



User's Manual

Powerline Ethernet / USB adapter PE-14/PU-14



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Chapter 1 :

1-1 Introduction

Thank you for purchasing the Powerline Ethernet / USB adapter.

Now you can take advantage of this great new technology and gain the freedom you need around the home or office using the existing power lines in your home or office.

The KIT Powerline Ethernet / USB adapter utilizes the existing 110, 220Vac electrical wiring in your home or office to connect all of your computers together to create a network.

The easy installation and setup will have you networking through your power lines in minutes.

Please read through this manual completely to ensure that you get the most out of your Powerline Ethernet / USB adapter.

1-2 Important Safety Information

This product is intended for connection to the AC power line.

The following precautions should be taken when using this product:

- Read all instructions before installing and operating this product.
- Follow all warnings and instructions marked on the product.
- Do not operate this product near water.
- This product relies on a building's electrical installation for short-circuit (over current) protection. Ensure that a fuse or circuit breaker no larger than 15 A is used on the phase conductors (all current-carrying conductors).
- Do not allow anything to rest on the product interconnect cords.
- Do not locate this product where people may walk on the cords.
- The wall mount should be plugged directly into a 120/240V AC wall outlet.
- Only a qualified technician should service this product. Opening or removing covers may result in exposure to dangerous voltage points or other risks.
- Unplug the wall mount from the wall outlet and refer the product to qualified service personnel for the following conditions:
 - When the interconnect cords are damaged or frayed.
 - If liquid has been spilled onto the product.
 - If the product has been exposed to rain or water.
 - If the product does not operate normally when the operating instructions have been followed.
- If the product exhibits a distinct change in performance.

Chapter 2 : Powerline Ethernet adapter (PE-14)

2-1. Product Specifications

Protocol :	TCP/IP
Media Interface :	RJ-45 for Ethernet 2-Prong AC plug for powerline LAN
Network Data Rate :	Up to 14Mbps
Security :	56-bit DES Encryption
LED Status Lights :	Collision, Link, Activity, Link/Activity
Dimensions (D × W × H) :	98.9 × 67 × 30mm
Power Input :	100 - 240V~, 50/60Hz
Safety & EMI :	FCC part 15, UL (US and Canada)
Operation Temperature :	0℃ to 55℃
Storage Temperature :	-20℃ to 70℃
Operating Humidity :	10% to 85% Non-condensing
Storage Humidity :	5% to 90% Non-condensing

2-2. System Requirements

- Computing device such as a PC or printer with an available Ethernet port
- 32 MB of RAM
- 10 MB of available hard disk space
- CD-ROM Drive
- Windows 98se, Windows Me, Windows 2000, Windows XP

2-3. Package Contains

- Powerline Ethernet adapter
- Ethernet Cable
- Software CD
- User Manual

Important: After receiving the Powerline Ethernet adapter, check for any shipping damages to on the carton and system unit before proceeding with any installations. Inspect the cartons for any obvious damages before unpacking.

2-4. Hardware Installation

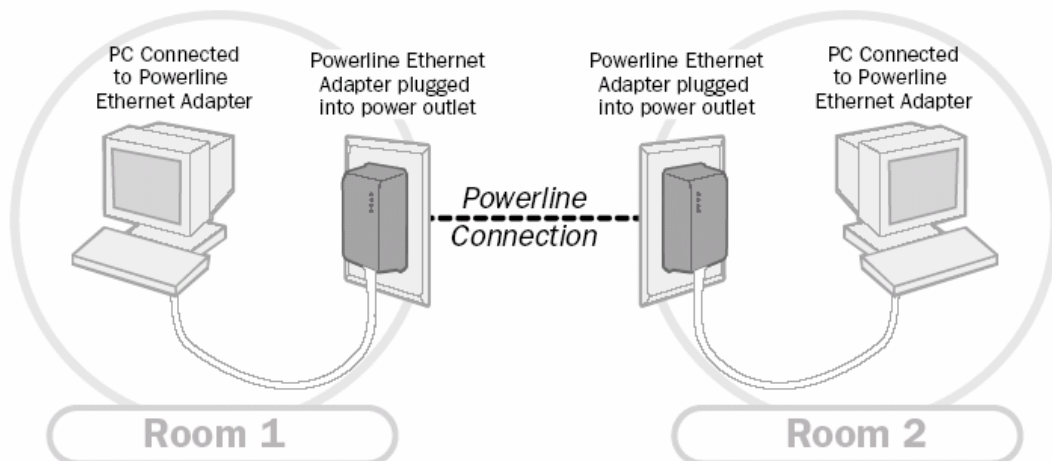
-  You will need at least two powerline adapters to create a network connection.
-  Connecting the Ethernet Bridge to a router, network printer or other networked device.

If the Powerline device is going to be connected to something else than a computer, such as a Router, Broadband modem, etc., no software needs to be installed. Simply plug the Powerline Ethernet adapter into a LAN port of the other network device and insert the Powerline Ethernet adapter in an AC socket. No further installation is needed for this device.

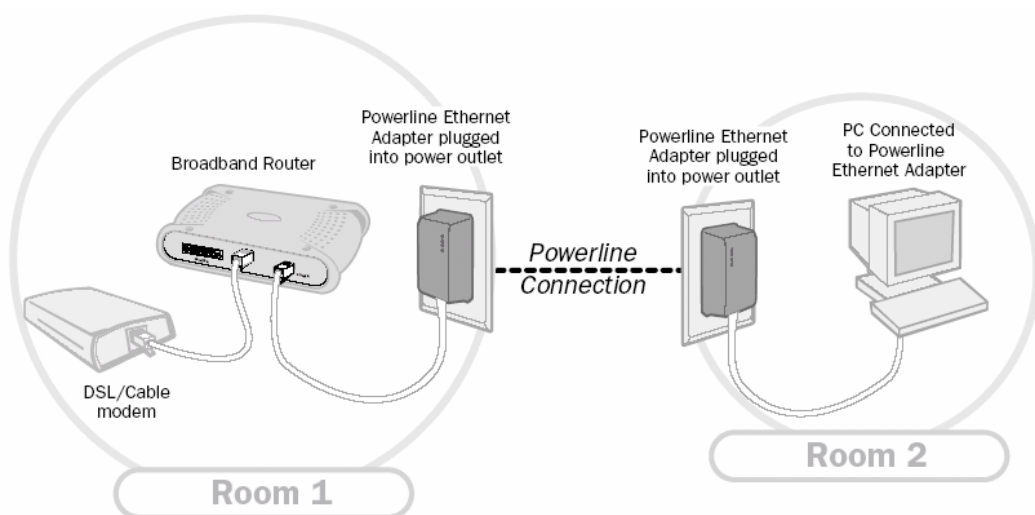
1. Installing and Setting Up the Powerline Ethernet adapter

- ① Install the software FIRST.
- ② Connect the Adapter directly into the wall outlet.
- ③ Do not connect the Adapter into a power strip or surge protector since these devices may contain circuit filters, which may degrade the powerline signal.
- ④ Connect the powerline ETHERNET cable to your PC.
- ⑤ Let Windows finish installing the Adapter

2. To connect two computers together in an isolated home network you will need the following :
 - A Powerline Ethernet adapter for each PC with an available Ethernet port

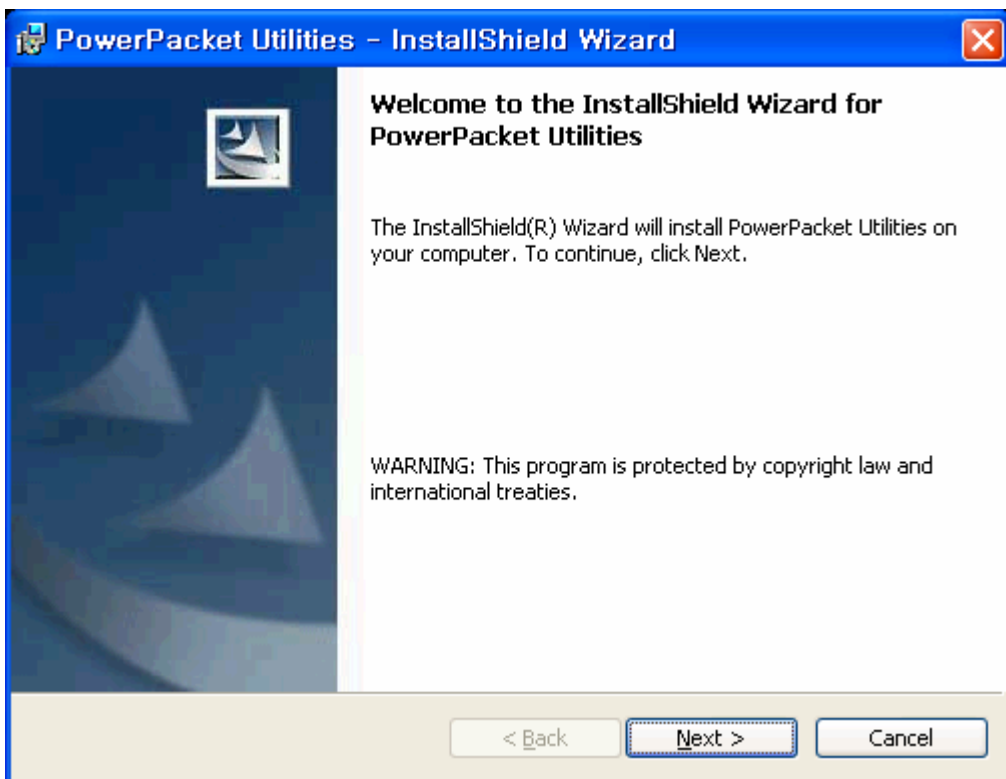


3. To share a cable or DSL connection between PCs in different rooms you will need one of the following setups :
 - Cable / DSL modem
 - Powerline Router

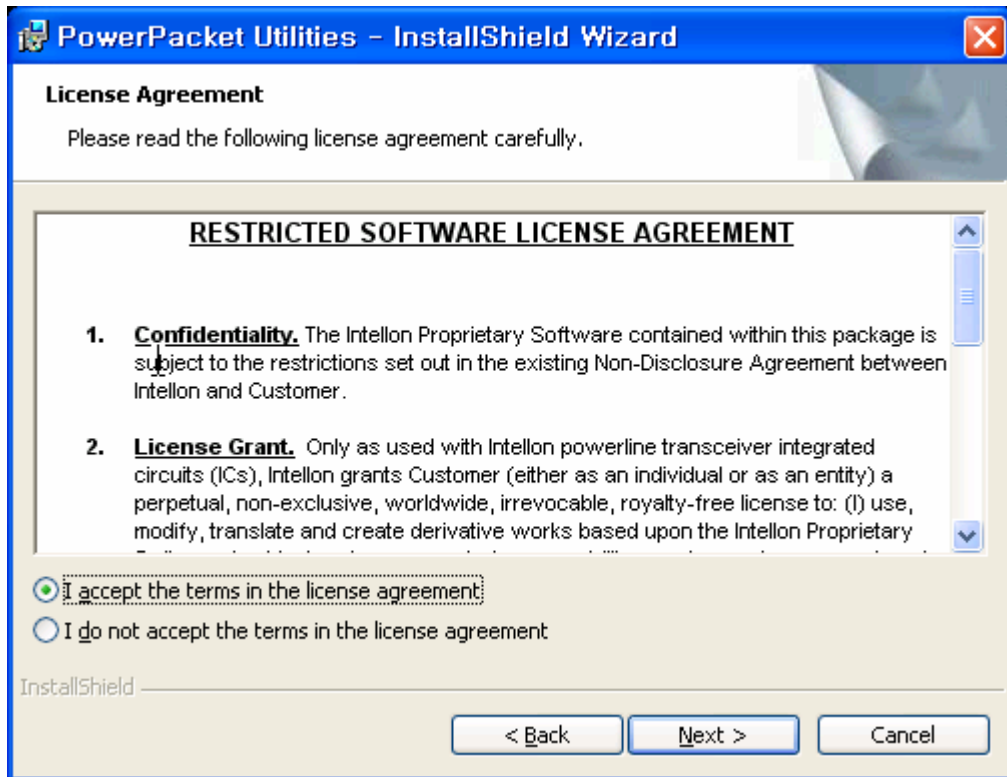


2-5. Software and Driver Installation

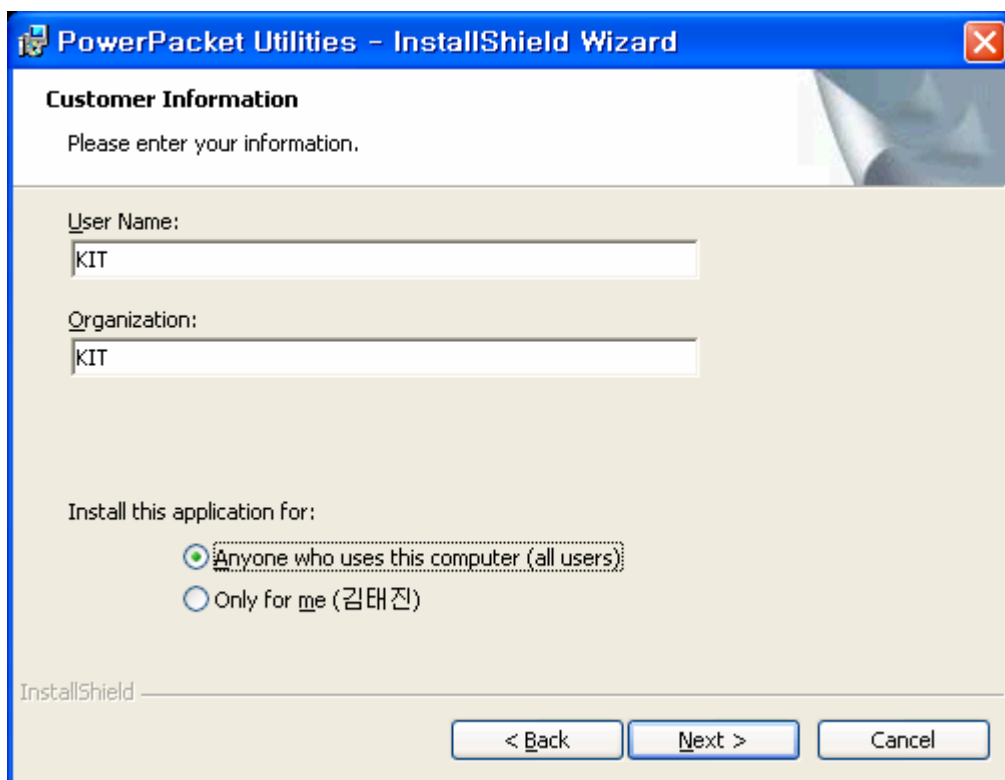
1. Insert the CD into your CD-ROM drive.
2. The Powerline Ethernet adapter Setup Utility screen will automatically appear. If it does not appear within 15-20 seconds, select your CD-ROM drive and double-click on the icon named "d:\Ethernet\Setup.exe".
(Where D is the letter of your CD-ROM drive).
3. The installer will start. Click "Next" to continue.



- Click 'Next' to start installation. The following screen is the copyright notice. If the conditions are acceptable, select 'I Accept.' Click 'Next' to continue.



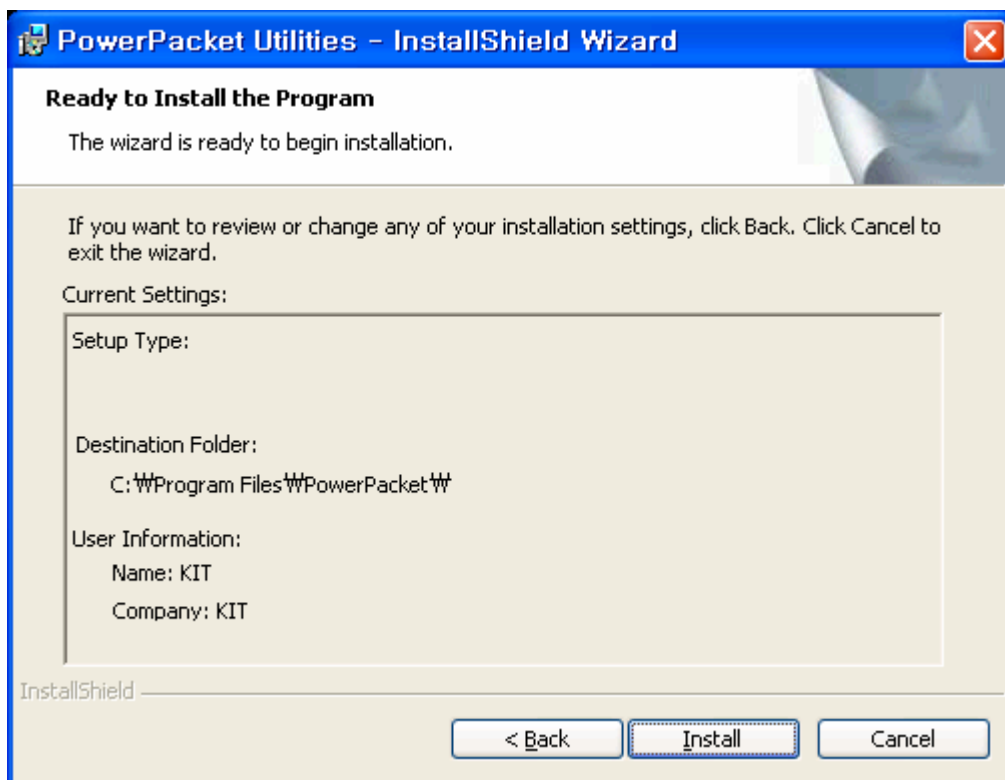
5. Enter a user name and organization name, and click Next to continue installation. (Username and Organization have no importance in device operation. Window might look slightly different on other plat-forms.)



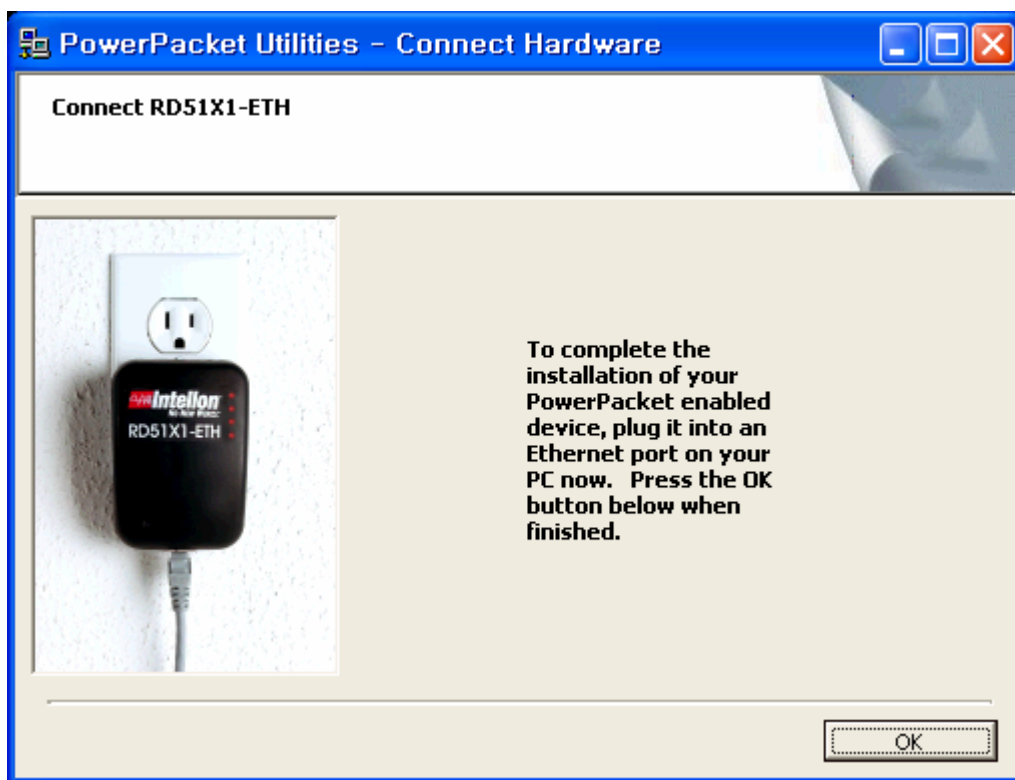
The image shows a Windows-style dialog box titled "PowerPacket Utilities - InstallShield Wizard". The window has a blue title bar with a close button in the top right corner. The main content area is light beige and contains the following elements:

- Customer Information**: A section header with a small graphic of a document and a pencil.
- Please enter your information.**: A prompt text.
- User Name:**: A text label followed by a text input field containing the text "KIT".
- Organization:**: A text label followed by a text input field containing the text "KIT".
- Install this application for:**: A section header.
- Radio buttons**: Two radio buttons are present. The first is selected (indicated by a green dot) and is labeled "Anyone who uses this computer (all users)". The second is unselected and is labeled "Only for me (김태진)".
- Progress bar**: A horizontal progress bar at the bottom left, labeled "InstallShield" followed by a line.
- Buttons**: Three buttons are at the bottom right: "< Back", "Next >", and "Cancel".

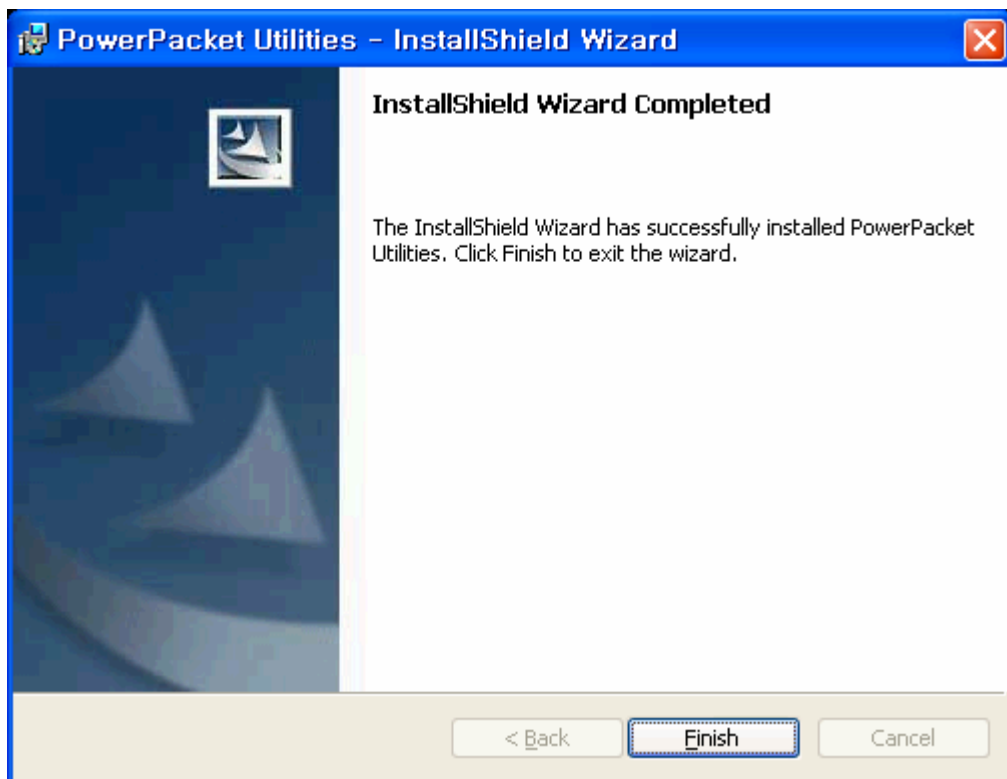
6. Press “Install” to start the Installation Wizard:



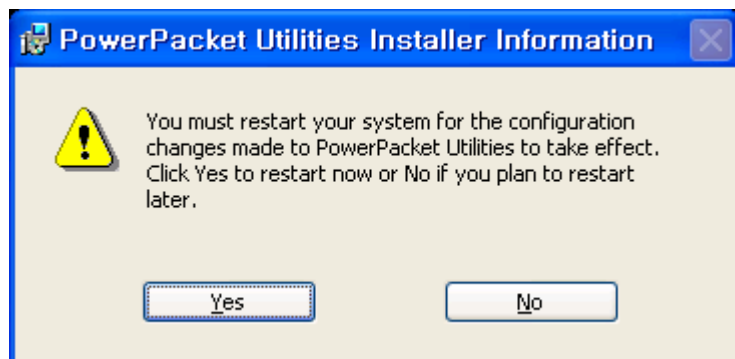
7. Follow the on-screen instruction until you see the message "Connect RD51X1-ETH." Plug your powerline device directly into a wall outlet, and then plug your ETHRNET cable from the powerline device into your PC.



8. Click “Finish” to complete the installation.



9. Click “Yes” to restart your computer.



Chapter 3 : Powerline USB adapter

3-1. Product Specifications

Protocol :	TCP/IP
Media Interface :	B-Type for USB 2-Prong AC plug for powerline LAN
Network Data Rate :	Up to 14Mbps
Security :	56-bit DES Encryption
LED Status Lights :	Collision, Link, Activity
Dimensions (D × W × H) :	82.6 × 51 × 23mm
Power Input :	100 - 240V~, 50/60Hz
Safety & EMI :	FCC part 15, UL (US and Canada)
Operation Temperature :	0℃ to 55℃
Storage Temperature :	-20℃ to 70℃
Operating Humidity :	10% to 85% Non-condensing
Storage Humidity :	5% to 90% Non-condensing

3-2. System Requirements

- Computing device such as a PC or printer with
- an available Ethernet port
- 32 MB of RAM
- 10 MB of available hard disk space
- CD-ROM Drive
- Windows 98se, Windows Me, Windows 2000, Windows XP

3-3. Package Contains

- Powerline USB adapter
- USB Cable
- Software CD
- User Manual

Important: After receiving the Powerline Ethernet adapter, check for any shipping damages to on the carton and system unit before proceeding with any installations. Inspect the cartons for any obvious damages before unpacking.

3-4. Hardware Installation

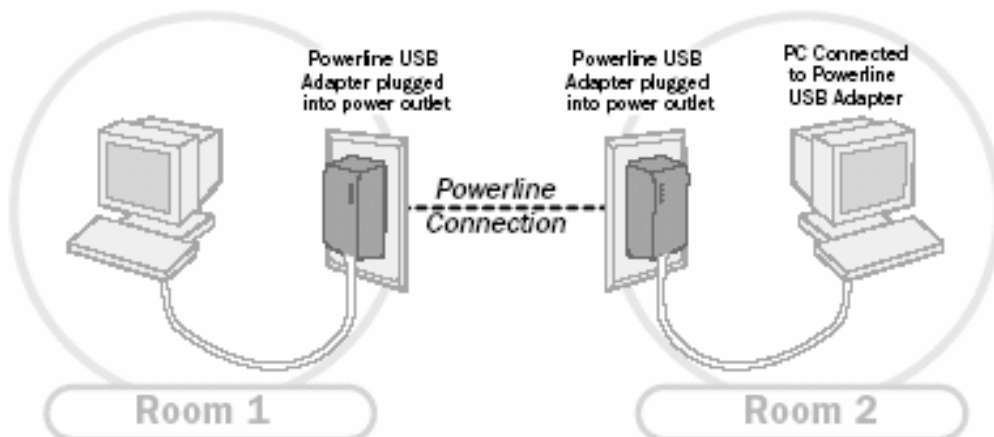
☞ You will need at least two powerline adapters to create a network connection.

1. Installing and Setting Up the Powerline USB adapter

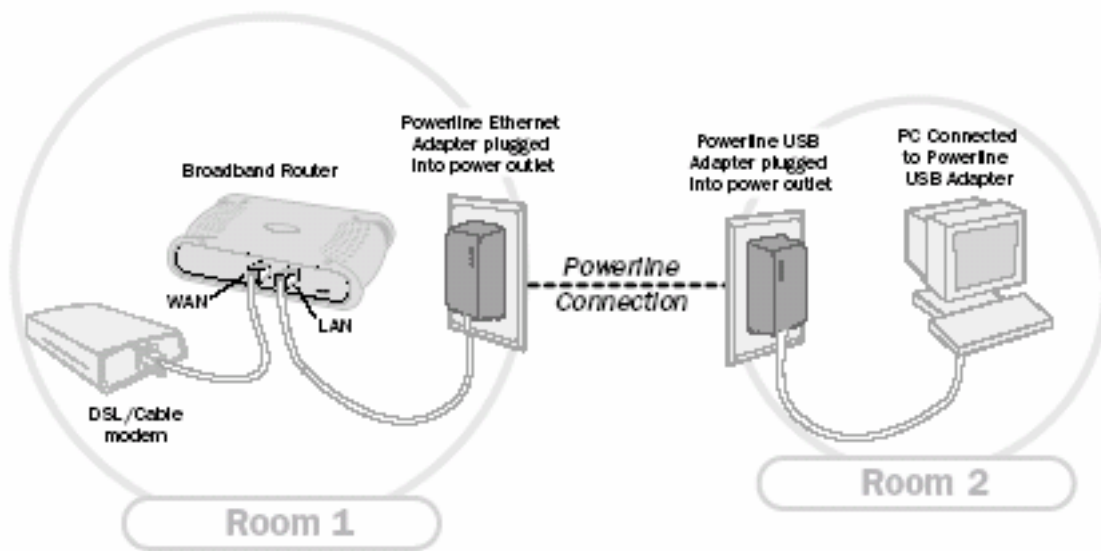
- ① Install the software FIRST. Your Powerline USB adapter will not work until you install the software.
- ② Connect the Adapter directly into the wall outlet.
- ③ Do not connect the Adapter into a power strip or surge protector since these devices may contain circuit filters, which may degrade the powerline signal.
- ④ Connect the powerline USB cable to your PC.
- ⑤ Let Windows finish installing the Adapter

**★ NOTE : INSTALL THE SOFTWARE BEFORE YOU
CONNECT THE ADAPTER TO YOUR
COMPUTER**

2. To connect two computers together in an isolated home network you will need the following:
 - A Powerline USB adapter for each PC with an available USB port



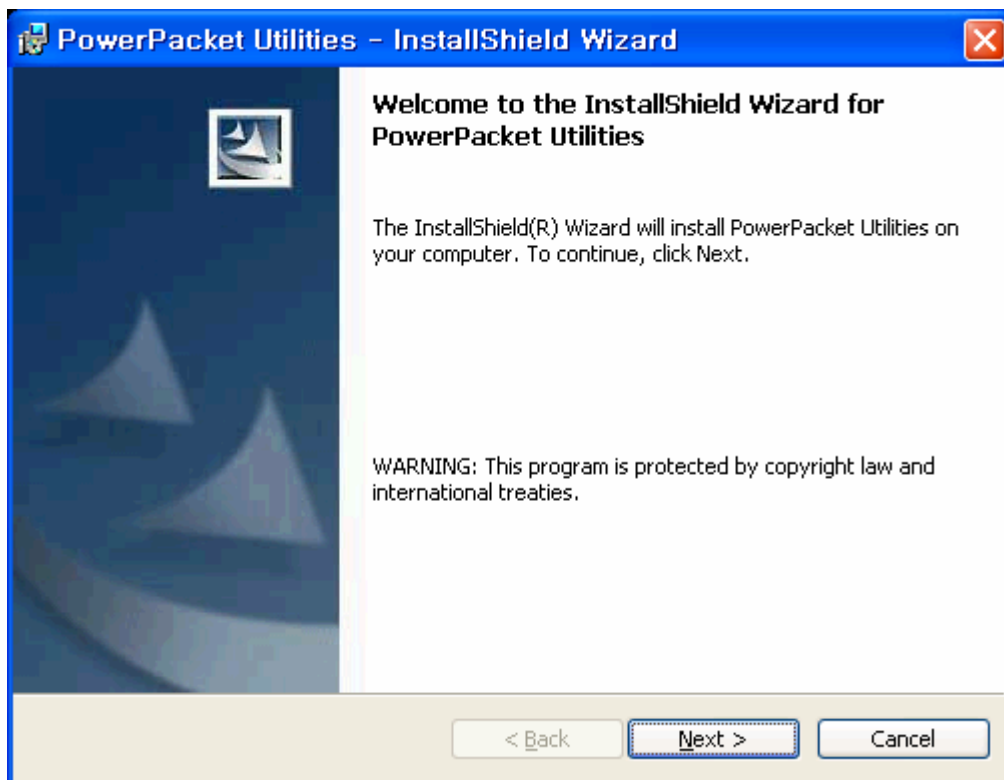
3. To share a cable or DSL connection between PCs in different rooms you will need one of the following setups :
 - Cable / DSL modem
 - Powerline Router



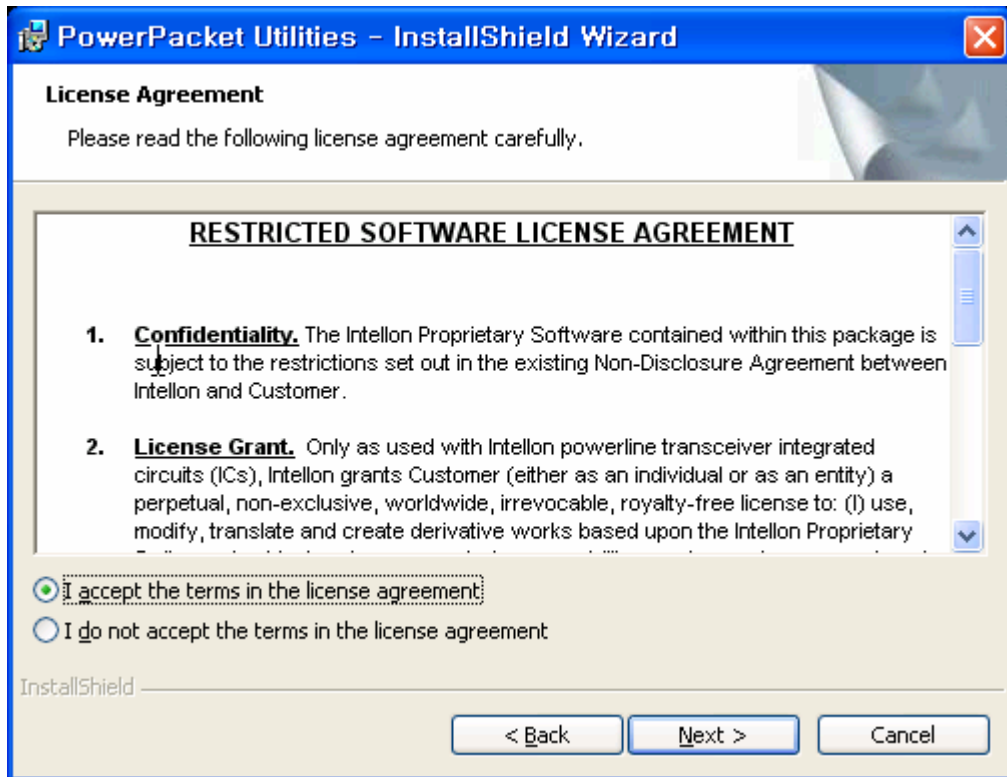
3-5. Software and Driver Installation

3-5-1. Software Installation

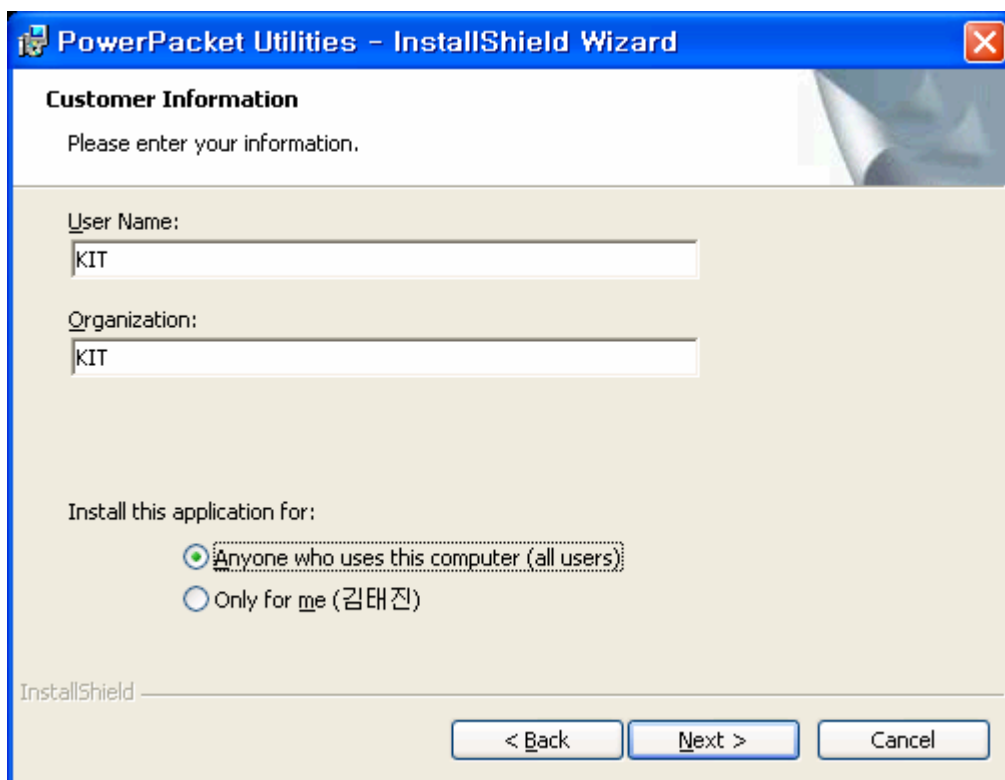
1. Insert the CD into your CD-ROM drive.
2. The Powerline USB adapter Setup Utility screen will automatically appear. If it does not appear within 15-20 seconds, select your CD-ROM drive and double-click on the icon named "d:\USB\Setup.exe".
(Where D is the letter of your CD-ROM drive).
3. The installer will start. Click "Next" to continue.



4. Click 'Next' to start installation. The following screen is the copyright notice. If the conditions are acceptable, select 'I Accept.' Click 'Next' to continue.

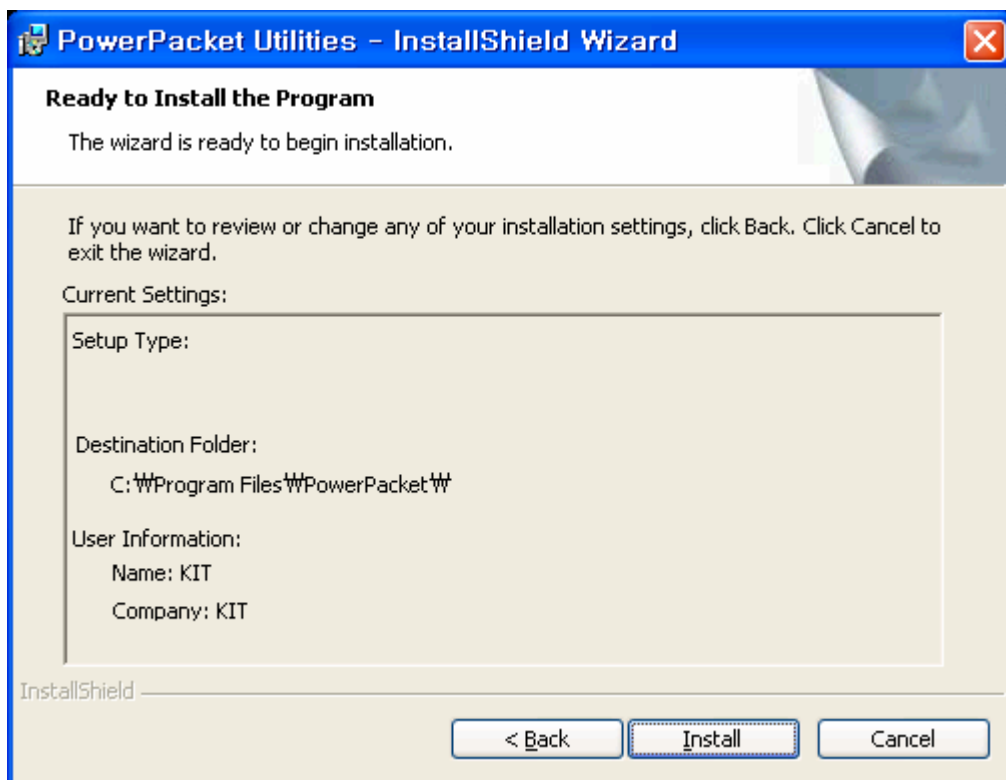


5. Enter a user name and organization name, and click Next to continue installation. (Username and Organization have no importance in device operation. Window might look slightly different on other plat-forms.)



The image shows a screenshot of the 'PowerPacket Utilities - InstallShield Wizard' window. The window has a blue title bar with the text 'PowerPacket Utilities - InstallShield Wizard' and a close button. The main content area is titled 'Customer Information' and contains the instruction 'Please enter your information.' Below this, there are two text input fields: 'User Name:' with the text 'KIT' entered, and 'Organization:' with the text 'KIT' entered. Below the input fields, there is a section titled 'Install this application for:' with two radio button options: 'Anyone who uses this computer (all users)' (which is selected) and 'Only for me (김태진)'. At the bottom of the window, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border. The bottom left corner of the window shows 'InstallShield' followed by a progress bar.

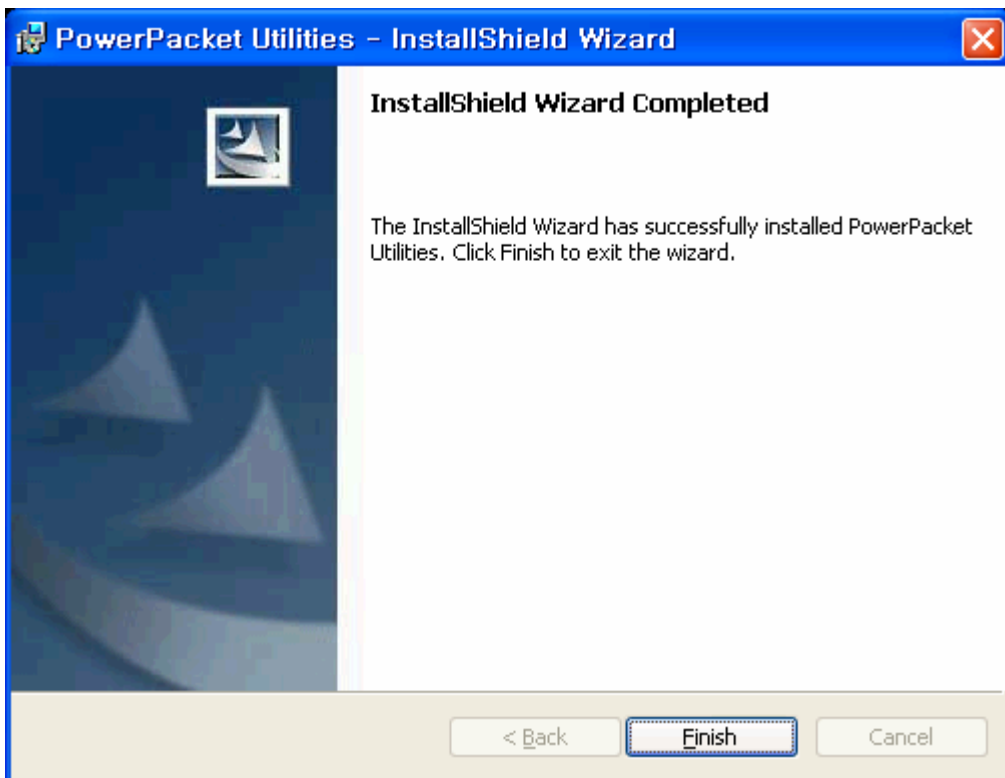
6. Press “Install” to start the Installation Wizard:



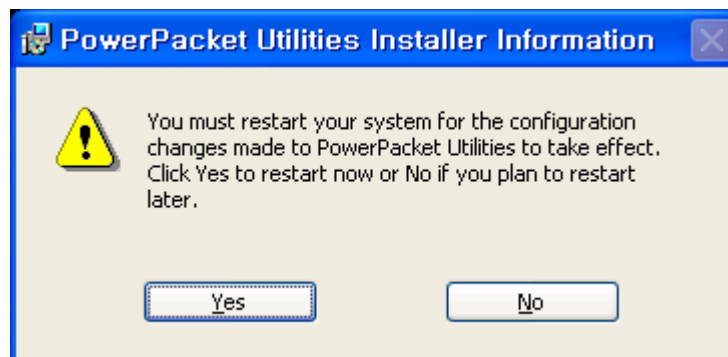
7. Follow the on-screen instruction until you see the message "Connect RD51X1-USB." Plug your powerline device directly into a wall outlet, and then plug your USB cable from the powerline device into your PC.



8. Click “Finish” to complete the installation.



9. Click “Yes” to restart your computer.



3-5-2. Driver Installation

1. Windows 98SE / ME

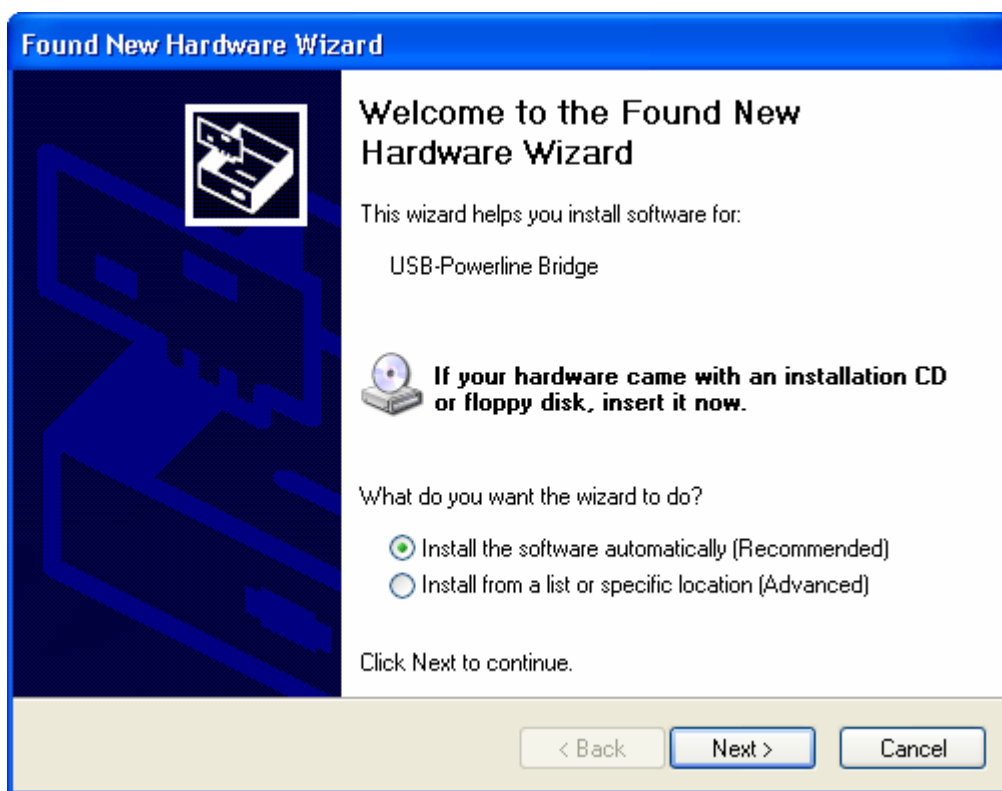
- ① After connecting the USB adapter, Windows will automatically detect the presence of the new hardware. If Windows 98 is not able to find the drivers, Click 'Browse' and open the directory: C:\Program Files\PowerPacket\USB Drivers.
- ② Click OK to install the USB adapter.

2. Windows 2000

- ① A screen informing you about driver testing as shown below will be displayed; click 'Yes' to install the driver.

3. Windows XP

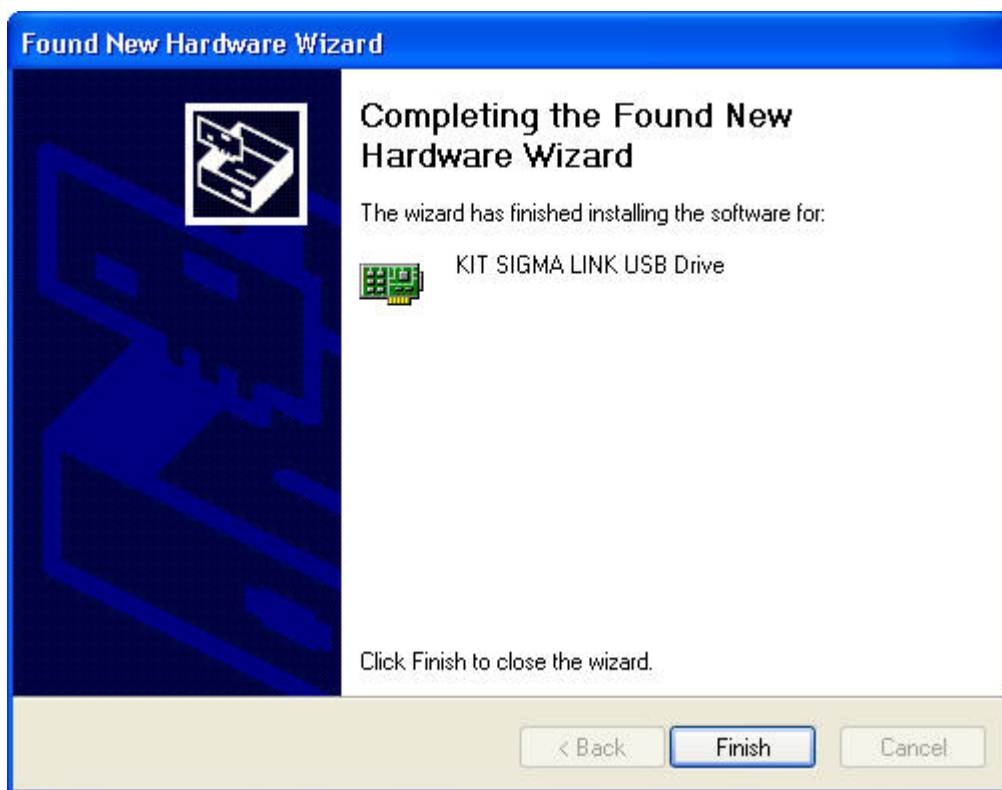
- ① The XP driver installation wizard may appear as shown in the next picture; choose the 'Install the software Automatically' option to continue.



- ⑥ A screen informing you about driver testing will be displayed; click 'Continue Anyway' to install the driver.



- © The drivers will be installed automatically; press 'Finish' to close the driver installation wizard. If the driver was not automatically installed, follow the instructions in the driver installation wizard and select installation from C:\Program Files\PowerPacket\USB Drivers



Chapter 4 : Power Packet Configuration Utility

Introduction

The PowerPacket Configuration Utility for PowerPacket products enables the user to find PowerPacket devices on the powerline network, measure data rate performance and ensure privacy by setting a user defined network private password.

This utility gives you the capability to set up a network password on the local device connected to the computer where the utility is running. It gives you as well, through the advanced option, the capability to set up a network password remotely on other PowerPacket devices through the powerline.

It is recommended that the same PC chosen for initial execution of this utility remain the PC of choice for subsequent network encryption updates. Network setup information is stored on the PC and is used to facilitate follow-on network encryption sessions.

Before running this utility, make sure that a PowerPacket device is properly installed and connected to your computer.

Running the utility

To run the utility, double click the **PowerPacket Configuration Utility** icon on your desktop.

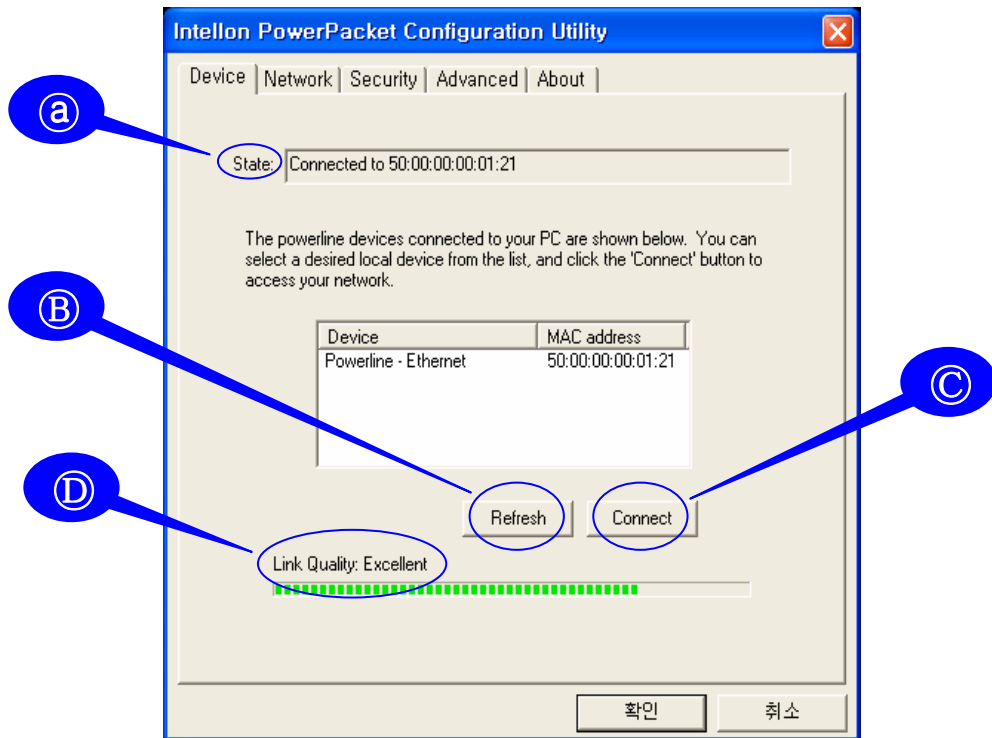
The wizard has five different dialog screens options accessible through the following tabs :

Device, **Network**, **Security**, **Advanced** and **About**. In the coming sections, we will explain the purpose and the functionality of each of them.

NB: As a general rule that applies to dialog screens, pressing:

The **OK** and **Cancel** buttons means “ exit utility ”

4-1. Device



The Device Tab

The “Device” tab shows you the Powerline Adapter that your computer is directly connected to. The Utility will automatically search and connect to your local Powerline adapter when you open it.

① **State**

Shows the MAC address of the device that you are directly connected to.

② **Refresh**

Click “Refresh” to scan for the Powerline adapter that is connected directly to your computer.

③ **Connect**

When there are multiple Powerline adapters connected directly to your computer, you can select the device you would like to configure by highlighting it in the device window and click “Connect”.

④ **Link Quality**

Shows the signal strength of the related powerline products. This is a “snapshot” of the signal strength at the time of the scan. Pressing the “Refresh” ② button may get a different result.

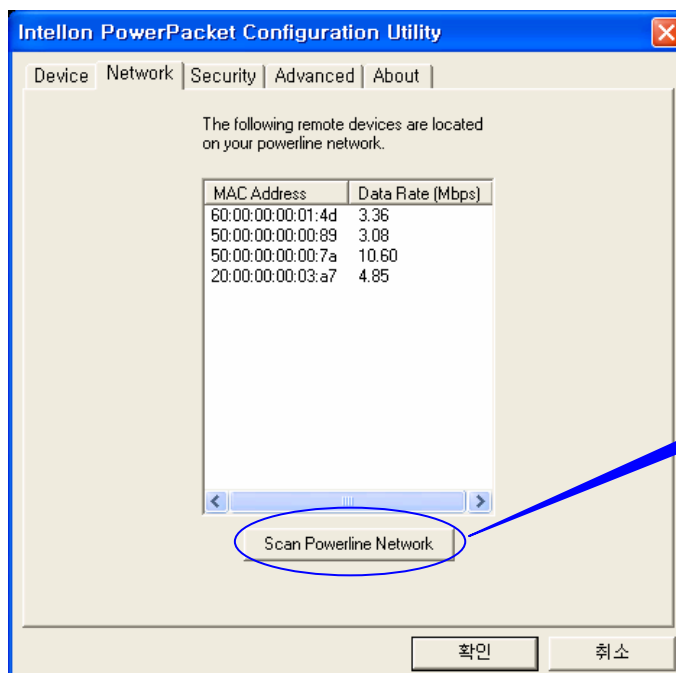
 **Note : You will receive a poor link quality when using only adapter.**

4-2. Network

The Network Tab

The “Network” tab shows the MAC address and data rate of all remote powerline products on your network. This is a “snapshot” of the data rate at the time of the scan. Pressing the “Scan Powerline Network” Ⓐ button may get a different result.

☞ Note : This screen will not show a powerline device that is directly connected to your computer. If a remote powerline device in your network is not listed in the screen below, make sure that its network password is the same as your current private network password. See the “Security Tab” section for how to set up your network password.



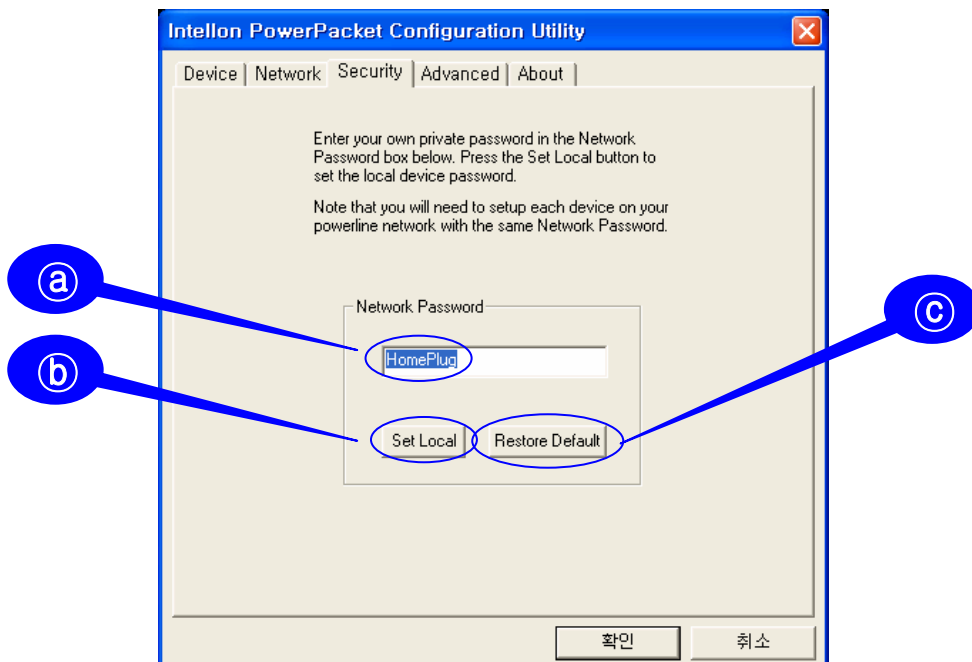
4-3. Security

The Security Tab

To ensure the security of your powerline network, a network password (56-bit encryption) needs to be set on every powerline device on your network. All powerline devices on your network must share the same network password.

The “Security” tab is used to set up the network password for the device that is connected directly to your computer.

 **Note : All Powerline adapter are shipped with a default network password of “HomePlug”.**



① **Network Password**

Enter your network password settings in this area. All powerline devices on your network must share the same network password. The password must have between four and 24 characters, and it is case-sensitive. The password can include any letters of the alphabet, numbers, or punctuation marks.

② **Set local**

Click “Set local” button to change the network password locally.

③ **Restore Default**

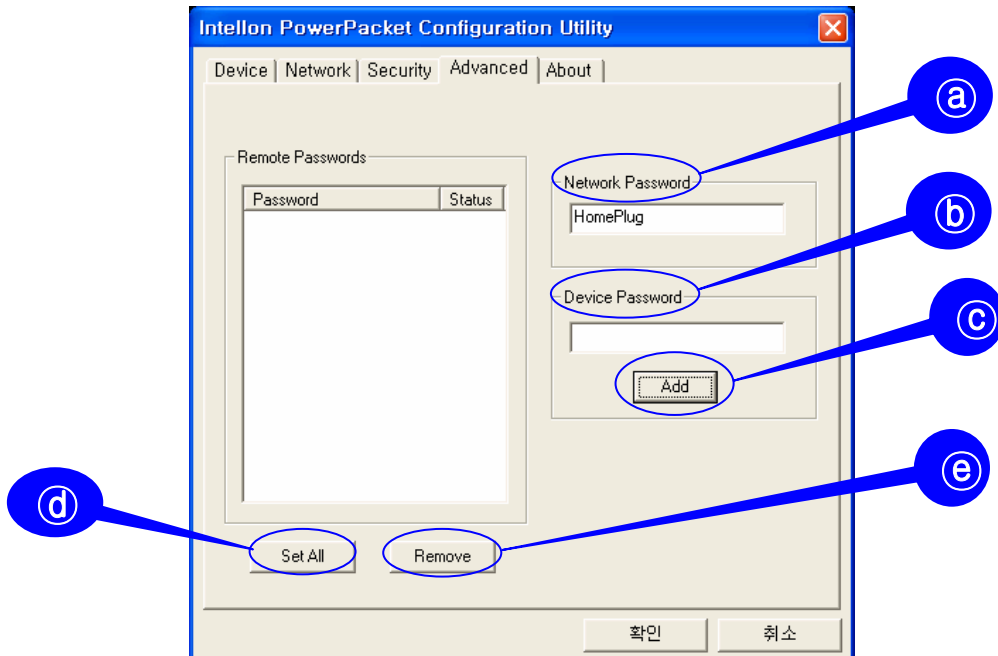
Click “Restore Default” to set your local network password to “HomePlug”.

4-4. Advanced

The Advanced Tab

The “Advanced” tab allows you to set your network password remotely on other powerline devices.

Example : You can remotely set the network password for a powerline device that's connected to a network printer.



① Network Password

Shows your current network password.

⑥ Device Password

Enter the Network Password of the remote on your network in this area. Every Powerline adapter has a unique device password printed on the device. The device password is case-sensitive.

⑦ Add

Click “Add” to apply your current network password for the remote device and add the device password to the “Remote Powerline Devices” text list box.

⑧ Set All

Click “Restore Default” to set your local network password to “HomePlug”.

⑨ Remove

Highlight a device password and click “Remove” to remove it from the list.

Chapter 5 : LED Function

5-1. Powerline Ethernet adapter (PE-14)

LED	LED STATUS	INDICATION
Collisions (COL)	Blinking	Collisions Occuring
	Off	No Collisions
Activity (ACT)	Blinking	Looking for Powerline Devices
	On	Network Traffic
	Off	No Network Traffic
Link (LINK)	On	Powerline Connection Established
	Off	No Powerline Connection
Link Activity (Link Act)	Blinking	Ethernet Activity
	On	Port Linked
	Off	No Ethernet Traffic

5-1. Powerline USB adapter (PU-14)

LED	LED STATUS	INDICATION
Collisions (COL)	Blinking	Collisions Occuring
	Off	No Collisions
Activity (ACT)	Blinking	Looking for Powerline Devices
	On	Network Traffic
	Off	No Network Traffic
Link (LINK)	On	Powerline Connection Established
	Off	No Powerline Connection

Appendix A

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of 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.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by KIT Co., Ltd. may void the user's authority to operate the equipment.

Appendix B

Limited Warranty

KIT Co.,Ltd warrants that (a) the hardware components of the KIT product will be free from defects in materials and workmanship under normal use for one (1) year from the date of purchase, and (b) the software components will perform substantially in accordance with KIT's published specifications for ninety (90) days from the date of purchase, but does not warrant that the software will be error-free or free of all defects. If a defect or nonconformance exists during the applicable warranty period, at its option KIT will repair or replace the defective parts or nonconforming software using new or refurbished replacement parts or media at no additional charge to you. This warranty extends only to you, the original purchaser and is not transferable to any subsequent purchasers.

Exclusions and Limitations

This Limited Warranty does not extend to any product not purchased or licensed from KIT or its authorized resellers or retailers.

This Limited Warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication, unusual electrical fluctuation, or improper transportation upon return to KIT; (b) if you use parts not manufactured or sold by KIT; or (c) to damage caused by modification of the product or as a result of service by anyone other than KIT or an KIT-authorized service provider.

Appendix C

Technical Support and RMA

Please contact the KIT Service and Support Center at:

KIT CO., LTD

168-26 Simi-dong

Gumi-Si, Gyeongsangbuk-Do

730-340, KOREA

Technical Support

Tel : +82-54-476-9978~80

Fax : +82-54-476-9958

E-mail : kit98@chol.com

<http://www.kit21c.co.kr>

Monday - Friday 9:00 AM - 5:00 PM PST