

# EZURiO

*Simple, Robust & Intelligent Embedded Wireless*

## High Speed *Bluetooth*<sup>®</sup> USB Adapter & PC Card

### Quick Start Guide

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# Introduction

*Bluetooth* is a short range wireless communication technology. It is designed to replace the traditional cable connections currently used to link compatible devices. These can be cable connections between computers and printers, computers and mobile phones and between mobile phones and headsets. *Bluetooth* is designed to operate in the internationally recognised ISM (Industrial, Scientific and Medical) frequency band. Within the ISM band (2.40GHz – 2.48GHz) *Bluetooth* transmissions hop between 79 separate frequencies 1,600 times every second.

*Bluetooth* is a low power radio designed for short range communication of about 10 metres and has an impressive peak data throughput.

The potential applications for this wireless technology are enormous – in time *Bluetooth* technology will touch all our lives in some shape or form. In the short term, *Bluetooth* will make mobile computing much easier and far more convenient than it's ever been. In the longer term, *Bluetooth* will open up a whole new world of infinitely flexible personal connectivity.

## Box Content

### ***Bluetooth* USB II Adaptor**

- USB Adaptor
- Installation CD-ROM
- Quick Start Guide

### ***Bluetooth* PC Card**

- PC Card
- Installation CD-ROM
- Quick Start Guide

# Getting Started

## Installing the Software

**Note: Do not connect your Bluetooth USB II Adaptor or insert your Bluetooth PC Card until you have completed the install procedure detailed below.**

- 1) Insert the CD into the CD/DVD drive on your PC. The CD should start automatically and present you with an installation menu.

*If the CD fails to start automatically, click on the Start button, select Run and type **D:\Setup.exe** (assuming your CD/DVD drive is D) then press Enter or click OK.*

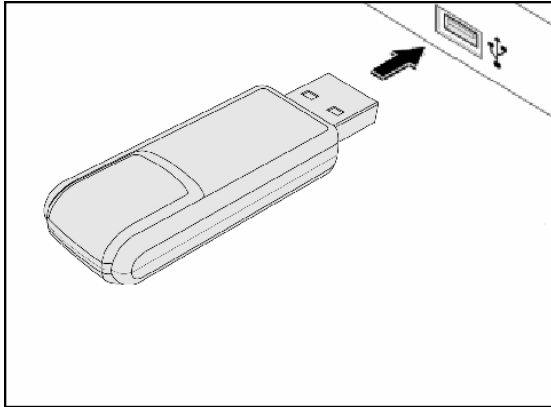
- 2) Choose Install *Bluetooth* Software to start the InstallShield Wizard.
- 3) Click **Next**.
- 4) If you agree with the license terms select **I accept the terms in the license agreement** and click **Next**.
- 5) You can edit the default device name or accept it by clicking **Next**.

*Note: The device name should be unique. This will be visible to other people when they discover your Bluetooth device.*

- 6) Choose to accept the default folder by clicking **Next**, or change the location by using the **Change** option.
- 7) Click **Install**.
- 8) When the install has completed click **Finish**.
- 9) If you are prompted to restart Windows, click **Yes**.

## Installing the Hardware

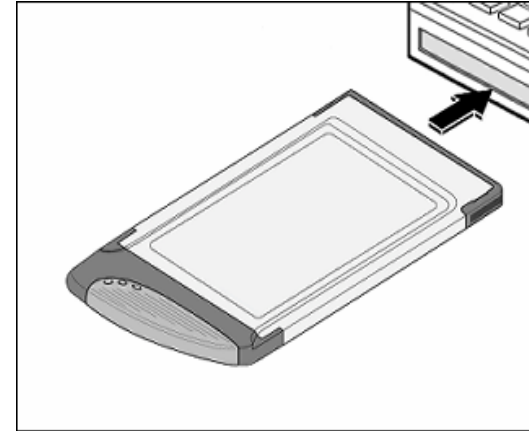
### **Bluetooth USB Adaptor**



3. Insert the *Bluetooth* USB Adaptor into the USB port.
4. Windows will inform you that new hardware has been discovered and that it is being installed.

*Note: Windows XP users will need to click **Next** then **Finish**.*

### **Bluetooth PC Card**



1. Insert the *Bluetooth* PC Card into a free PC Card slot.
2. Windows will inform you that new hardware has been discovered and that it is being installed.

*Note: Windows XP users will need to click **Next** then **Finish**.*

# Bluetooth Configuration

After successful installation of the software and hardware you should have a new item on the Windows taskbar. This is the *Bluetooth* tray icon.

Right-click on it, select Advanced Configuration and you will see the following screen.

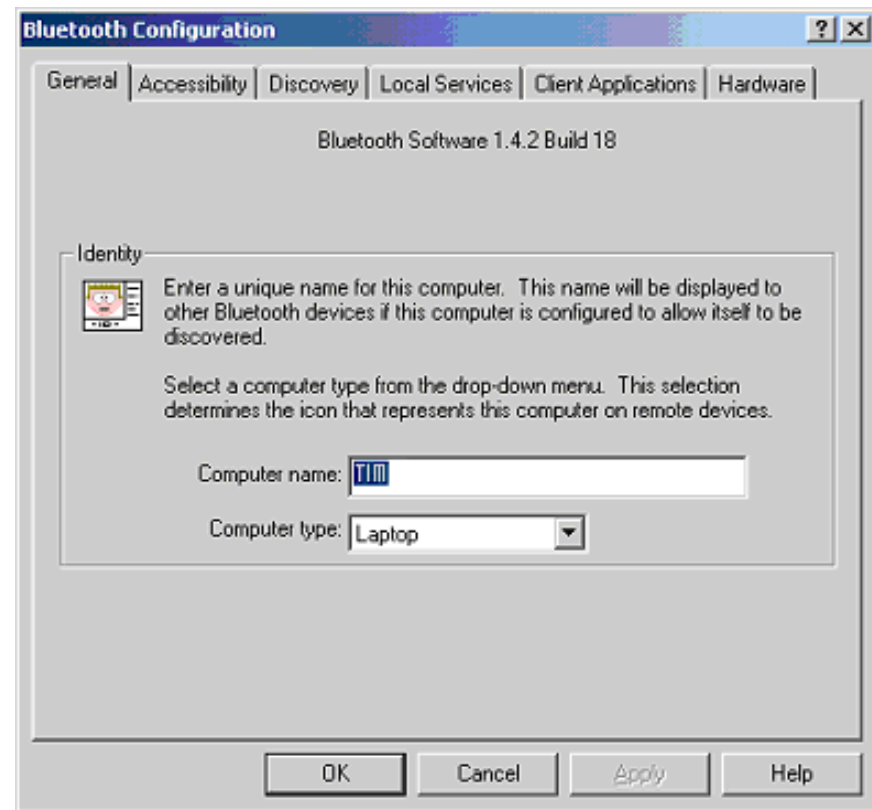
Note: The computer name you see here is the same as your computer name or the name you chose during the installation process. The computer type is either “Desktop” or “Laptop”. This information is shown to other *Bluetooth* users when they search for your computer.



Bluetooth Tray Icon  
Windows 2000



Bluetooth Tray Icon  
Windows XP

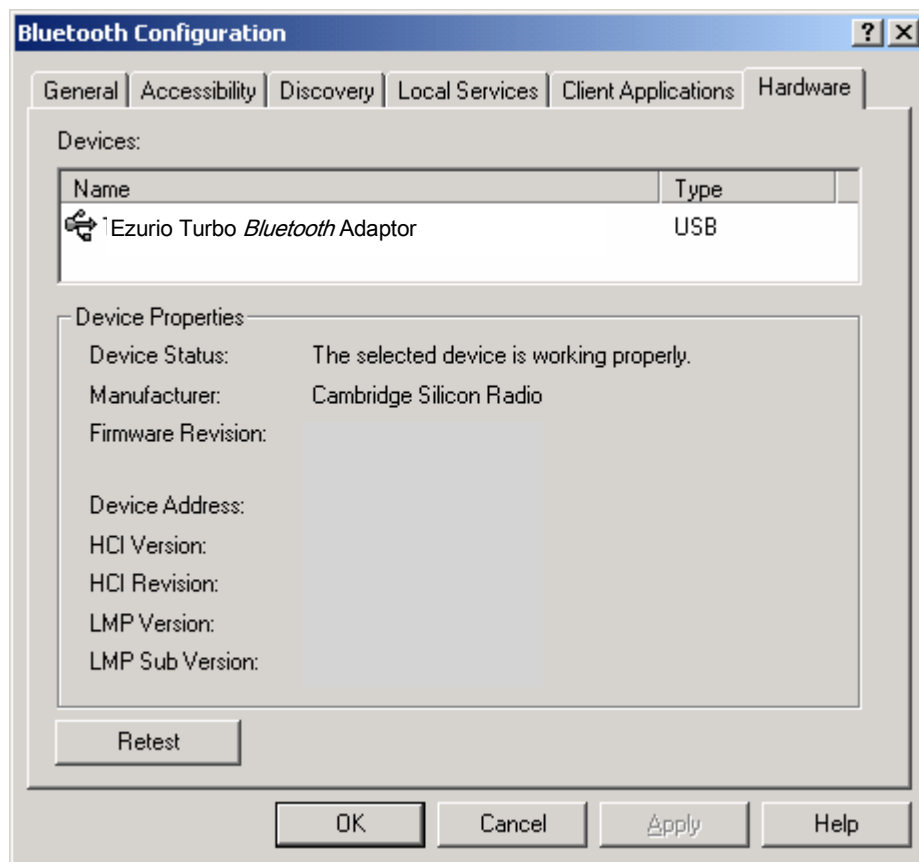


Bluetooth Configuration - General

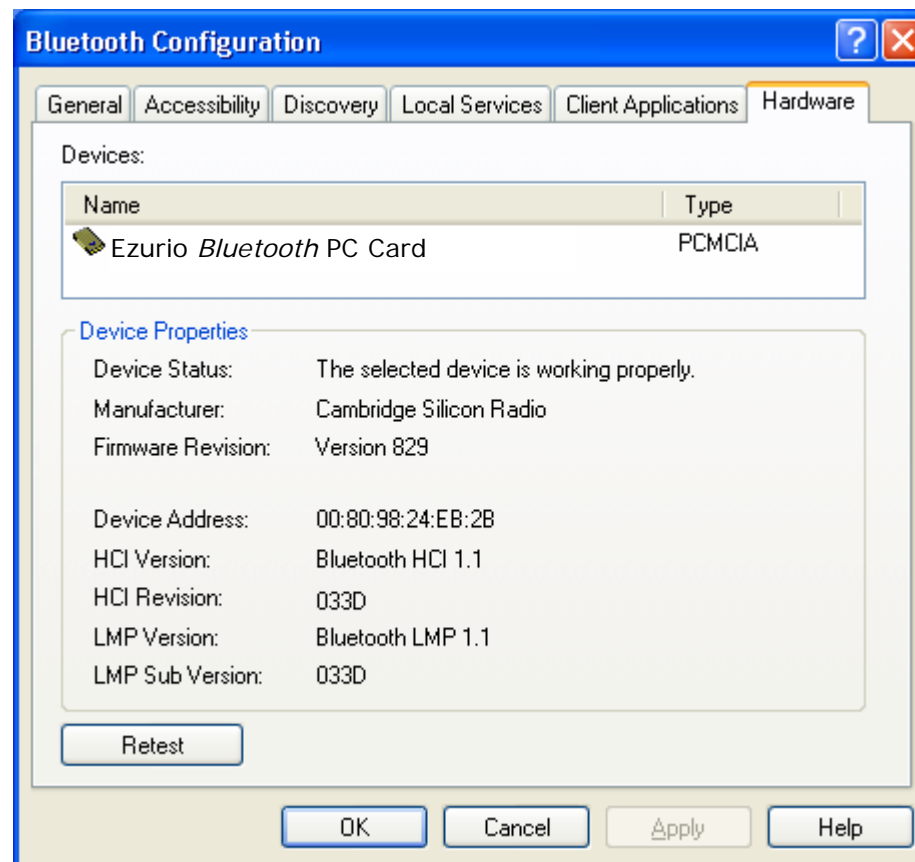
To check your hardware is working click on the Hardware tab.

If the Device Status is showing **Device Not Found** then your USB Adaptor or PC Card has not been detected by the software. If the device is not plugged in, insert it and select this hardware option again.

*There are more details about the Bluetooth Configuration Panel in the Bluetooth help guide. You can view this help by clicking on the Help button, seen here in the bottom right hand corner.*



*Bluetooth Configuration – Hardware  
Windows 2000*



*Bluetooth Configuration – Hardware  
Windows XP*



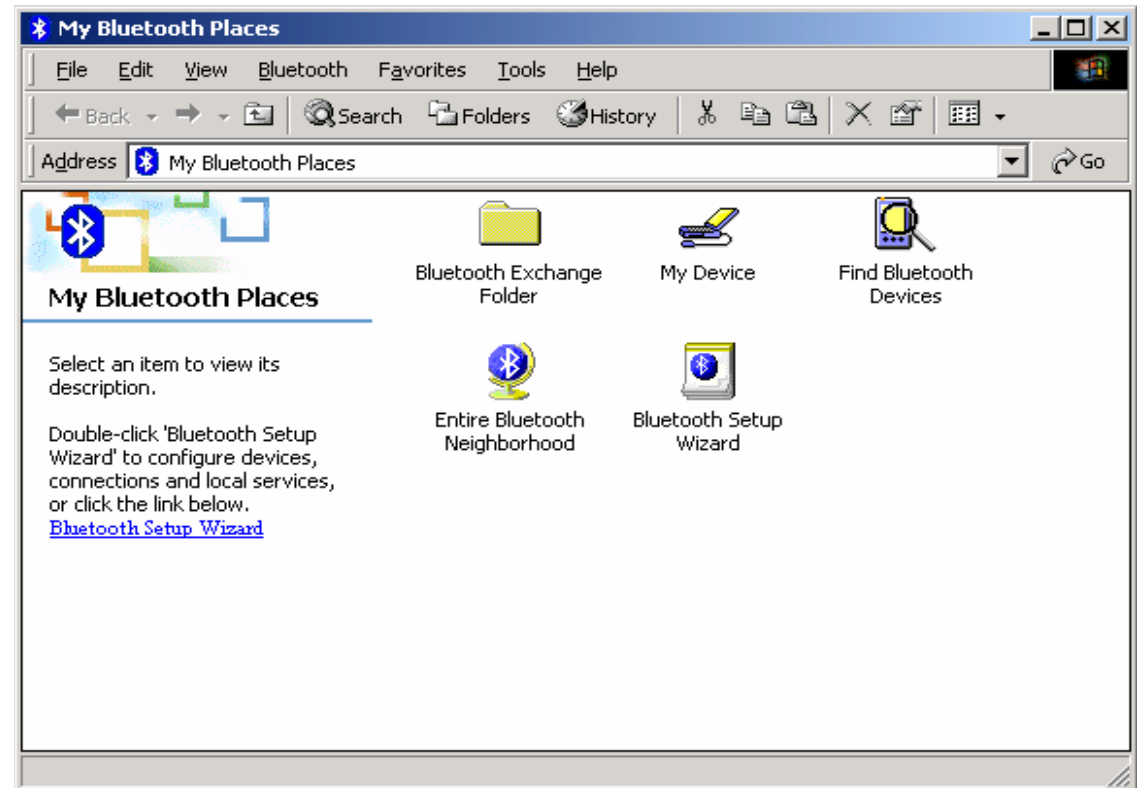
## My *Bluetooth* Places

After installation of the *Bluetooth* software you will have a new icon on your desktop. This is the My *Bluetooth* Places icon.

Double-click on this icon to bring up My *Bluetooth* Places.



*My Bluetooth Places - Desktop Icon*



*My Bluetooth Places*

## Device Discovery

### Windows 98/Me/2000

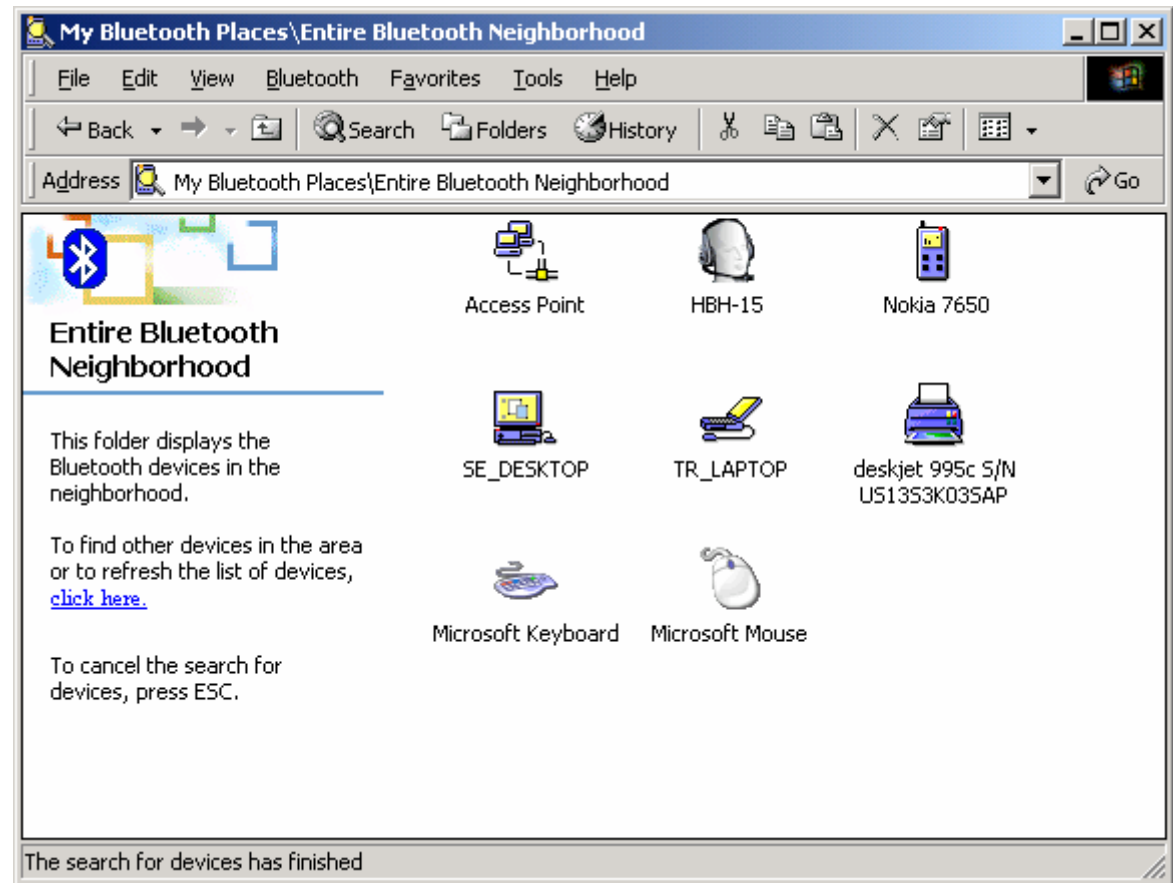
Double-click on Find *Bluetooth* Devices. A search for other *Bluetooth* devices within radio range will start automatically. If any devices are discovered they will be displayed.

### Windows XP

Click on View devices in range. A search for other *Bluetooth* devices within radio range will start automatically. If any devices are discovered they will be displayed.

*Note: The search may take a few minutes if there are many discoverable Bluetooth devices within range.*

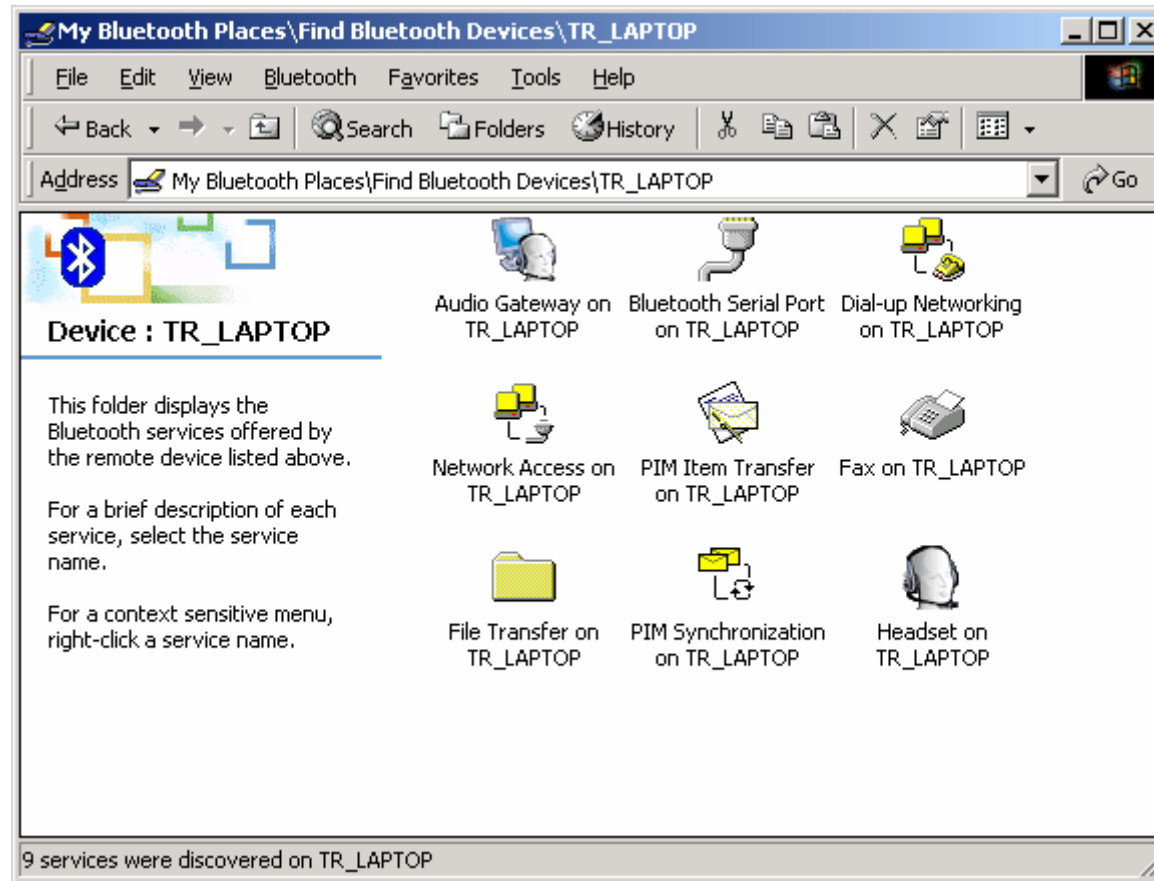
If you have not configured other *Bluetooth* devices yet, set them up now then click View, Refresh to re-discover these *Bluetooth* devices. There is a section later in this guide to help set up *Bluetooth* connections with the most popular *Bluetooth* mobile phones.



*Entire Bluetooth Neighbourhood – Search Complete*

## Service Discovery

Each device you have discovered will have services you can access. To find out which services a device supports double click on that device. You will then see all the services listed, providing the services are compatible and the device has not gone out of range or been switched off.



*Service Discovery*

## Bluetooth Services (Profiles)



The **Bluetooth Serial Port** allows you to establish a serial connection to a *Bluetooth* serial port on another *Bluetooth* device. The serial connection can be used by legacy applications as it emulates a simple RS232 serial cable link between two *Bluetooth* devices.



The **Dial-Up Networking (DUN)** service allows you to access and use the modem on another *Bluetooth* device to dial out, typically to an Internet Service Provider (ISP) to browse the internet and send/receive email.



The **Audio Gateway** service allows remote devices to use the audio features of your computer.



The **Headset** service allows you to connect to *Bluetooth* headset devices.



**Network Access** allows you to connect to the Internet and LAN through another *Bluetooth* device's LAN connection.



**PIM Item Transfer** is used to exchange items between the personal information managers (PIM) via *Bluetooth*.



If you want to copy, move or drag and drop files you should use file transfer. In fact you can perform any usual file transfer actions with **File Transfer** such as open, cut, copy, paste and delete.



**PIM Synchronisation** is used to synchronise the information (PIM database) between you and another *Bluetooth* device.



If you wish to send a **Fax** over *Bluetooth* you can access the fax service of another *Bluetooth* device to do this.

*Note: You are advised to view the Help file supplied with this software for more detailed information about all of these services.*

## LED Status

### **Bluetooth USB II Adaptor**

The USB Adaptor is designed to meet USB specification 1.1 and incorporates an integral antenna.



LED	Description	Function
1	Power/Data	Normally on. Flashes whilst data transfer is in progress
2	Status	Flashes every 2 seconds when the device is discoverable

### **Bluetooth PC Card**

The PC Card is a type II PC Card. It incorporates an integral antenna.



LED	Description	Function
1	Data	Normally on. Flashes whilst data transfer is in progress
2	Power	Permanently on when the device is powered
3	Status	Flashes every 2 seconds when the device is discoverable

# Pairing Guide

Pairing (also referred to as bonding) is the process of associating *Bluetooth* devices with each other. It is advisable to *pair* with frequently used *Bluetooth* devices. This will establish a permanent security link between the devices and enable quick access to the services provided, without the need to enter passkeys.

Once a device is paired it remains paired even if the user:

- Reboots one or both devices
- Stops and starts the services on the devices

*Note: A paired device will be displayed in the Entire Bluetooth Neighbourhood window even if the device is not within radio range and/or powered on at the time Entire Bluetooth Neighbourhood is opened and explored.*

The Pairing Wizard supplied will show you how to pair your USB Adaptor or PC Card to many popular *Bluetooth* phones.

For additional information on how to pair a specific device that is not included in the pairing wizard, refer to the documentation supplied with that *Bluetooth* device.

## GPRS & HSCSD

GPRS (Generalised Packet Radio Service) is a form of the GSM standard which is designed for sending data. It is called an “always-on” service, as it keeps the connection maintained, but you are only charged for the amount of data you send.

To use GPRS you need to obtain an APN name from your network provider, along with a username and password. You should enter these into your handset, after which you can set up a dial-up networking (DUN) connection between your PC and your mobile phone to provide mobile internet access.

To set up a DUN connection, right click on the *Bluetooth* tray icon, and then select Quick Connect and Dial-up networking.

If you do not have GPRS, then High Speed Circuit Switched Data (HSCSD) is a useful alternative. HSCSD is an enhancement of Circuit Switched Data (CSD) which is available on current GSM networks. It increases the speed of transmission so you can send and receive information up to three times faster than the current maximum of 9600bps. The HSCSD solution enables higher rates by using multiple channels, allowing subscribers to enjoy faster Internet access and e-mail.

*Note: Contact your service provider for details on availability, supported connection rates and to subscribe to this service.*

### Windows 98/Me

Go to Start, Settings, Control Panel and double-click on Modems. Highlight *Bluetooth* Modem. Click Properties, Connection and Advanced.

### Windows 2000

Go to Start, Settings, Control Panel and double-click on Phone and Modem Options. Click Modems and highlight *Bluetooth* Modem. Click Properties and then Advanced.

### Windows XP

Go to Start, Control Panel and double-click on Phone and Modem Options. Click Modems and highlight *Bluetooth* Modem. Click Properties and then Advanced.

## Frequently Asked Questions

*How do I find the Bluetooth Device Address (BDA) of my device?*  
Right-click on the taskbar *Bluetooth* icon and select Advanced Configuration. Click on the Hardware tab. The *Bluetooth* address will be displayed next to the Device Address.

*Why can't I discover a nearby Bluetooth device?*

The remote device is probably in non-discoverable mode. Check the status of the device and perform another search when the remote device is in discoverable mode.

*Why am I unable to exchange business cards?*

Ensure that both *Bluetooth* devices have default business cards created and selected.

*Can other Bluetooth devices access my confidential files?*

The *Bluetooth* specification provides levels of security. By default your machine is discoverable and is sharing one empty folder. This folder can only be accessed by other *Bluetooth* devices that you have paired with and authorized.

*Can I do a device discovery from my 2 machines simultaneously?*  
Simultaneous device discovery is supported but not recommended as the machines may fail to discover each other.

*Can I use my Bluetooth headset with my Ezurio Bluetooth PC Card?*

Yes. Full audio support is available in version 1.4.2.18 of the *Bluetooth* software.

*Can I use two Bluetooth profiles at the same time?*

Yes, providing the remote equipment supports this feature. Both the USB adaptor and PC card provide this functionality.

*Why can't I use dial-up networking and print to my Bluetooth printer at the same time?*

*Bluetooth* currently support two types of configuration, point-to-point and point-to-multipoint.

Point-to-point acts as a cable replacement, allowing you to remove the cable between your headset and your mobile phone, or from your printer to your laptop.

Point-to-multipoint provides the ability to connect eight devices simultaneously, this forms what is referred to as a Piconet. To achieve this one device must be the controller (referred to as the Master) and the other seven devices must be controlled (referred to as the Slaves). As you can imagine this is not a simple task for the Master device and not all devices can perform this role. Also not all profiles can support multipoint connections. In practice only Network Access Profile and the Serial Port Profile support multipoint connections.



## Technical Support

If you are still experiencing problems please contact your place of purchase or local distributor. Alternatively, for further guidance and up to date product and support information try:

Our website at [www.ezurio.com](http://www.ezurio.com)  
or  
our helpdesk at [support@ezurio.com](mailto:support@ezurio.com)

## Regulatory Information

This product complies with any mandatory product specification in any country where the product is sold.

EU recommendation 1999/519/EC and has been provided with the CE mark accordingly.



### **Bluetooth**

This equipment is qualified according to *Bluetooth* Core Specification:  
PC Card v1.1 USB Adaptor v2.0+EDR  
USB



Special notice for use in France:  
This product is suitable for indoor use only.

### **ESD (Electrostatic Discharge)**

If your Ezurio *Bluetooth* device is affected by ESD, it is recommended that you restart any *Bluetooth* processes that were active at the time.

### **Copyright and Trademark Notices**

Products and brand names may be the trademarks or registered trademarks of their respective owners.

*BLUETOOTH* is a trademark owned by *Bluetooth* SIG, Inc, U.S.A. and licensed to Ezurio Limited.

## Safety Statements

Please note the two following Underwriters Laboratories Inc.'s notices:

“This UL Listed ITE Accessory is intended for use with a listed host computer.”

“The long-term characteristics or the possible physiological effects of radio frequency (RF) electromagnetic fields associated with this equipment have not been evaluated.”

### **In addition:**

This device complies with Part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

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

The radiated output power is far below the FCC Radio frequency exposure limits. Nevertheless, this device should be used in such a manner that the potential for human contact during normal operation is minimized.

Warning: Changes or modifications made to this equipment not expressly approved by Ezurio Limited may void the user's authority to operate this equipment.

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-

located or operating to conjunction with any other antenna or transmitter.

## **Important Please note the following:**

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 receiver.
- Connect the equipment into 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.

The user should not modify or change this equipment without written approval from Ezurio Ltd. Modification could void authority to use this equipment.

# Technical Information

## ***Bluetooth USB Adaptor v2***

Supported operating systems:  
Windows 98 Second Edition  
Windows Me (Millennium Edition)  
Windows 2000  
Windows XP  
Windows 2003 Server

Power consumption - normal: 25mA  
Power consumption - peak: 45mA  
Supply voltage: 5V  
Operating temperature: -40°C – +85°C  
Nominal RF output power: 4mW (6dBm)  
Maximum RF output power: 4mW (6dBm)  
Range: up to 200 metres, free space.  
Weight: 15g

*Bluetooth* specification: Version 2.0+EDR  
*Bluetooth* power class: 1

## ***Bluetooth PC Card***

Supported operating systems:  
Windows 98 Second Edition  
Windows Me (Millennium Edition)  
Windows 2000  
Windows XP  
Windows 2003 Server

Power consumption - normal: 46mA  
Power consumption - peak: 100mA  
Supply voltage: 5V  
Operating temperature: -20°C – +75°C  
Nominal RF output power: 4mW (6dBm)  
Maximum RF output power: 4mW (6dBm)  
Range: up to 100 metres, free space.  
Weight: 30g

*Bluetooth* specification: Version 1.1  
*Bluetooth* power class: 1

# Glossary

## **Authentication**

Process of verifying the identity of the user at the other end of a link. Authentication is accomplished by using a link key stored in the device memory or by a user PIN (called pairing).

## **Authorization**

Process of deciding if a requesting device is allowed to have access to a service on another device. Authorization always includes authentication.

## **Bluetooth Device Address**

Every *Bluetooth* transceiver is issued a unique 48-bit *Bluetooth* Device Address which is used for quite a few algorithms when exchanging data between devices. The *Bluetooth* Device Address is used for hop sequence generation and many error detection code generation schemes.

## **Bluetooth Unit**

Any device such as a mobile handset, PDA, or PC card that is equipped with suitable *Bluetooth* hardware needed to establish wireless communication between devices.

## **Bonding / Pairing**

The creation of a semi-permanent (or permanent) relationship between two devices. The relationship is established when the user enters a passkey with the explicit purpose of creating a bond between two devices. This procedure is different from authenticating using a passkey in which the user is requested to enter a passkey during the establishment of a link.

## **Inquiry / Discovery**

Process by which a *Bluetooth* unit transmits inquiry messages in order to discover the other *Bluetooth* units that are active within the coverage area. Any *Bluetooth* unit that received the inquiry message may respond to the inquiring device with information about its *Bluetooth* unit and its host device.

## **PIN Code / Passkey**

Personal Identification Number. A type of password that is unique to a user.

**Piconet**

A network of devices connected using *Bluetooth* technology. A piconet may consist of two to eight devices. In a piconet, there will always be one master while the others are slaves.

**Trusted device / Paired device**

A device that has been authenticated.

**Profiles**

*Bluetooth* software emulates various types of wired links it is designed to replace. Each of these emulations is known as a profile. Examples of profiles are serial port, LAN and dial-up networking.

## Warranty

Ezurio warrants that the *Bluetooth* USB Adaptor and *Bluetooth* PC Card products shall conform to Ezurio's published specifications, which may be subject to change, and remain free from defects in materials and workmanship under normal, proper and intended use for a period of two (2) years from date of purchase, provided that proof of purchase be furnished with any returned equipment.

If, during the warranty period, any component part of the equipment becomes defective by reason of material or workmanship, and Ezurio is immediately notified of such defect, Ezurio shall at its option supply a replacement part or request return of equipment, freight prepaid, to its designated facility for repair. In the event that no fault is found on a product returned for repair, Ezurio reserves the right to charge the customer its standard published repair charge.

This warranty shall not apply to any product that has been subject to misuse, bending, twisting, neglect, alteration, improper installation, operation outside of the parameters of the published specification, use in any non-approved countries or unauthorised repair performed by anyone other than a Ezurio designated repair facility. Any non-warranty repairs or maintenance shall be at Ezurio's standard rates in effect at the time.

This warranty is in lieu of all other warranties, whether expressed, implied, or statutory, including but not limited to, implied warranties or merchantability and fitness for a particular purpose. In no event shall Ezurio be liable, whether in contract, in tort, or on any other basis, for any damage sustained by its customers or any other person arising from or related to loss of use, failure or interruption in the operation of any products, or delay in maintenance, or for incidental, consequential, indirect, or special damages or liabilities, or for loss of revenue, loss of business, or other financial loss arising out of or in connection with the sale, lease, maintenance, use, performance, failure, or interruption of these products.

**DECLARATION OF CONFORMITY**

In accordance with Annex IV of the EU directive 1999/5/EC

Notified Body consulted: **TO BE COMPLETED AFTER TEST**  
 ID-Number of Notified Body: **TO BE COMPLETED AFTER TEST**

declare under our responsibility that the **EZURIO Bluetooth USB Adaptor II** complies with the appropriate essential requirements of the Article 3 of the R&TTE and the other relevant provisions, when used for its intended purpose.

Health and Safety requirements contained in Article 3 (1) a)

**EN 60 950:** 1992 Safety of information technology equipment + Amendment A1:1993, Amendment A2:1993, Amendment A3:1995, Amendment A4:1997, Amendment A11:1997  
 EN 50371: Generic standard to demonstrate the compliance of low-power electronic and electrical apparatuses with the basic restrictions related to human exposure to electromagnetic fields (10 MHz - 300 GHz) – General public

Protection requirements with respect to electromagnetic compatibility Art.3 (1) b)

EN 301489-17 V1.1.1 (09-2000), Electromagnetic Compatibility and radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for wideband data Hiperlan equipment

Means of the efficient use of the radio frequency spectrum

EN 300328-2 V1.2.1 (11-2001), Radio Equipment and Systems (RES); Wideband transmission systems; Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Part 2: Harmonized EN covering essential requirements under article 3(2) of the R&TTE directive.

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**DECLARATION OF CONFORMITY**

In accordance with Annex IV of the EU directive 1999/5/EC

Notified Body consulted: **Phoenix Test-Lab**  
 ID-Number of Notified Body: **0700**

declare under our responsibility that the **EZURIO Bluetooth PC Card II**

complies with the appropriate essential requirements of the Article 3 of the R&TTE and the other relevant provisions, when used for its intended purpose.

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