

Getting Started

Packing Contents

- TBW-104UB Advanced High Power Bluetooth USB Adapter
- Quick Installation Guide
- Utility & Driver CD-ROM
- USB 2.0 Cable

Minimum System Requirements

- PC running Windows 2000, Windows XP, Windows Vista
- USB 1.1 or 2.0 Port
- Pentium 600 MHz processor or above
- 128 MB RAM or above
- 50MB free disk space on your hard drive
- CD-ROM drive

Driver Installation

If you have any Bluetooth driver (software) previously installed on your computer or built-in Bluetooth device, please remove the driver and disable Bluetooth device first!

1. Please insert the Utility & Driver CD into CD-ROM drive, and then follow the instruction below to install Utility and drivers.

   Note: DO NOT connect the TBW-104UB USB adapter until instructed to do so.

   Note: If the setup menu does not launch automatically, go to start → run → type in D:\setup, where "D" in "D:\setup" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard.

1. Please click **Install Utility** to begin Bluetooth adapter installation.
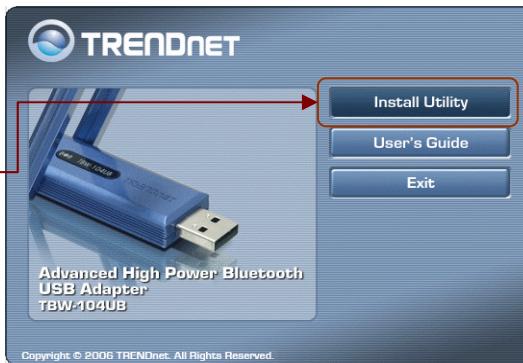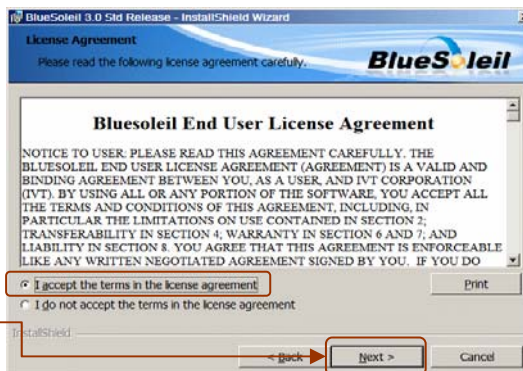
2. Please select **Language** from the drop down menu and then click **OK**.
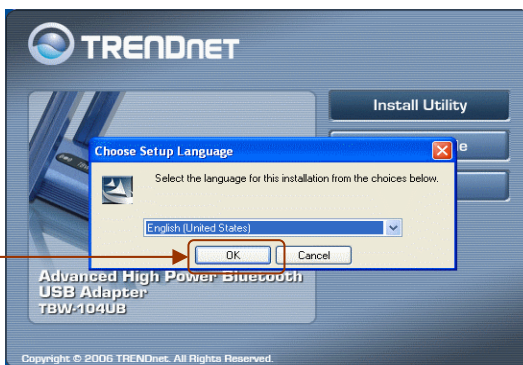
3. Please Click **Next**

4. Please select **I accept the terms in the license agreement**. Click **Next**

5. Please Click Next
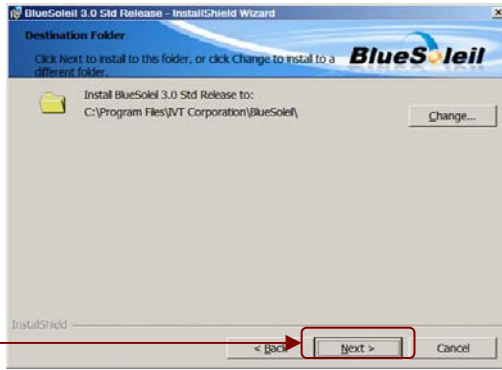
6. Click Install
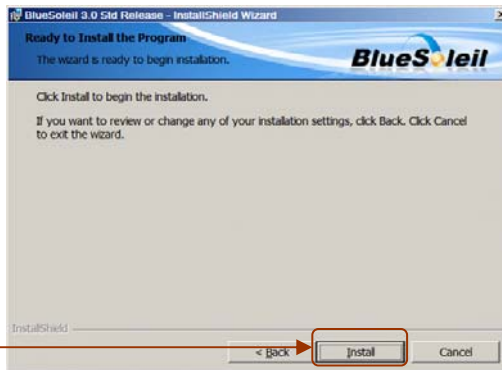
7. Disregard all popup Windows except for the installation Window shown to the right and click Finish

8. Click Yes to restart the computer.

> **BlueSoleil 3.0 Std Release Installer Information**
>
> ⚠ You must restart your system for the configuration changes made to BlueSoleil 3.0 Std Release to take effect. Click Yes to restart now or No if you plan to restart later.
>
> [Yes]   [No]
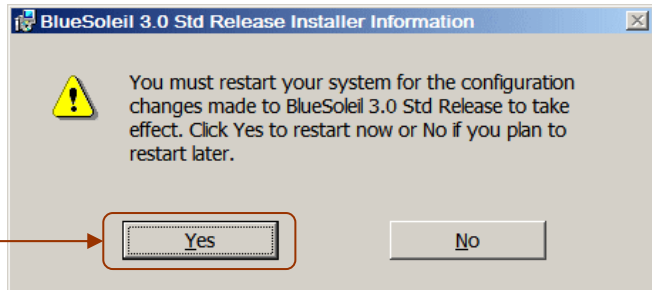
9. A message appears in the BlueSoleil toolbar notifying the user to plug in the Bluetooth adapter
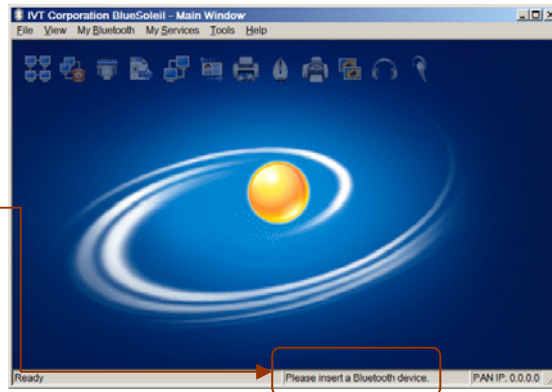
2. Please plug in TBW-104UB. The drivers will install automatically.

3. After the completion of the driver installation, the **Welcome to Bluetooth** screen will appear. Assign your Windows system a device name and device type. In most cases, you should leave the security setting checked. Click OK.

Appliactions Installed

After the completion of the driver and utility installation, the "**IVT BlueSoleil**" item will be added to Windows Start Menu Programs group.
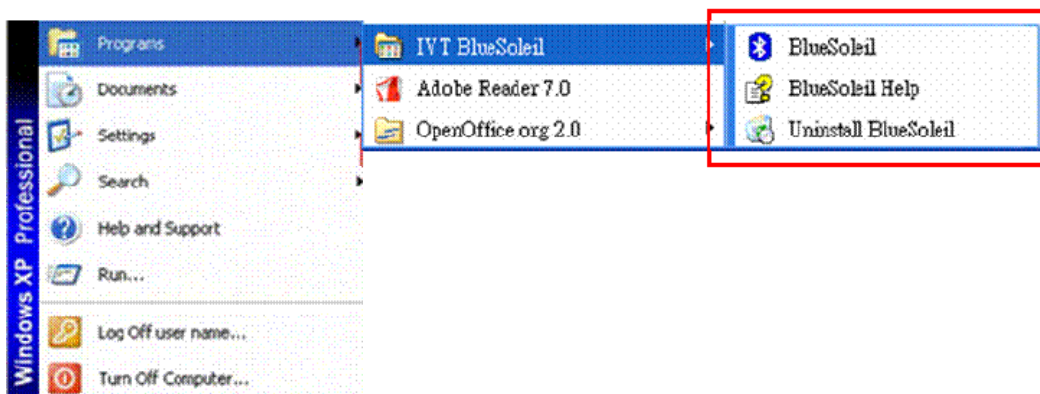
BlueSoleil Introduction

BlueSoleil is a Windows-based software from IVT that allows your Bluetooth® enabled desktop or notebook computer to wirelessly connect to other Bluetooth enabled devices. BlueSoleil allows MS Windows users to wirelessly access a wide variety of Bluetooth enabled digital devices, such as cameras, mobile phones, headsets, printers, and GPS receivers. You can also form networks and exchange data with other Bluetooth enabled computers or PDAs.

 In order to connect and share services via Bluetooth wireless technology, two devices must support the same Bluetooth Profile(s) as well as opposite device roles (i.e., one must be the server, and the other must be the client). Bluetooth enabled devices often support multiple profiles, and if involved in multiple connections, can perform different device roles simultaneously.
BlueSoleil supports the following Bluetooth functions (Profiles) in the following device roles:

Bluetooth Functions (Profiles)	Client	Server
Advanced Audio*	✓	✓
Basic Image Profile	✓	✓
Dial-Up Networking	✓	
Fax	✓	
File Transfer	✓	✓
Headset*	✓	✓
Human Interface Device	✓	
LAN access	✓	✓
Object Push	✓	✓
Personal Area Networking	✓	✓
Printer	✓	
Serial Port	✓	✓
Synchronization	✓	✓

Main Windows

Local Bluetooth Device

The Local Bluetooth enabled device, known as "My Device", represents the user's computer that is running BlueSoleil.

Icon:

Operations:

- Hover mouse to display the local Bluetooth device's name or address (if without name).
- Click on the red ball to start or stop searching for Bluetooth devices in range.
- Right-click on the red ball to display a pop-up menu of related operations (e.g., General Inquiry, My Services, Security, etc.).

Remote Bluetooth Devices

Remote devices are other *Bluetooth* enabled devices that are in the *Bluetooth* radio range of your local device. BlueSoleil uses different icons to indicated different types of remtoe devices.

Icons

Devices	Icon	Devices	Icon
Personal Computer &Server		Laptop	
Headset &HiFiAudio &Loud Speaker		Mobile	
PDA		LAN Access Point & Modem	
Keyboard		Mouse	
Printer &Scanner &FAX		Camera	
Game bar		Unknown device	

Icon Meanings

Remote devices can be in any of three states, which BlueSoleil indicates with different colors.

- White- Idle. The normal state of the device.

- Orange- Selected. You have selected the device.
- Green- Connected. The device is connected to your computer.

Operations

- Single-click on the icon to select.
- Double-click on the icon to search   for the services supports by the remote Bluetooth device .
- Right-click on the icon to display a pop-up menu of related operations (e.g. Refresh Services, Pair Devices, Connect, etc.).

Bluetooth Service Buttons of Remote Device

Service buttons at the top of the Main Window represent a range of Bluetooth services potentially supported by Remote Devices.

Icons

Services	Button Image	Services	Button Image
PAN		DUN	
SPP		LAP	
FTP		SYNC	
OPP		HCRP	
HID		FAX	
BIP		Advanced Audio	
Headset			

Icon Meanings

There are 3 states for the service icons, indicated by different forms.

- Idle. The normal state.
- Available - Highlighted. The *Bluetooth* service is available on the selected remote device.
- Connected - Green. The *Bluetooth* service is active in a connection with the remote device.

Operations
- Hover your mouse over the service icon to display the name of the service.
- Single-click on the service icon to connect.
- Right-click on the service icon to display a pop-up menu of related operations.

Bluetooth Connection Management

To set up a Bluetooth connection, the remote device must be found first. There are 3 ways to find remote devices in BlueSoleil.

Inquire Device

1. Single-click the red ball in the main window to start inquiry.
2. *Bluetooth* devices within the radio range will be shown around the center ball.
3. Wait for a few seconds until the names of all the devices are obtained.

Connect

1. Select a remote device and double click it to browse its services.
   Bluetooth passkey may be asked if security level of either side is set to high and they are not paired devices.
   After service browsing, the services the remote device supports are highlighted by changing the color of the service buttons on the top of the main window.
2. Single click one of the service button to connect.
   After connection is setup, the remote device and the service button will turn green.

Security Configurations

Pair / Un-pair Devices

Once a remote device has paired with your computer by exchanging passkeys, passkeys will no longer be required for further connections between your computer and the device.

How to pair with another device

<u>**Automatically**</u>

If a passkey is required for connection, the devices will be paired automatically the first time they successfully exchange passkeys and connect. After a device has successfully paired with your computer, the remote device icon in the Main Window will have a red checkmark next to it.

<u>**Manually**</u>

In the Main Window, right click on the device icon, and in the pop-up menu, select **Pair Device**. In the **Enter Bluetooth Passkey** dialog, enter the same passkey that you enter on the remote device. After a device has successfully paired with your computer, the remote device icon will have a red checkmark next to it.

How to un-pair with another device

<u>**Manually**</u>

In the Main Window, right-click on the device icon, and in the pop-up menu, select Unpair. The red checkmark next to the device icon will disappear.

General Security

To access the security configuration screen, click **My Bluetooth | Security**…

Security Level
- **Low:** If checked, other devices will be able to access your device freely without entering a passkey. However, if the remote device requires a passkey to connect, then both devices need to exchange passkeys.
- **Medium:** The medium level is service level security; you can assign the appropriate level of access for each specific service. For more detail, see Local Services Security.
- **High:** If checked, passkeys must be exchanged for every incoming and outgoing connection, unless the two devices have already paired in the past.

Bluetooth Passkey

- **Set Default Passkey:** Use this setting to set a default passkey for all connections. BlueSoleil will use this passkey whenever one is required.

Data Encryption

- **Enable Data Encryption:** If checked, the data transmitted will be encrypted.

Appendix

Specification

Standard	Class 1 Bluetooth v2.0 with EDR, backward compatible with Bluetooth v1.1 & v1.2
Radio Frequency	2.4~2.4835 GHz, ISM band
Spread Spectrum	Frequency Hopping and Adaptive Frequency Hopping
Modulation	GFSK, DQPSK (2Mbps) and 8DPSK (3Mbps)
Data Rate	Up to 3 Mbps
RF Output Power	Up to 17 dBm
Receiving Sensitivity	-90dBm at 0.1% BER
Antenna	One external dipole antenna
Profiles Support	DUN (Dial-up Networking) FAX LAP (LAN Access Profile) SPP (Serial Port Profile) HID (Human Interface Device) HCRP (Hardcopy Cable Replacement Profile) FTP (File Transfer Profile) OPP (Object Push Profile) A2DP (Advanced Audio Distribution Profile) AVRCP (Audio/Video Remote Control Profile) GAVDP (Generic Audio/Video Distribution Profile) HSP (Headset Profile) PAN (Personal Area Networking) BIP (Basic Image Profile) SYNC (Synchronization Profile) AV (Audio Video)
OS Support	Windows 2000, XP, MCE (Media Center Edition) & Vista
Power Consumption	Typical: 95 mA Tx Max.: 136 mA @17 dBm Rx: Max: 45 mA Idle: 12 mA
Dimension	71.25 (L) X 35.60 (W) X 11.25 (H) mm
Environmental Condition	Operating Temperature: 0 ~50° C , Humidity:10 ~ 90% Storage Temperature: -20 ~70° C, Humidity:10 ~ 90%
Certifications	FCC, CE

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-104UB	2 years

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 deliver to customer an equivalent product to replace the defective item. 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.

There are no user serviceable parts inside the product. Do not remove or attempt to service the product through any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual.

Warranty service may be obtained by contacting TRENDnet office within the applicable warranty period for a Return Material Authorization (RMA) number, accompanied by a copy of the dated proof of the purchase. Products returned to TRENDnet must be pre-authorized by TRENDnet with RMA number marked on the outside of the package, and sent prepaid, insured and packaged appropriately for safe shipment.

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LIMITATION OF LIABILITY: TO THE FULL EXTENT ALLOWED BY LAW TRENDNET ALSO EXCLUDES FOR ITSELF AND ITS

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Governing Law: This Limited Warranty shall be governed by the laws of the state of California.

Note: AC/DC Power Adapter, Cooling Fan, Cables and Power Supply carry 1-Year Warranty

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Francais/Deutsch - 11am-8pm, Monday - Friday MET

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Francais/Deutsch - 11am-8pm, Monday - Friday MET

24/7 Technical Support 365

Product Warranty Registration

Please take a moment to register your product online.
Go to TRENDnet's website at http://www.trendnet.com

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