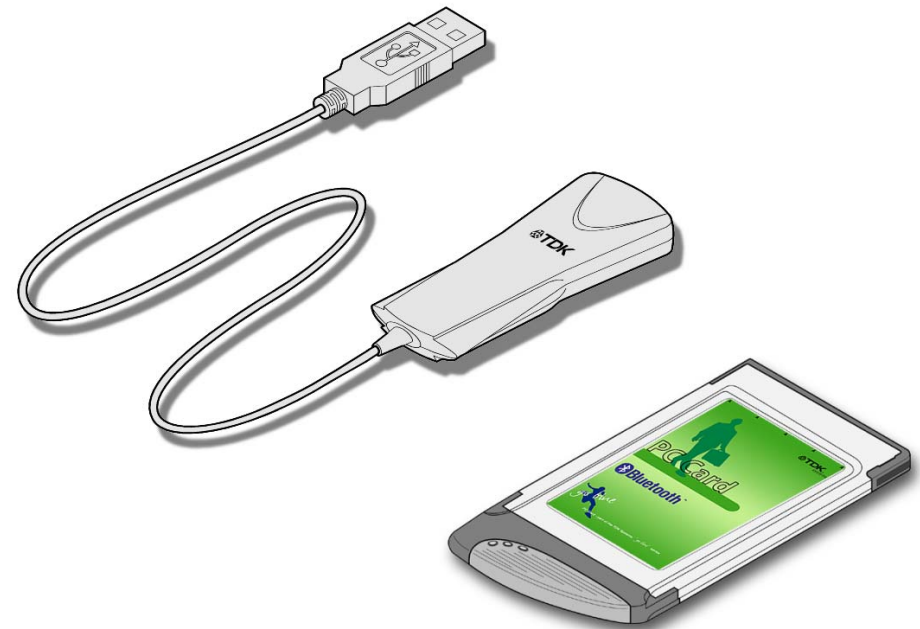


USB Adaptor & PC Card

Bluetooth Solutions



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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 (2.4GHz – 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 of 721Kbps.

The potential applications for this new 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 Adaptor

- USB Adaptor
- Installation CD-ROM
- USB Extension Cable
- Instruction Booklet
- Green Oval Housing (2)

Bluetooth PC Card

- PC Card
- Installation CD-ROM
- Instruction Booklet

Getting Started

Installing the Software

Note: Do not connect your Bluetooth USB 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.*

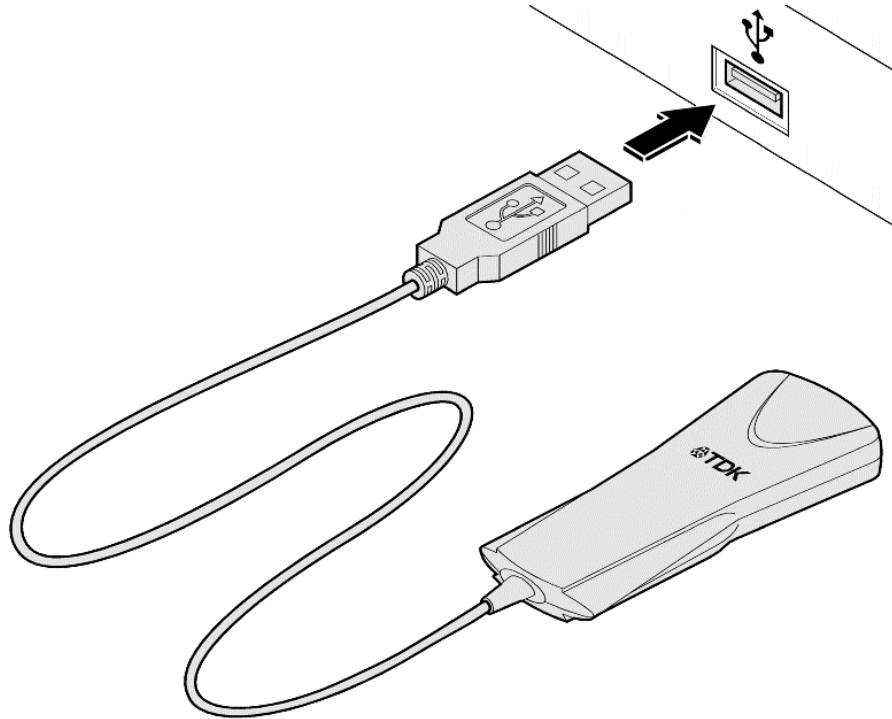
- 2) Choose Install Bluetooth Software to start the InstallShield Wizard.
- 3) Click **Next**.
- 4) If you agree with the license terms select **I accept the terms in the license agreement** and click **Next**.
- 5) Ensure the device name and type are set correctly then click **Next**.

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) Click **Yes** to restart Windows.

Installing the Hardware

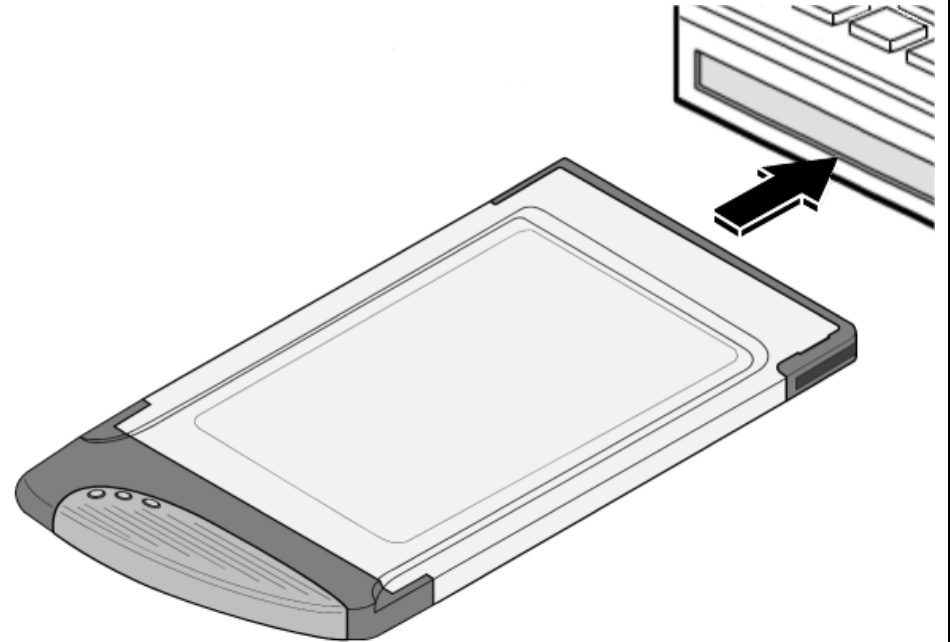
Bluetooth USB Adaptor



- 1) Insert the Bluetooth USB Adaptor into the USB port.
- 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, Continue Anyway** 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, Continue Anyway** then **Finish**.*

Bluetooth Tray Application

After successful installation of the software and hardware you should have a new item on the Windows taskbar. If you move the mouse onto the system tray (usually in the bottom right hand corner of your desktop) Bluetooth icon you should see the following

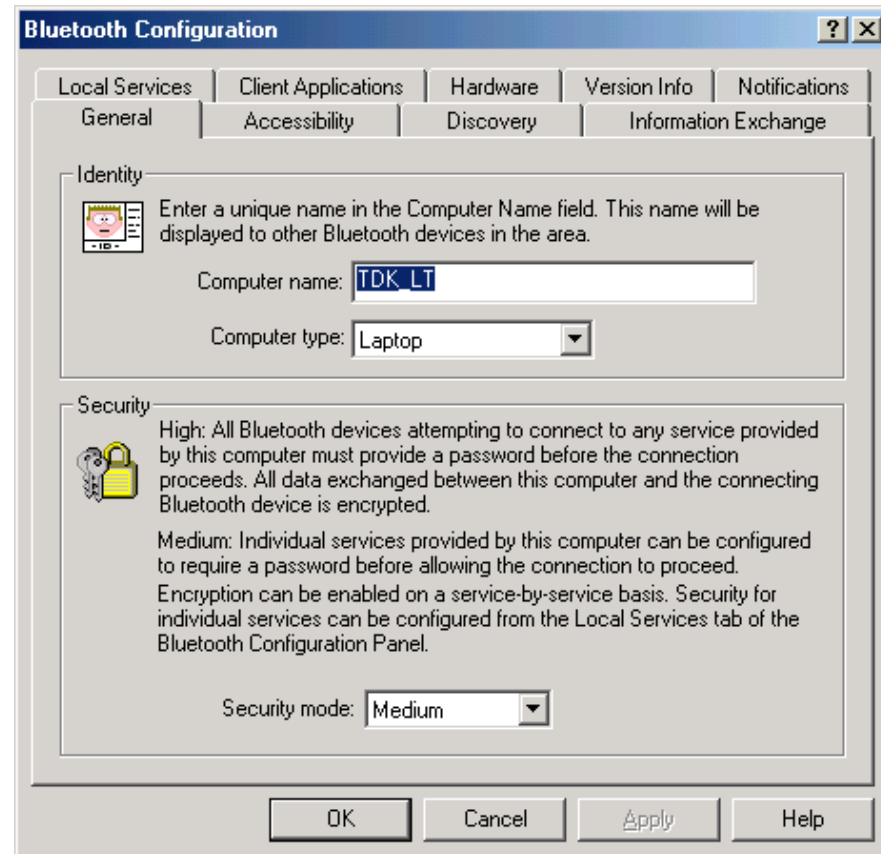


System Tray Icon

This is the Bluetooth System Tray icon. Right-click on it, select Setup then 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 is the device type other Bluetooth users will see when they search for your computer.

Also on this screen is the security mode setting. You may set this mode to High or Medium. By default Medium is selected. Generally, this means that anyone can connect to you and use your services without having to type in a password. You can protect individual services with a password for increased security.

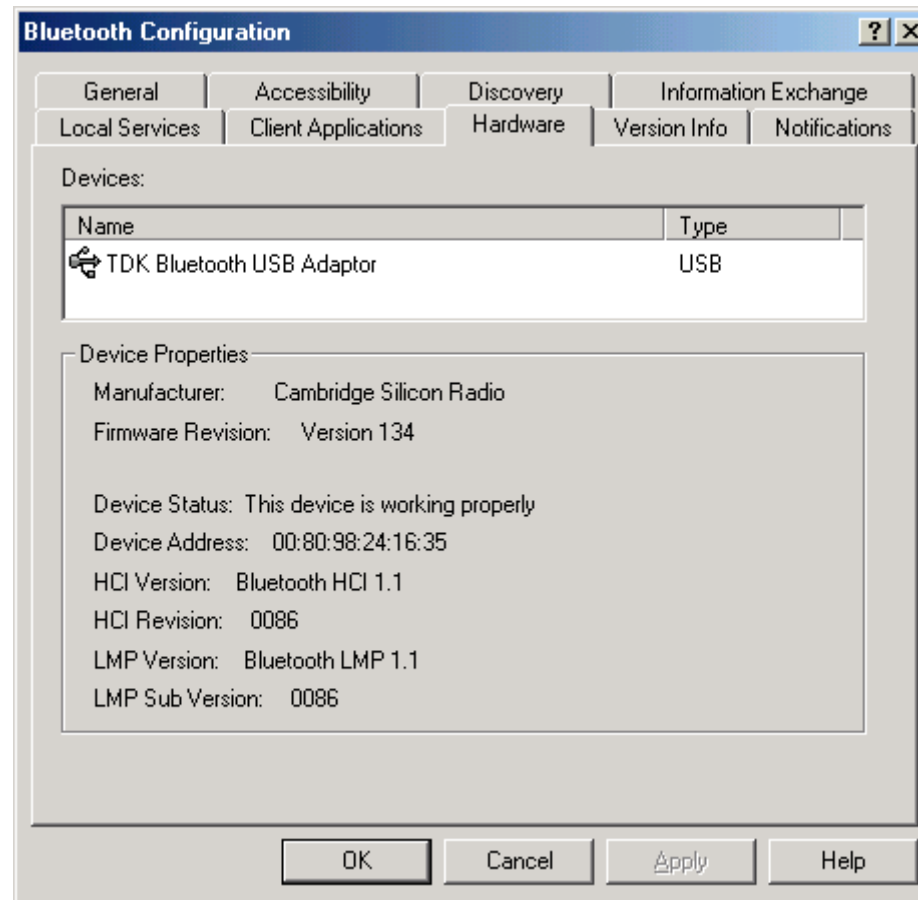


System Tray Application – Bluetooth Configuration

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

If the Device Status is showing “na” 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.

Note: 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

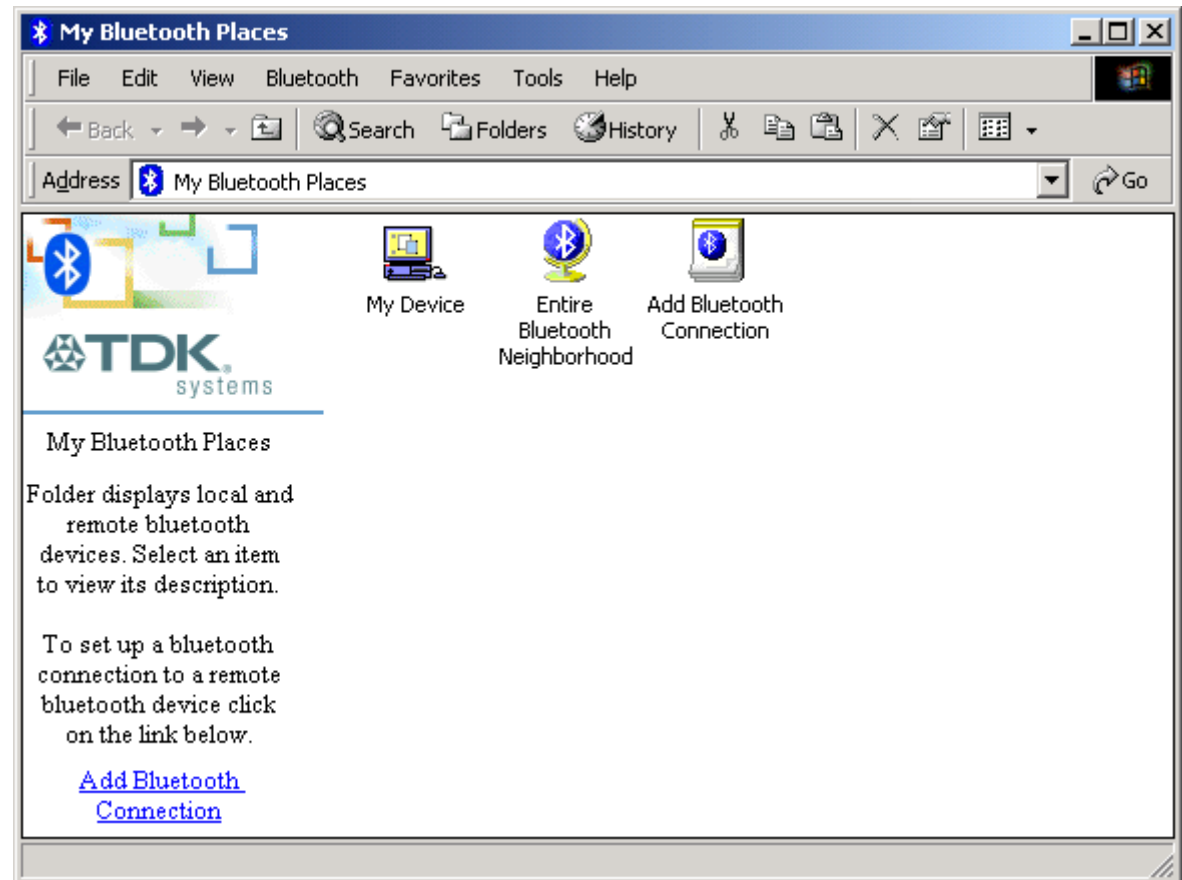
My Bluetooth Places

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



My Bluetooth Places - Desktop Icon

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



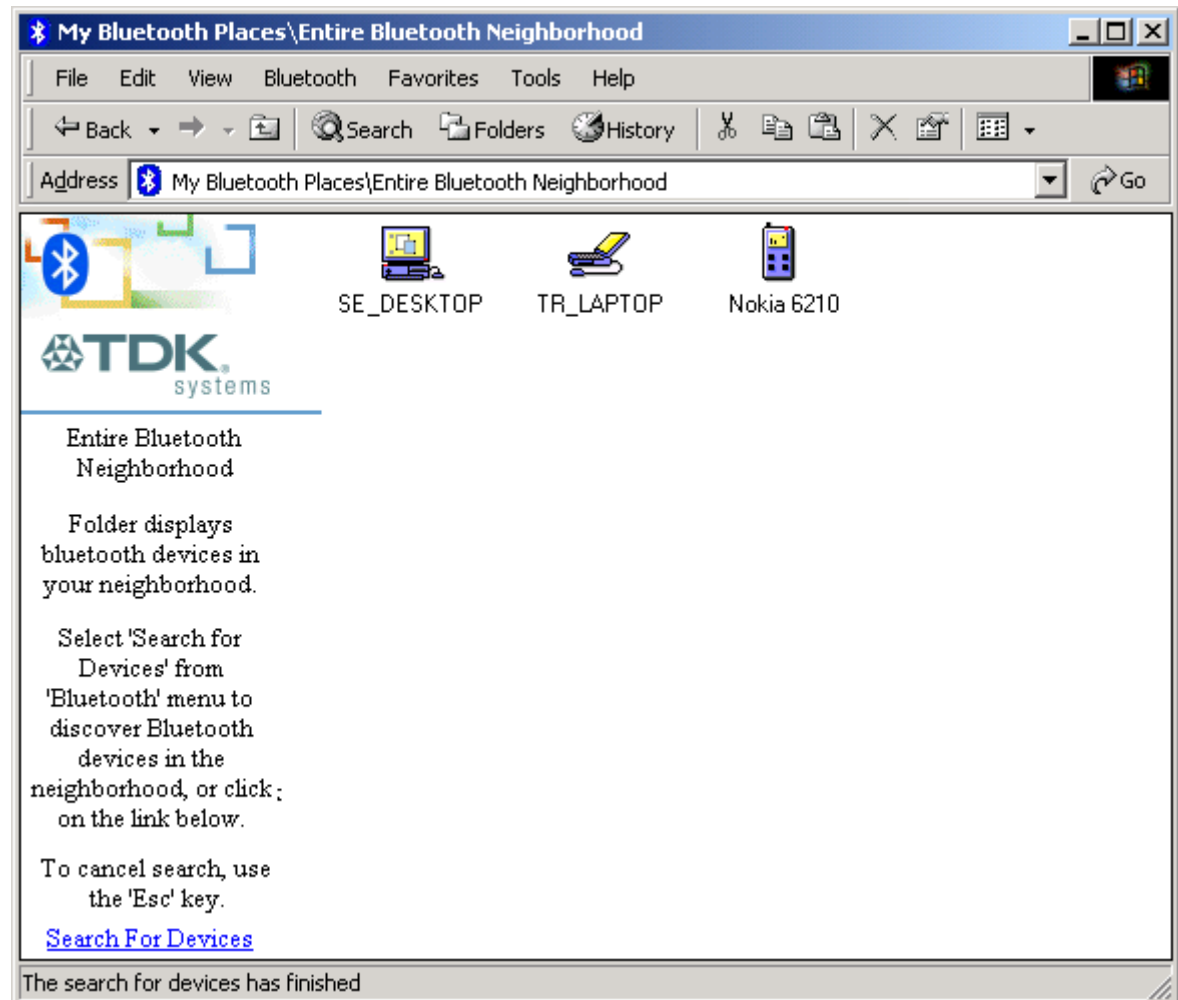
My Bluetooth Places

Device Discovery

When you open the Entire Bluetooth Neighborhood it will initially automatically try to **discover** (search for) other Bluetooth devices within radio range. If any devices are discovered they will be displayed in the Entire Bluetooth Neighborhood. Subsequent searches can be initiated by clicking [Search For Devices](#).

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

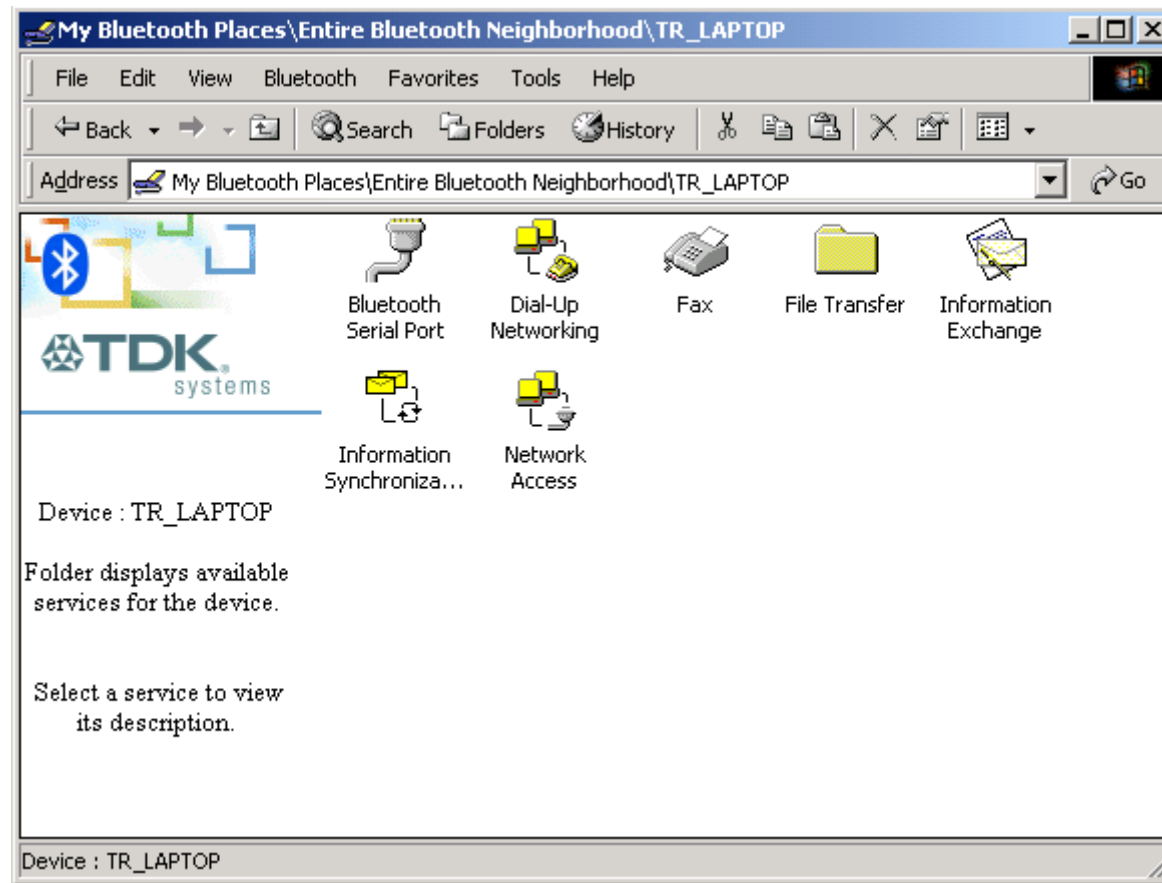
If you have not configured any other Bluetooth devices yet, set them up now then click on [Search For Devices](#) to re-discover your other Bluetooth devices. There is a section later in this guide to help set up Bluetooth connections with the most popular Bluetooth mobile phones.



Entire Bluetooth Neighborhood – Searching Complete

Service Discovery

Each device in the Bluetooth Neighborhood 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.



Entire Bluetooth Neighborhood – 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.



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



Network Access allows you to connect to the Internet through another Bluetooth device's LAN connection. Only Point-to-Point Protocol (PPP) is supported.



The **Information Exchange** 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 the **Public Folder** such as open, cut, copy, paste and delete.



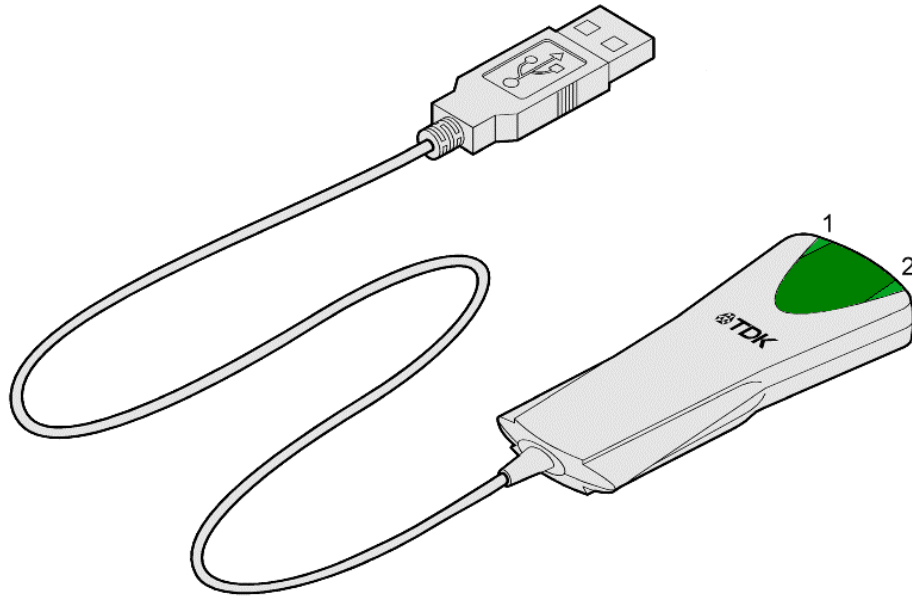
The **Information Synchronization** is used to synchronize the information (PIM database) between you and another Bluetooth device.

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 Adaptor

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

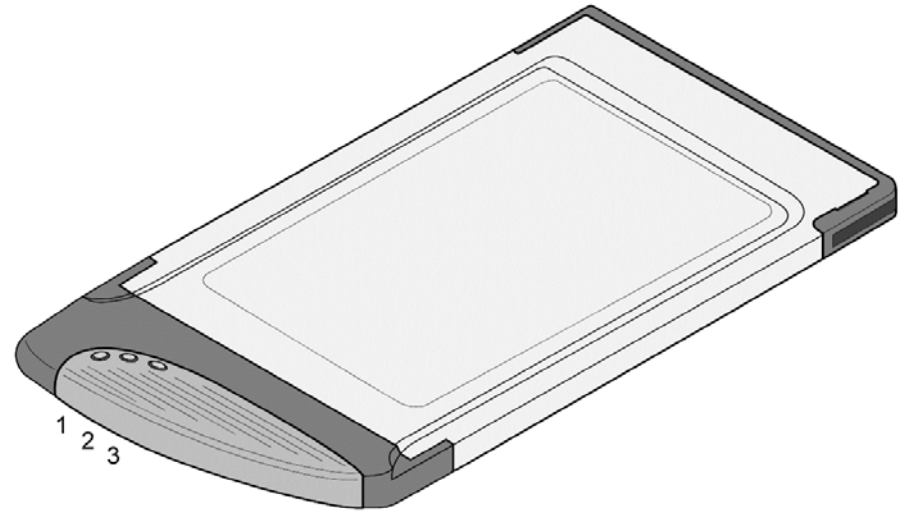


Each LED indicates the following

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.



Each LED indicates the following

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 Neighborhood window even if the device is not within radio range and/or powered on at the time Entire Bluetooth Neighborhood is opened and explored.

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

Note: blue5 and blueM users should refer to the online user guide provided on the blue5/blueM software CD.

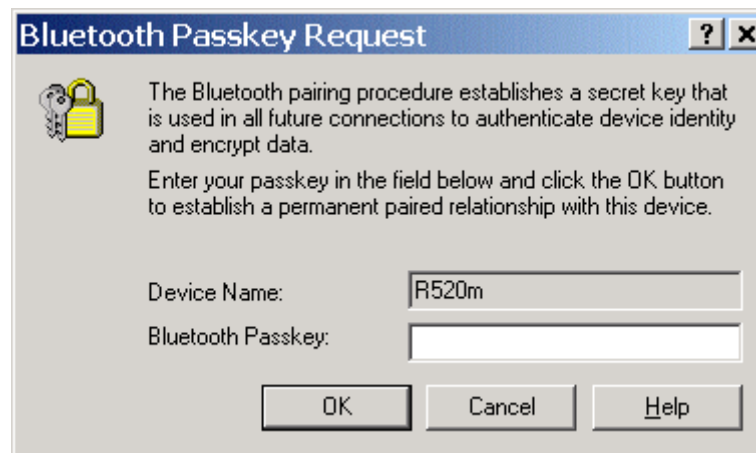
The following section shows how to pair your USB Adaptor or PC Card solution with other popular Bluetooth solutions.

Ericsson R520m

- 1 From the standby screen, press  or  to enter the menu.
- 2 Press 5 to enter the Extras menu.
- 3 Press 4 to select Bluetooth.
- 4 Press 2 to select Paired devices.
- 5 Select Add device and choose Phone accepts.

Note: If the Add device option in the Paired devices menu is greyed out and unselectable, the Bluetooth option may be disabled. Return to the Bluetooth menu, press 4 for Operation Mode and set the mode to On or Automatic.

- 6 Double-click My Bluetooth Places on the desktop.
- 7 Double-click Entire Bluetooth Neighborhood.
- 8 Wait while discoverable Bluetooth devices that are in range are discovered.
- 9 Right-click your R520m phone shown in the list of devices found and select Pair Device.




Bluetooth Passkey Request

- 10 Enter a passkey of your choice (the passkey can be up to 16 characters long and must be numerical).

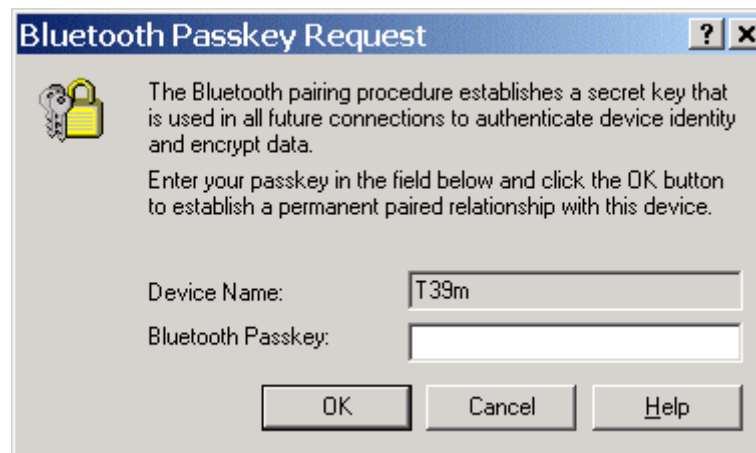
- 11 Click OK.
- 12 Your Ericsson phone will prompt you to Add to paired devices.
- 13 Press Yes.
- 14 Enter the same passkey on your phone.
- 15 Press Yes.
- 16 Your Ericsson phone will prompt you to edit the name tag. When you are satisfied with the name tag, press Yes.

Ericsson T39m

- 1 From the standby screen, press  to enter the menu.
- 2 Press 5 to enter the Extras menu.
- 3 Press 5 to select Bluetooth.
- 4 Press 2 to select Paired devices.
- 5 Select Add device and choose Phone accepts.

Note: If the Add device option in the Paired devices menu is greyed out and unselectable, the Bluetooth option may be disabled. Return to the Bluetooth menu, press 4 for Operation Mode and set the mode to On or Automatic.

- 6 Double-click My Bluetooth Places on the desktop.
- 7 Double-click Entire Bluetooth Neighborhood.
- 8 Wait while discoverable Bluetooth devices that are in range are discovered.
- 9 Right-click your T39m phone shown in the list of devices found and select Pair Device.



Bluetooth Passkey Request

- 10 Enter a passkey of your choice (the passkey can be up to 16 characters long and must be numerical).

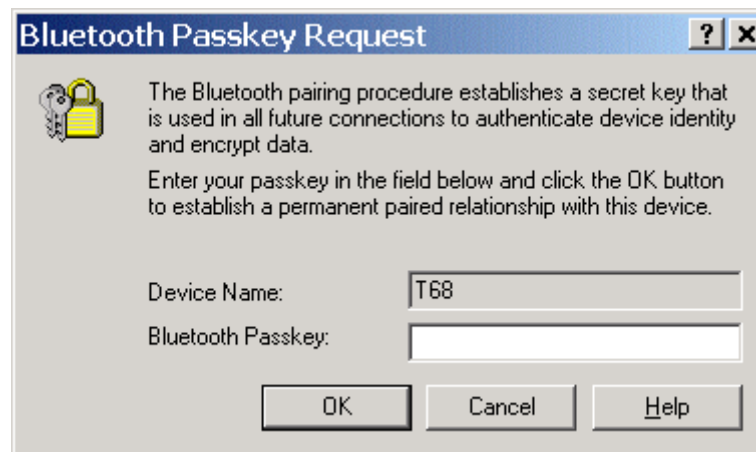
- 11 Click OK.
- 12 Your Ericsson phone will prompt you to Add to paired devices.
- 13 Press Yes.
- 14 Enter the same passkey on your phone.
- 15 Press Yes.
- 16 Your Ericsson phone will prompt you to edit the name tag. When you are satisfied with the name tag, press Yes.

Ericsson T68

- 1 From the standby screen, move the joystick to the right to enter the menu.
- 2 Press 8 to enter the Connect menu.
- 3 Press 2 to select Bluetooth.
- 4 Press 2 to select Paired devices.
- 5 Select Add device and choose Phone accepts.

Note: If the Add device option in the Paired devices menu is greyed out and unselectable, the Bluetooth option may be disabled. Return to the Bluetooth menu, press 4 for Operation Mode and set the mode to On or Automatic.

- 6 Double-click My Bluetooth Places on the desktop.
- 7 Double-click Entire Bluetooth Neighborhood.
- 8 Wait while discoverable Bluetooth devices that are in range are discovered.
- 9 Right-click your T68 phone shown in the list of devices found and select Pair Device.



Bluetooth Passkey Request

- 10 Enter a passkey of your choice (the passkey can be up to 16 characters long and must be numerical).
- 11 Click OK.

12 Your Ericsson phone will prompt you to Add to paired devices.

13 Press Yes.

14 Enter the same passkey on your phone.


15 Press Yes.

16 Your Ericsson phone will prompt you to edit the name tag. When you are satisfied with the name tag, press Yes.

Nokia 6210

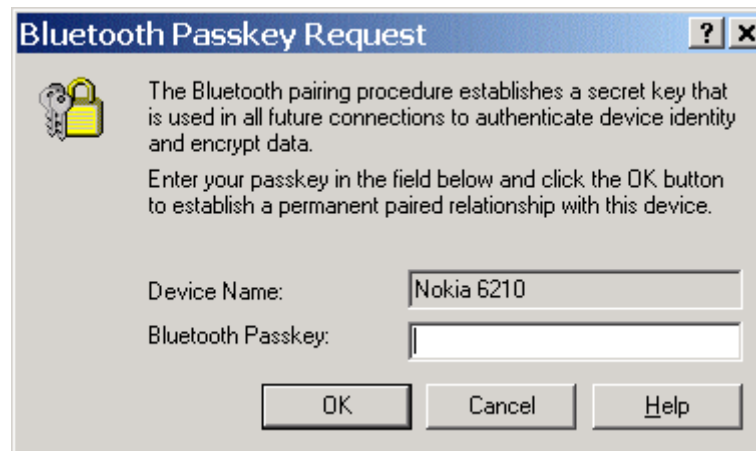
The Nokia Connectivity Battery (LRW-1) brings Bluetooth functionality to the Nokia 6210.

Note: You need to check that your 6210 can support the Bluetooth Connectivity Battery.

- *Switch on your Nokia phone with the Connectivity Battery attached. The  icon will be shown briefly in the top left corner of the phone display if the phone can support the Bluetooth Battery.*

You can have your 6210 checked and upgraded at your local Nokia dealer free of charge.


- 1 Double-click My Bluetooth Places on the desktop.
- 2 Double-click Entire Bluetooth Neighborhood.
- 3 Wait while discoverable Bluetooth devices that are in range are discovered.
- 4 Right-click your Nokia 6210 phone shown in the list of devices found and select Pair Device.



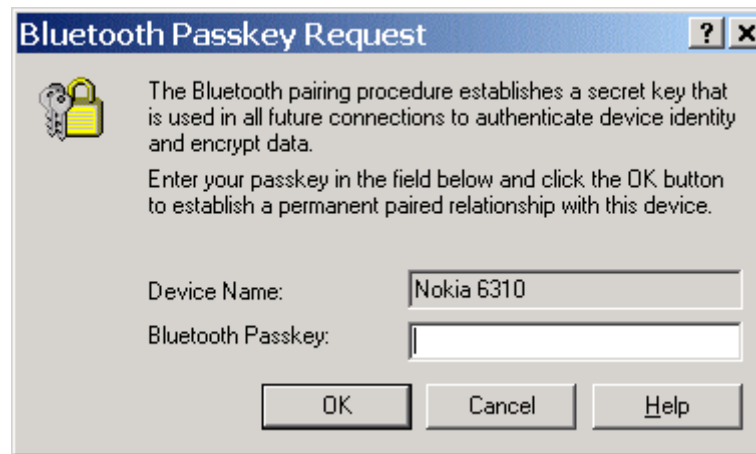
Bluetooth Passkey Request

- 5 Type in the preset Nokia passkey (indicated on a label supplied with the Connectivity Battery) in the Bluetooth Passkey field and click OK.

Nokia 6310


Note: Bluetooth may not be enabled on your Nokia 6310. If you can see the  icon in the top left corner of the phone display then Bluetooth is enabled. To enable Bluetooth, press Menu and select Bluetooth menu. Press Select and set Bluetooth to On.

- 1 Double-click My Bluetooth Places on the desktop.
- 2 Double-click Entire Bluetooth Neighborhood.
- 3 Wait while discoverable Bluetooth devices that are in range are discovered.
- 4 Right-click your Nokia 6310 phone shown in the list of devices found and select Pair Device.



Bluetooth Passkey Request

- 5 Enter a passkey of your choice (the passkey can be up to 16 characters long and must be numerical).
- 6 Click OK.
- 7 When your Nokia phone prompts you about the connection, press Accept.
- 8 Type in the same passkey on your Nokia phone and press OK.

Note: Each time you attempt to connect to a service on your paired phone it will prompt you to Accept or Reject the connection. To turn off this feature go to the Bluetooth menu and select View paired devices. Highlight the machine you paired with earlier and press Options. Press  and set Request conn. Authorization to No.

Frequently Asked Questions

How do I find the Bluetooth Device Address (BDA) of my device?

Right-click on the taskbar Bluetooth Icon, select Setup then 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 your machine and the remote computer has a default business card 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. Right-click on the taskbar Bluetooth Icon, select Setup then Configuration. Click on the Information Exchange tab to see the folder you are sharing to other Bluetooth devices.

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.

Is my device point to point and what does this mean?

Both the USB adaptor and PC card are multipoint devices. A point to point system will only allow communication between two machines and will no longer be accessible to other Bluetooth devices.

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.

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.tdksystems.com

or our helpdesk at

support@tdksystems.com

Regulatory Information

This product complies with any mandatory product specification in any country where the product is sold. In addition, the product complies with the following:

European Union (EU) and EFTA

This equipment complies with the R&TTE directive 1999/5/EC and the following standards:

ETS 300 328-1 V1.2.2 (2000-07)

ETS 300 826 11/1997

EN 60950:1992 + A1:1993, A2:1993, A3:1995, A4:1997, A11:1997

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



Bluetooth

This equipment is qualified according to Bluetooth Core Specification, version 1.1



Special notices for use in France and Italy

France

Dispositif à faible puissance (1 mW), pas de limitation pour son usage à l'intérieur ou à l'extérieur.

Low power device (1 mW), no limitation for indoor or outdoor use.

Italy

E' necessaria la concessione ministeriale anche per l'uso. Verificare con i rivenditori la procedura da seguire.

Licence required for use. Check with your reseller for the procedure you need to follow.

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 TDK Systems Europe 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 TDK Systems Europe Limited may void the FCC authorization to operate this equipment.

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.

Technical Information

Bluetooth USB Adaptor

Supported operating systems

Windows 98 (Second Edition)
Windows Me (Millennium Edition)
Windows 2000
Windows XP

Power consumption - normal: 35mA
Power consumption - peak: 105mA
Supply voltage: 5V
Operating temperature: 0 - 35°C
Nominal RF output power: 1mW (0dBm)
Maximum RF output power: 2.5mW (4dBm)
Range: up to 10 metres, free space.
Weight: 35g

Bluetooth specification: Version 1.1
Bluetooth power class: 2

Bluetooth PC Card

Supported operating systems

Windows 98 (Second Edition)
Windows Me (Millennium Edition)
Windows 2000
Windows XP

Power consumption - normal: 113mA
Power consumption - peak: 149mA
Supply voltage: 5V
Operating temperature: 0 - 60°C
Nominal RF output power: 1mW (0dBm)
Maximum RF output power: 2.5mW (4dBm)
Range: up to 10 metres, free space.
Weight: 30g

Bluetooth specification: Version 1.1
Bluetooth power class: 2

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 / 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 are known as profiles. Examples of profiles are serial port, LAN and dial-up networking.

Warranty

TDK warrants that the Bluetooth USB adaptor and Bluetooth PC Card products shall conform to TDK'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 one (1) year 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 TDK is immediately notified of such defect, TDK 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, TDK 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 TDK designated repair facility. Any non-warranty repairs or maintenance shall be at TDK'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 TDK 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.



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 United Kingdom
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 Fax: +44 (0) 20 8905 8608
 www.tdksys.com

DECLARATION OF CONFORMITY

We
 [Manufacturer's name and address]

TDK Systems Europe Ltd.
 126 Colindale Avenue
 Colindale
 London NW9 5HD
 United Kingdom

declare under our sole responsibility that the product:
 [Brandname, name and model]

brandname: TDK
 model name: TDK Bluetooth USB Adaptor

To which this declaration relates is in conformity with the following standard(s) or other normative document(s):

ETS 300 328-1 V1.2.2 (2000-07)
 ETS 300 826 11/1997
 EN 60950:1992 + A1:1993, A2:1993, A3:1995, A4:1997, A11:1997
 EU recommendation 1999/519/EC

following the provisions of Directive 1999/5/EC, also known as the "R&TTE Directive".

City: London Date: September 19th, 2001

Name : Peter de Wit Title: Approvals Manager

Signature:



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 Colindale, London NW9 5HD
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 Tel: +44 (0) 20 8938 1000
 Fax: +44 (0) 20 8905 8608
 www.tdksys.com

DECLARATION OF CONFORMITY

We
 [Manufacturer's name and address]

TDK Systems Europe Ltd.
 126 Colindale Avenue
 Colindale
 London NW9 5HD
 United Kingdom

declare under our sole responsibility that the product:
 [Brandname, name and model]

brandname: TDK
 model name: TDK Bluetooth PC Card

To which this declaration relates is in conformity with the following standard(s) or other normative document(s):

ETS 300 328-1 V1.2.2 (2000-07)
 ETS 300 826 11/1997
 EN 60950:1992 + A1:1993, A2:1993, A3:1995, A4:1997, A11:1997
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