



LevelOne



PLI-3410

200Mbps HomePlug AV Wireless Combo Adapter

User Manual

Safety Warnings

1. Do not use the adapter in high humidity or high temperature environment.
2. Do not open or repair the case yourself.
3. Avoid using this product and all its accessories outdoor.
4. Place the adapter on a stable surface.
5. Only “HomePlug AV” compliant PowerLine Communication (PLC) adapter for remote access is necessary.
6. Plug your LevelOne HomePlug AV device directly to the AC outlet on the wall. It is best to avoid using extension power cable as it may possess noise filter or surge protector functions that may cause interference that may impact the performance of the device.

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Chapter 1: Product

Introduction

Thank you for purchasing PLI-3410 200Mbps HomePlug AV Wireless Combo Adapter. Your new device is an unit that extends your wireless coverage through power lines.

Compliant with the latest HomePlug AV standards, which support data speeds of up to 200Mbps, PLI-3410 can be used to bridge Ethernet devices such as modems, routers, PCs, set-top- boxes, and game consoles, allowing users to share network access via existing in-home power cabling.

What's unique is that the device has an extra built-in 802.11n Access Point, enabling users to enjoy mobility, high-speed wireless connection and better coverage with no more dead zones. Just plug PLI-3410 into any wall power socket, and you can easily set up a secure wireless network by pressing the Wi-Fi Protected Setup (WPS) button. Thus, the adapter can extend your wireless coverage through power lines for multimedia applications such as online games, IPTV and audio streaming from room to room.

- **Extended Wireless Coverage**

With an integrated 11n Wireless Access Point, the adapter can bridge wireless connections of up to 6 times the speed and 6 times the wireless coverage of an 802.11b / g network device. It supports a data rates up to 300Mbps and is also compatible with 802.11b / g equipment.

- **Noise-immune Transmission**

Unlike others, the device supports superior and noise-immune data transmission over in-home electrical power lines. Even at the moment your family turns on an electronic device or turns off a light, you won't experience any interruption to latency-sensitive applications such as multimedia or video being shared with your family in another room.

- **802.11g / 802.11n Wireless AP with WPA / WPS Support**

With an integrated 802.11g / 802.11n Wireless Access Point, the device The supported features of Wireless Protected Access (WPA-PSK/ WPA2-PSK) and Wireless Encryption Protocol (WEP) enhance the security level of data protection and access control via Wireless LAN. The device also supports the Wi-Fi Protected Setup (WPS) standard, allowing users to establish a secure wireless network by simply pushing a button.

- **Quality of Service (QoS) over PowerLine**

Quality of Service control guarantees the transmission quality by automatically prioritizing data. PLI-3410 automatically recognizes the bandwidth needs of voice and video applications. QoS prioritizes the data to guarantee optimal transmission quality. TV and video images are received and displayed with absolute smoothness. QoS also guarantees clear, instant transmission of voice

data, even when other applications are running on the network at the same time. QoS makes your network a pleasure to use.

- **Rich Management Interfaces**

It supports flexible management interfaces with LAN, WLAN and PowerLine. Users can use WEB GUI through the above interfaces to configure and manage the device.

- **Web based GUI**

It supports web based GUI for configuration and management. It is user-friendly.

- **Firmware Upgradeable**

Device can be upgraded to the latest firmware through the WEB based GUI.

Features

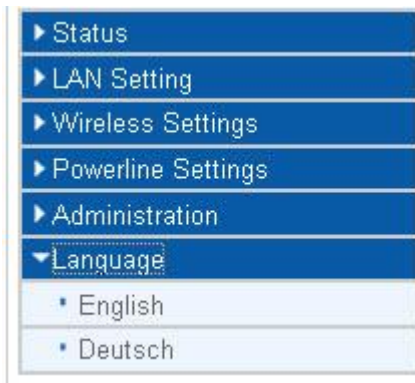
- Provides physical layer data rate of up to 200Mbps over existing in-home power lines
- Extended wireless coverage of up to 3 times the range of 802.11g products
- WPS (Wi-Fi Protected Setup) for easy setup
- Auto channel select
- Utilizes power line technology that takes advantage of the unused bandwidth of the electrical wiring in your home
- Utilizes Quality of Service control
- Supports Triple Play applications such as IPTV, VoIP and high-speed Internet access
- Supports 10/100 BaseT Ethernet
- Compliant with the HomePlug PowerLine Alliance industry specifications
- Ideal for residential users

Specifications

Protocol	TDMA, CSMA/CA
Standard	Ethernet specification: IEEE 802.3, IEEE 802.3x, IEEE 802.3u, Auto MDI/MDIX
Transmission Speed	200Mbps
Modulation	Supports OFDM - 1155 carriers, 1024 / 256 / 64 / 16 / 8 QAM, QPSK, BPSK and ROBO
Frequency Band	2MHz ~ 30MHz
Security	128-bit AES Link Encryption with key management for secure power line communications Encryption: NMK (Network Membership Key) used to authenticate/access Rotating NEK (Network Encryption Key)
Operating System	Windows XP / Vista / 7 Other 10/100 Base-T Ethernet devices
Power Supplier	Input: 100~240V AC, 50~60Hz Protection: OCP, OVP, SCP
Physical Interface	AC power plug 2 fixed antennas WPS button Sync button Reset button RJ-45 compatible LED display: <ul style="list-style-type: none"> • WLAN • POWER • PLC (PowerLine Link/Act) • ETH (Ethernet Link/Act)
Physical Specifications	Dimensions (W, D, H): 4.42" x 3.05" x 2.12" (112.4mm x 77.4mm x 53mm)
Operating Environment	Operating temperature: 0°C ~ 40°C Storage temperature: -20°C ~ 70°C Humidity: 20 ~ 95% non-condensing

Chapter 2: Installing the Adapter

Language Setting



Package Content

- PLI-3410 200Mbps HomePlug AV Wireless Combo Adapter
- Quick Start Guide
- CD User Manual
- Ethernet Cable



Warning

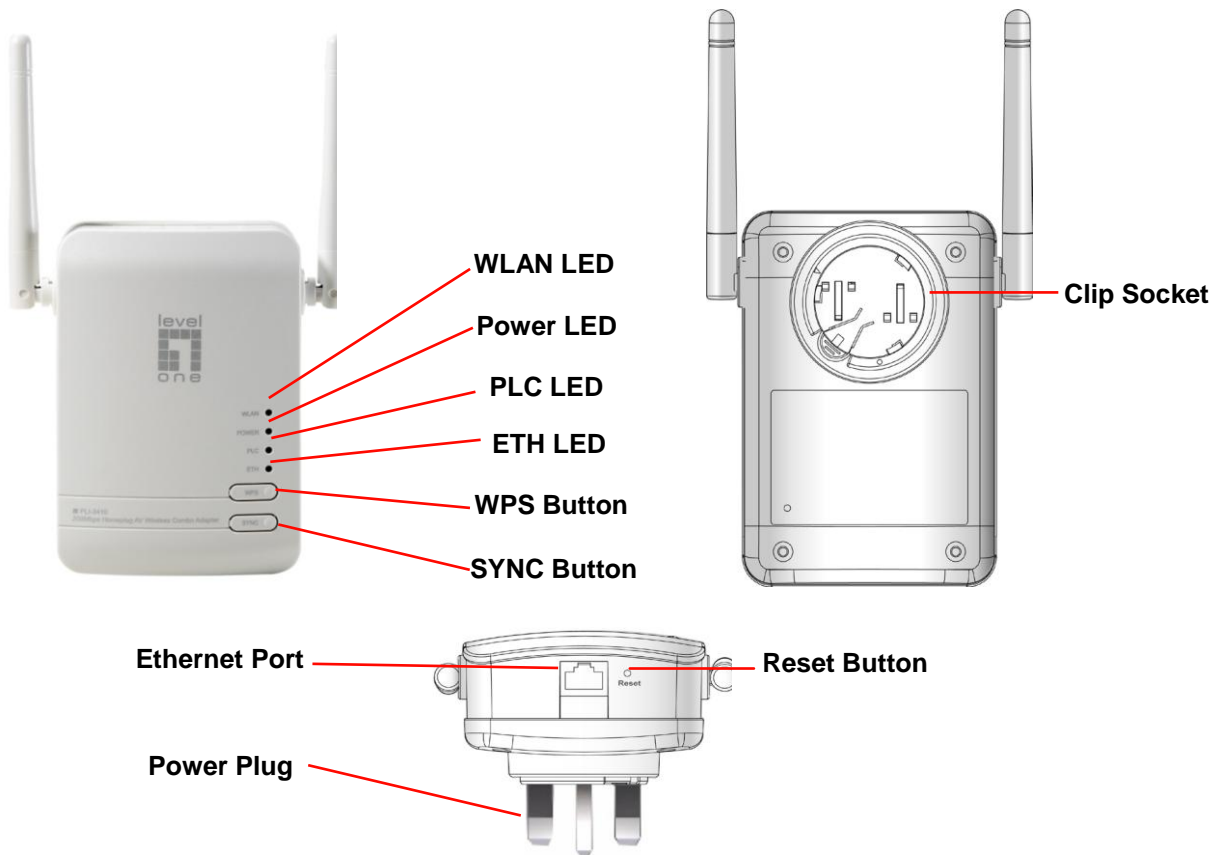
- Do not use the adapter in high humidity or high temperatures.
- Do not open or repair the case yourself.
- Avoid using this product and all accessories outdoors.



Attention

- Place the adapter on a stable surface.
- Only "Homeplug AV" compliant Power Line Communication (PLC) adapter for remote access is necessary.

Device Overview



The Description of each labeled part is described in the table below.

WLAN LED	Lit green when the wireless function is enabled. Blinking when data is transmitted or received via WLAN. Blinking quickly when WPS is proceeded.
Power LED	Lit green when the device is power on. Lit off when power is off.
PLC (Powerline Link/Act) LED	Lit green when the power line sync is established. Blinking quickly when data is transmitted or received via power line. Blinking after Sync button is pushed (see Sync Button described below).
ETH (Ethernet Link/Act) LED	Lit green when connected to an Ethernet device. Blinking when data is transmitted or received via Ethernet port.
WPS Button	Push this button to trigger Wi-Fi Protected Setup function.
Sync Button	Used to establish a LAN network with other power line devices. Push this button for 1~3 second(s) and release it to set device enter the power line Sync state.

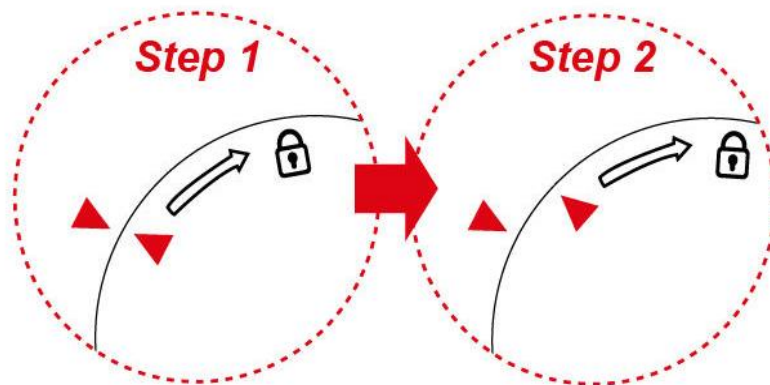
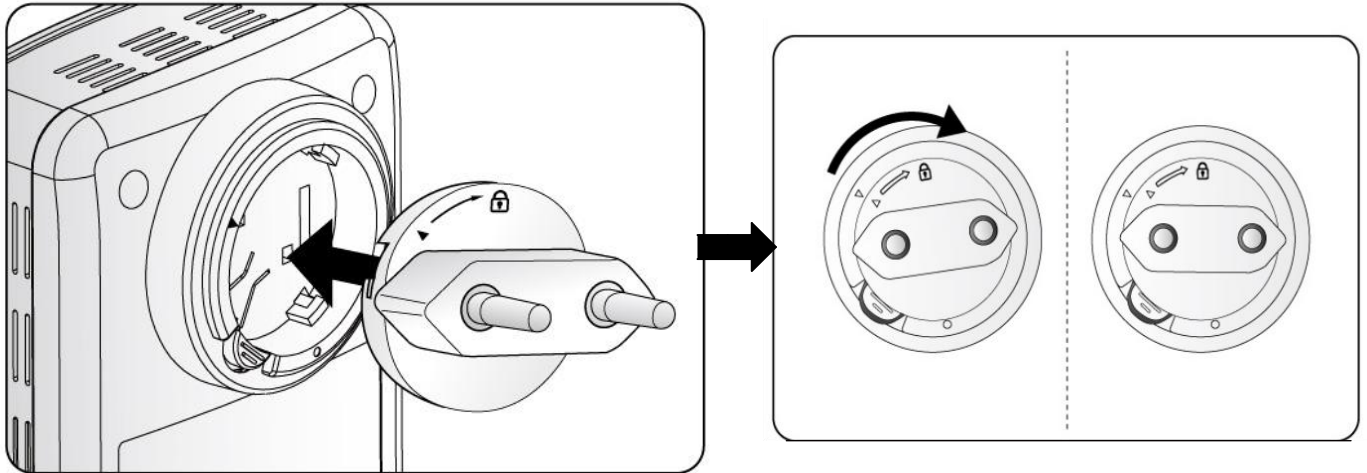
Reset Button	Press this button 1~3 second(s) to reset device to factory default settings.
Ethernet Port	Connect the HomePlug AV device with an Ethernet device (e.g. computer, router, hub/switch, IP phone, IPTV set-top-box, gaming consoles...), using the RJ-45 Ethernet cable included.
Power Plug / AC Power Cord	Plug into an AC outlet for power supply and to build a PowerLine network with other HomePlug AV devices.
Clip Socket	<p>Install the clip into this socket.</p> <p><i>Note: Please DO NOT remove or disassemble the socket clip frequently as this may cause serious damage on your HomePlug AV device.</i></p>

Hardware Installation

Refer to the following diagrams and instructions to install the clip with PLI-3410:

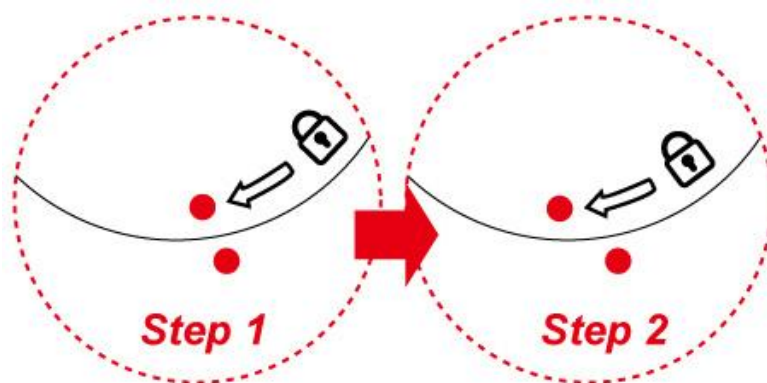
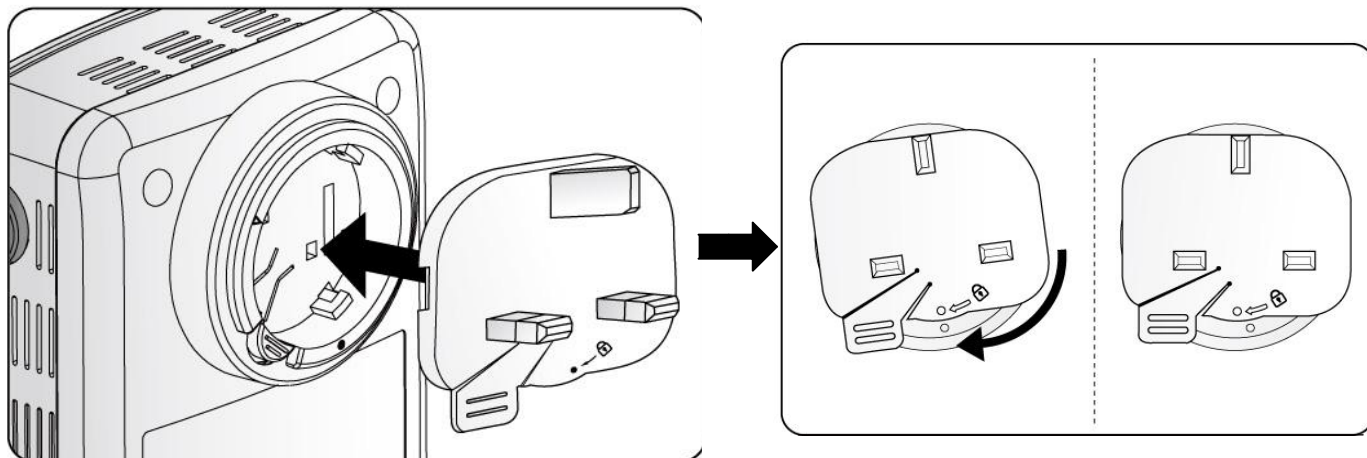
Example 1: EU clip

- Please check the lock instruction on your clip.
- If you got the “Triangle Lock”, refer to right diagram.



Example 2: UK clip

- Please check the lock instruction on your clip.
- If you got the “Circle Lock”, refer to right diagram.

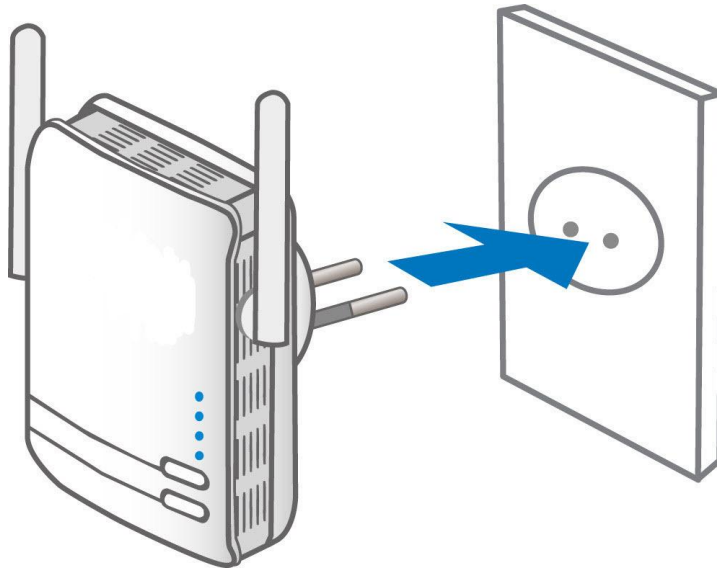


Connecting the HomePlug Adapter

It is easy to connect PLI-3410 simply by performing the following instructions:

Power Connection

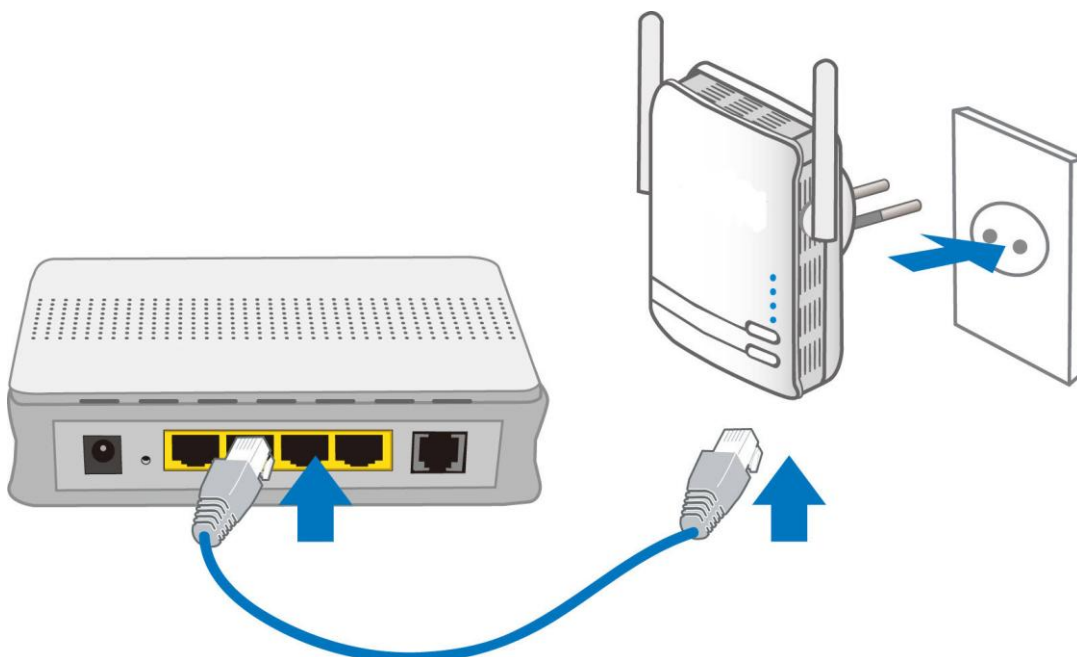
Plug PLI-3410 into the wall outlet/socket.

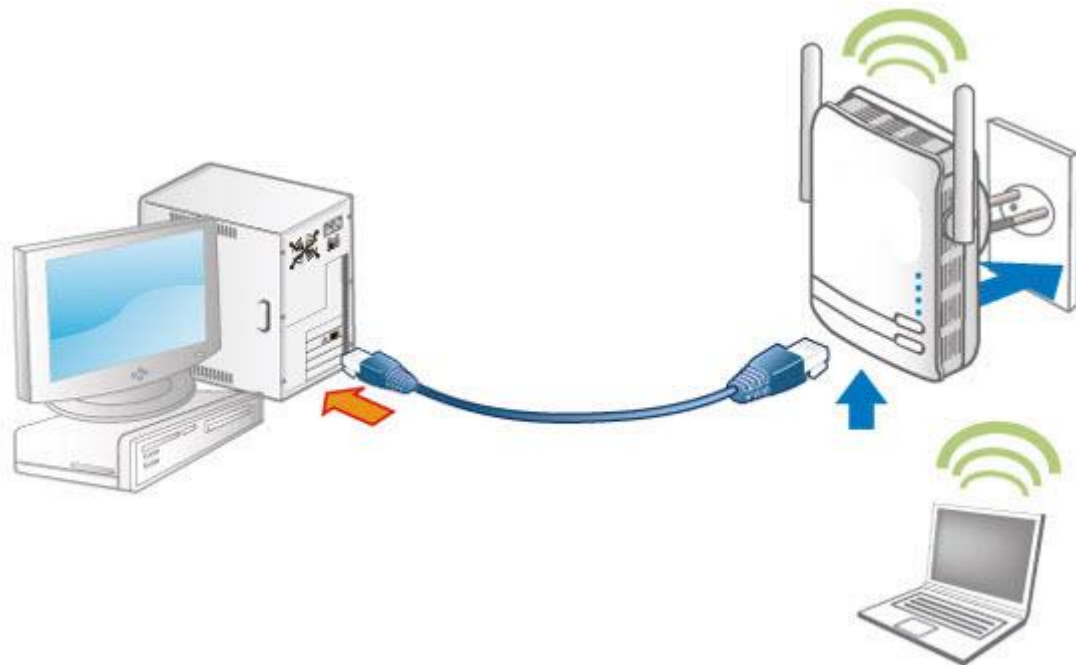


LAN & Wireless Connection

Connect the supplied RJ-45 Ethernet cable to the Ethernet port on PLI-3410 and the other side to the device's Ethernet interface.

You can enable wireless function to connect to the Wi-Fi devices through WPS configuration interface or by pushing the WPS button of your PLI-3410.



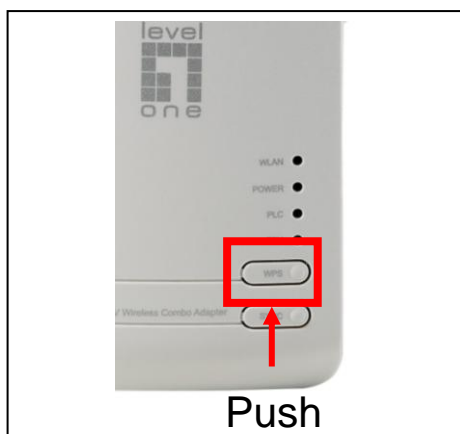


WPS configuration.

Keep pushing the WPS button of PLI-3410. Then push WPS button of your wireless IP device, and the Wi-Fi protection will be set up automatically. Likewise, do same steps for other wireless devices having WPS button.

Example:

PLI-3410



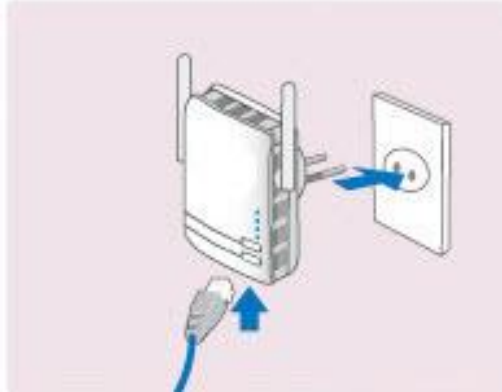
Wireless IP Devices
have WPS button



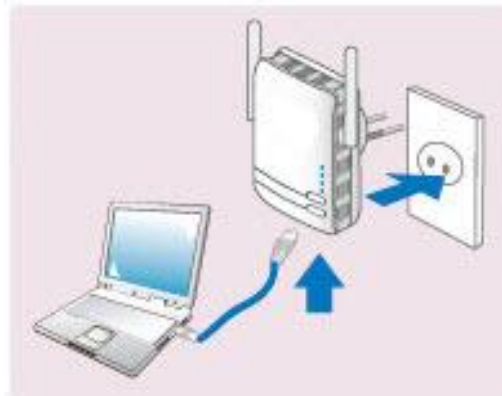
Networking Setup

Refer to the following steps:

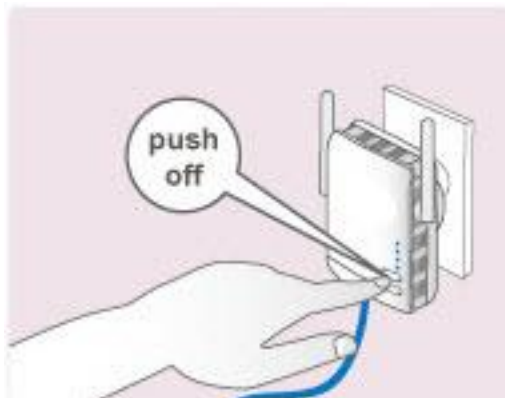
1. Connect a network cable to the bridge and then plug PLI-3410 into a power socket.



2. Then connect PLI-3410 to a laptop, modem, router or a set-top-box.



3. Create a secure network by simply pushing the SYNC button for 1~3 seconds.



Note: Plug/socket, power cable and input voltage/frequency may vary from country to country.

Quick Start (Setup PowerLine Network)

Push Button usage

Sync Button is used to add a HomePlug device to a PowerLine network or enable it to join a network by pressing the Sync Button of the device to turn it into Broadcast state or Join state. There are 3 types of Sync Button trigger states:

1. Broadcast State: Enable LevelOne HomePlug AV device to provide information for another HomePlug AV device to join its PowerLine network group (works even if it is the only device existing within the network group).
2. Join State: This allows an ungrouped LevelOne HomePlug AV device to join an existing PowerLine network group.
3. Ungroup State: Press the Sync Button for more than 10 seconds to detach the device from its network group.

Application Scenarios

Scenario 1: A LevelOne HomePlug AV device A wants to form a network group with another HomePlug AV device B

You can assign whichever device (A or B) to be in the Broadcast State and the other in the Join State.

Example:

1. Press the Sync Button of device A for 1~3 seconds to turn it into Broadcast State, you should find the Power LED blinks steadily signifying it is in Broadcast state.
2. Press the Sync Button of device B for 1~3 seconds to turn it into Join State, you should find the Power LED blinks steadily signifying it is in Join state.
3. Wait for both devices to boot again (all LEDs will turn off and on) and when the PLC LEDs of both devices lit steadily, you will now have these devices being in the same network group.



The Power LED will blink steadily after the sync button has been pressed for 1~3 seconds to signify that it is now in the sync mode ready to communicate with other HomePlug devices.

Scenario 2: A LevelOne HomePlug AV device wants to join an existing network group BC

Device A wants to join a network group “BC” currently consisting of device B and device C. Any devices within the “BC” group can become the “Broadcast State” and device A will be the “Join State”.

Example:

1. Press the Sync Button of device A for more than 10 seconds to make sure that it is detached completely from any possible network group.
2. Press the Sync Button of device B or C of the BC network group for 1~3 seconds to turn it into Broadcast State, you should find the Power LED blinks steadily signifying it is in Broadcast state.
3. Press the Sync Button of device A for 1~3 seconds to turn it into Join State, you should find the Power LED blinks steadily signifying it is in Join state.
4. Wait for the devices to boot again and when the PLC LEDs of both devices lit steadily, you will now have device A joined with the BC network group.



The Power LED will blink steadily after the sync button has been pressed for 1~3 seconds to signify that it is now in the sync mode ready to communicate with other HomePlug devices.

Scenario 3: A LevelOne HomePlug AV device A of network group AD wants to join an existing network group BC

For a device which already belongs to a network group is to join with a different network group, that device has to be ungrouped from its current attached group first.

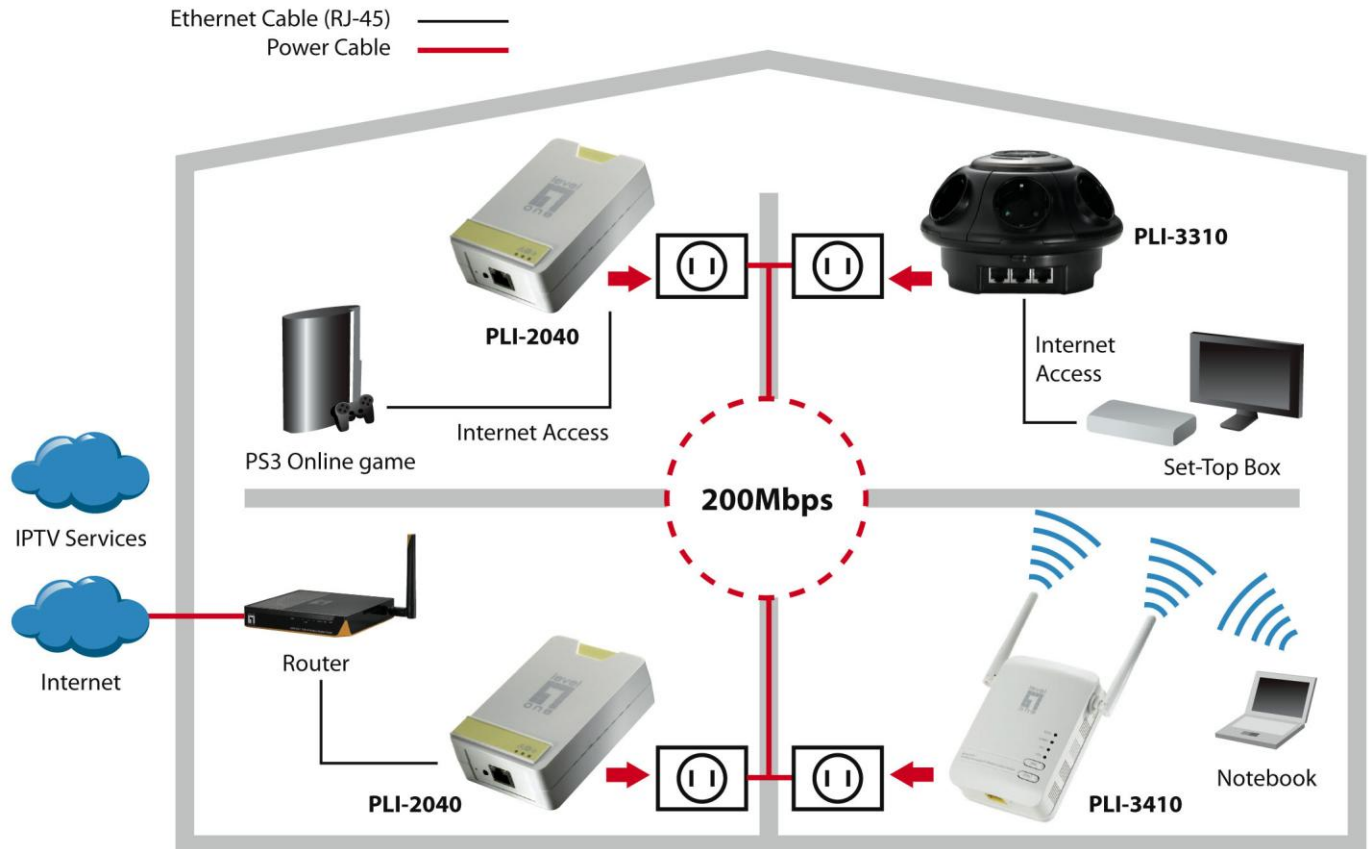
Example:

1. Press the Sync Button of device A for more than 10 seconds to ungroup it from network group AD.
2. Then press the Sync Button of device (B or C) of network group BC for 1~3 seconds to turn it to Broadcast State, you should find the Power LED blinks steadily signifying it is in Broadcast state.
3. Press the Sync Button of device A again for 1~3 seconds to turn it to Join State, you should find the Power LED blinks steadily signifying it is in Join state.
4. Wait for the Sync LED of both devices A and (B or C) lit steadily. Now you will have device A join the network group BC.



The Power LED will blink steadily after the sync button has been pressed for 1~3 seconds to signify that it is now in the sync mode ready to communicate with other HomePlug devices.

PowerLine Network Illustration



Chapter 3: Basic Network Installation

The HomePlug adapter can be configured through your web browser. A web browser is included as a standard application in the following operating systems: Linux, Mac OS, Windows 98/NT/2000/XP/Me/Vista, etc. The product provides an easy and user-friendly interface for configuration.

Please check your PC network components. The TCP/IP protocol stack and Ethernet network adapter must be installed. If not, please refer to your Windows-related or other operating system manuals.

There are ways to connect the device, either through an external repeater hub or connect directly to your PCs. However, make sure that your PCs have an Ethernet interface installed properly prior to connecting the device. You ought to configure your PCs to obtain an IP address through a DHCP server or a fixed IP address that must be in the same subnet as the device. The default IP address of the device is 192.168.1.1 and the subnet mask is 255.255.255.0 (i.e. any attached PC must be in the same subnet, and have an IP address in the range of 192.168.1.1 to 192.168.1.252). The best and easiest way is to configure the PC to get an IP address automatically from the device using DHCP. If you encounter any problem accessing the HomePlug AV adapter web interface it is advisable to uninstall your firewall program on your PCs, as they can cause problems accessing the IP address of the device. Users should make their own decisions on what is best to protect their network.

Please follow the following steps to configure your PC network environment.

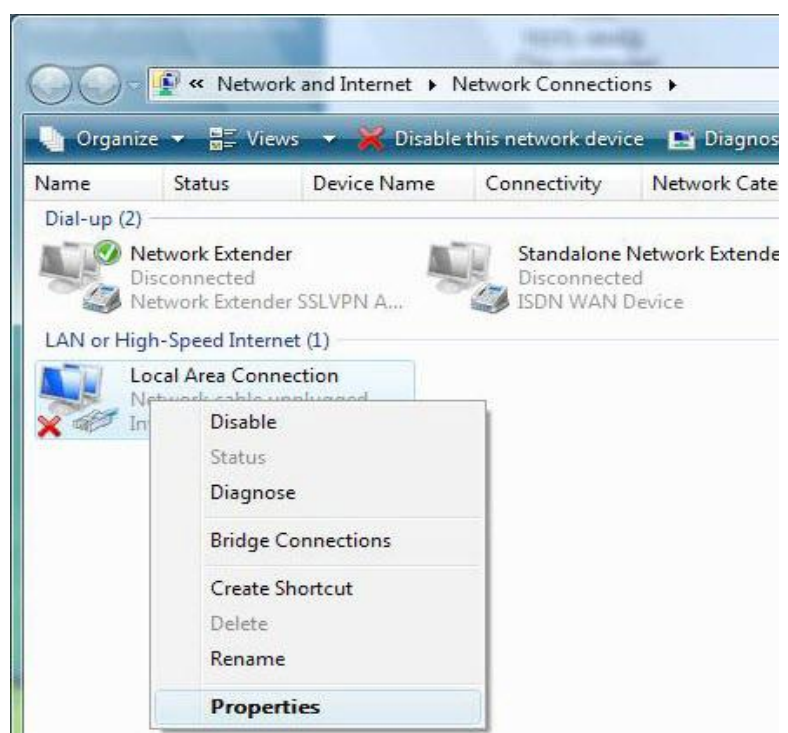
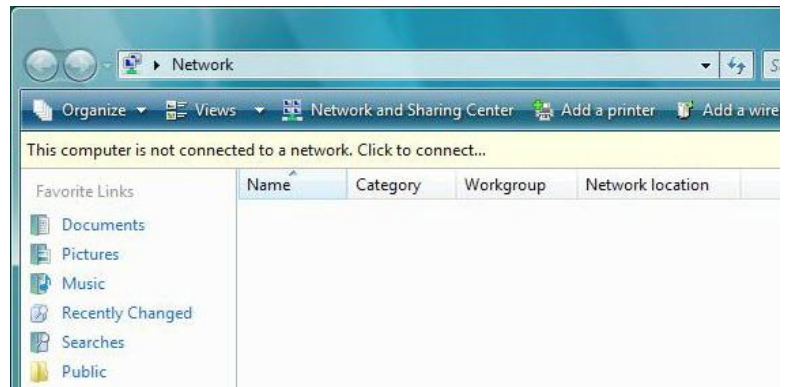


Any TCP/IP capable workstation can be used to communicate with or through this router. To configure other types of workstations, please consult your manufacturer documentation.

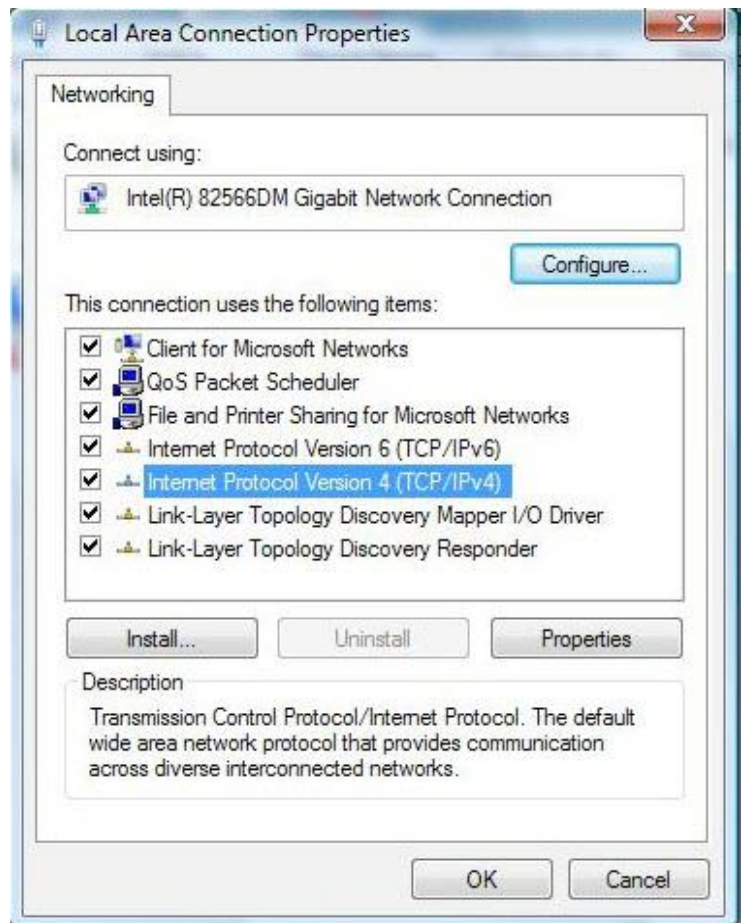
Network Configuration

Configuring PC in Windows Vista / 7

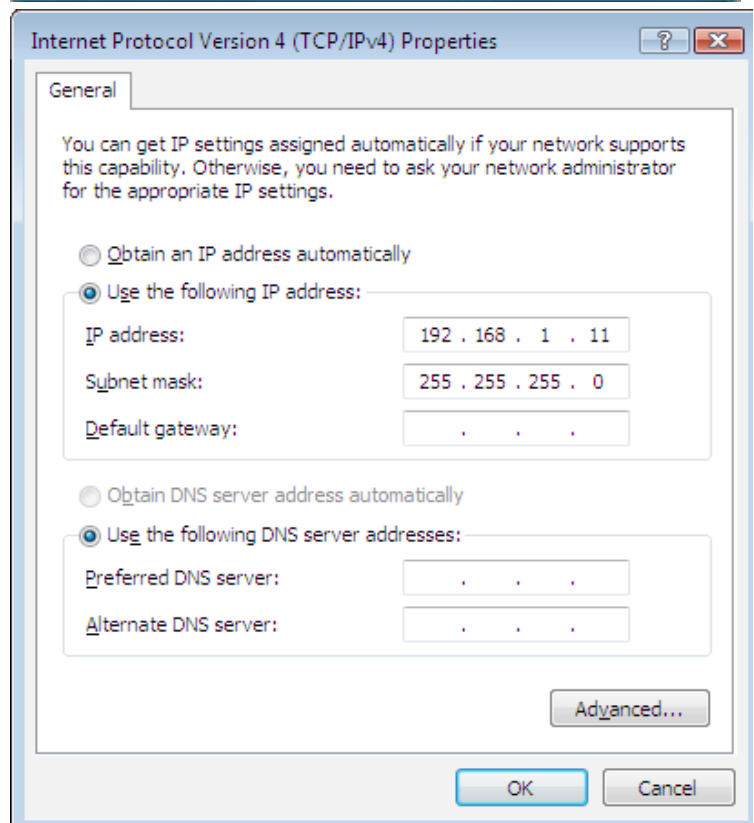
1. Go to Start. Click on Network.
2. Then click on Network and Sharing Center at the top bar.
3. When the Network and Sharing Center window pops up, select and click on Manage network connections on the left window column.
4. Select the Local Area Connection, and right click the icon to select Properties.



5. Select Internet Protocol Version 4 (TCP/IPv4) then click Properties.

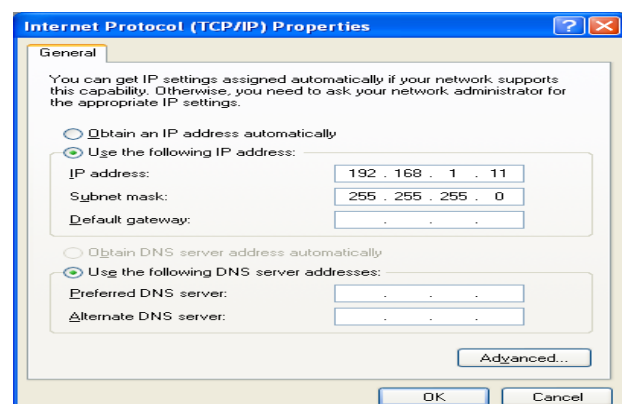
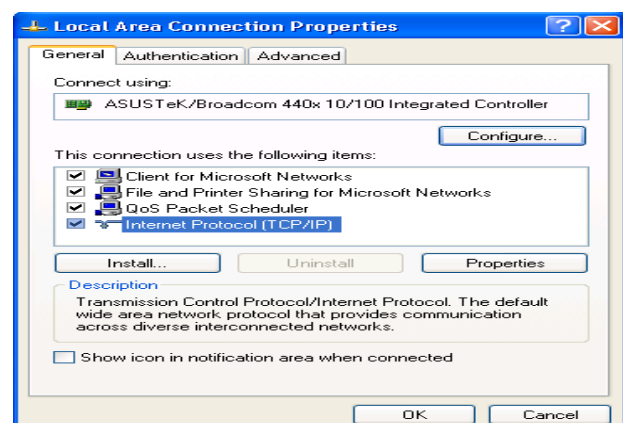
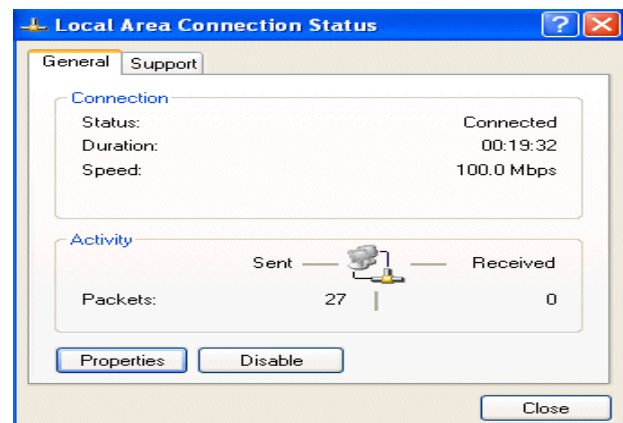
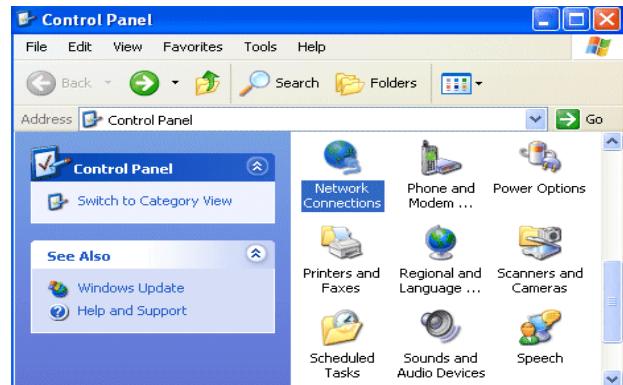


6. In the TCP/IPv4 properties window, click Use the following IP address and Use the following DNS server address radio buttons. Then click OK to exit the setting.
7. Click OK again in the Local Area Connection Properties window to apply the new configuration.



Configuring PC in Windows XP


1. Go to Start > Control Panel (in Classic View). In the Control Panel, double-click on Network Connections
2. Double-click Local Area Connection.
3. In the Local Area Connection Status window, click Properties.
4. Select Internet Protocol (TCP/IP) and click Properties.
5. Click Use the following IP address and Use the following DNS server address radio buttons.
6. Click OK to finish the configuration.



Factory Default Settings


Before configuring your adapter, you need to know the following default settings.

Web Interface (Username and Password)


 Username: admin


 Password: admin

The default username and password are “**admin**” and “**admin**” respectively.

 Group Name: HomePlugAV

Device LAN IP settings

 IP Address: 192.168.1.1

 Subnet Mask: 255.255.255.0

DHCP server

 DHCP server is disabled.

 Start IP Address: 192.168.1.2

Internet Access Configuration

To configure this device for internet access, you must have IE 5.0 / Netscape 4.5 or above installed on your computer. There is basically one way to configure your device before you are able to connect to the internet: **Web Interface**. Configuration of this method will be discussed in detail in the following section.

Configuring with your Web Browser

Open your web browser, enter the IP address of your Ethernet Adapter which by default is 192.168.1.1, and click "Go". A user name and password window prompt will appear. The default username and password are "**admin**" and "**admin**".



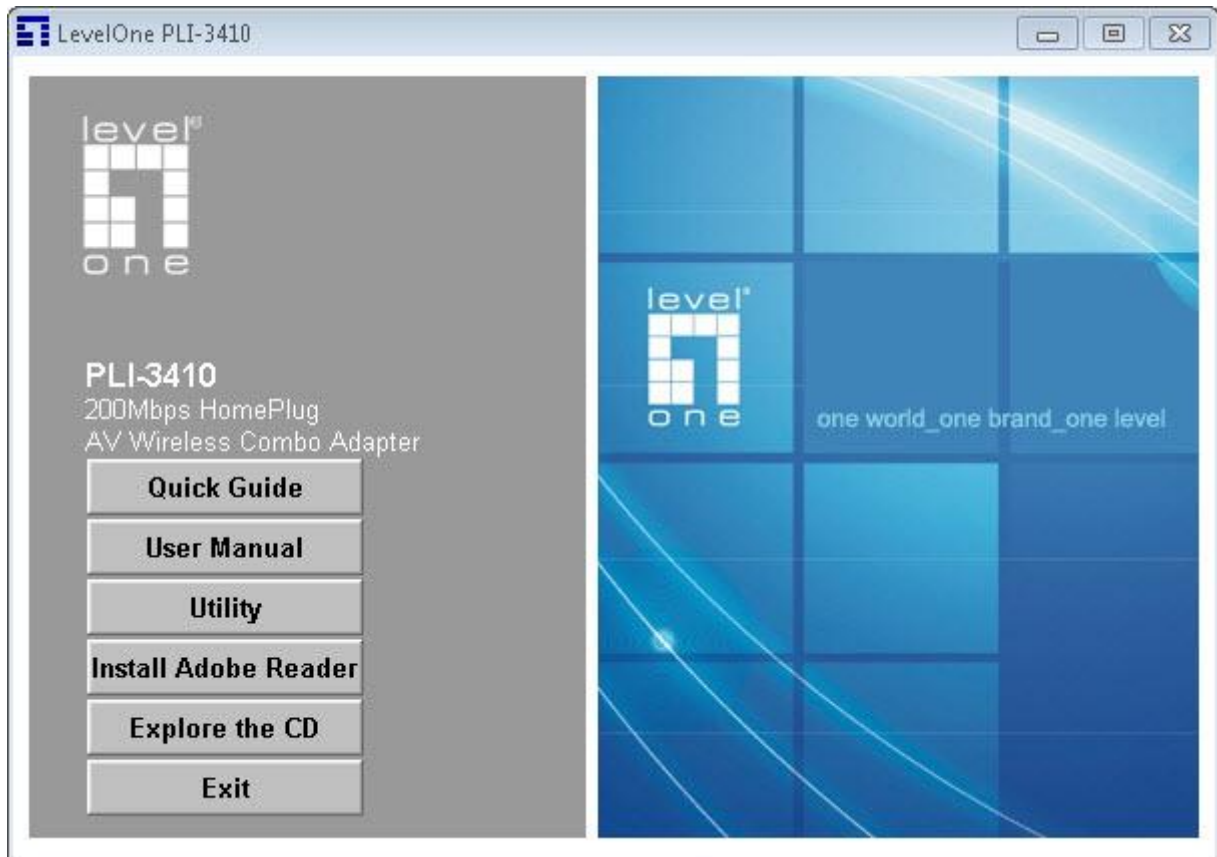
Congratulations! You are now successfully logon to the PL-3410200Mbps HomePlug AV Wireless Combo Adapter!

If the authentication succeeds, the homepage will appear on the screen.

Chapter 3: Utility Installation

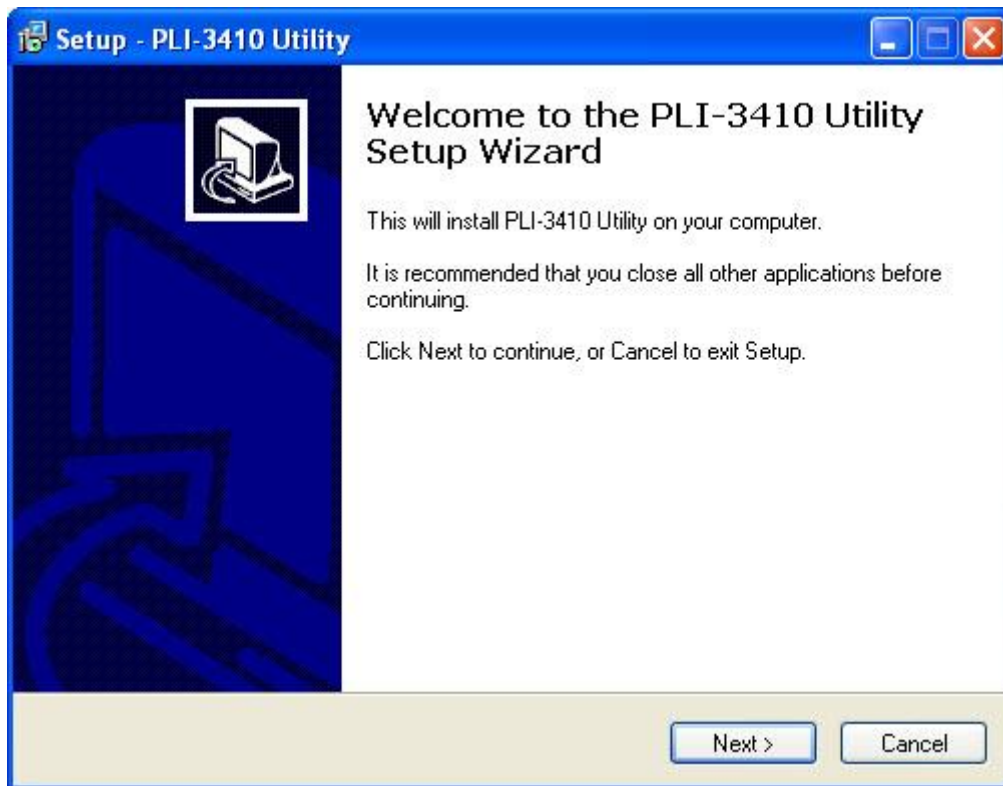
The utility can be used on the following Windows platform: Windows 2000/XP/Vista/7.

1. Place the LevelOne PLI-3410 HomePlug AV 200 Utility auto-installation CD into your CD-ROM/DVD-ROM drive.
2. Click on Utility for Easy Installation to install the utility.

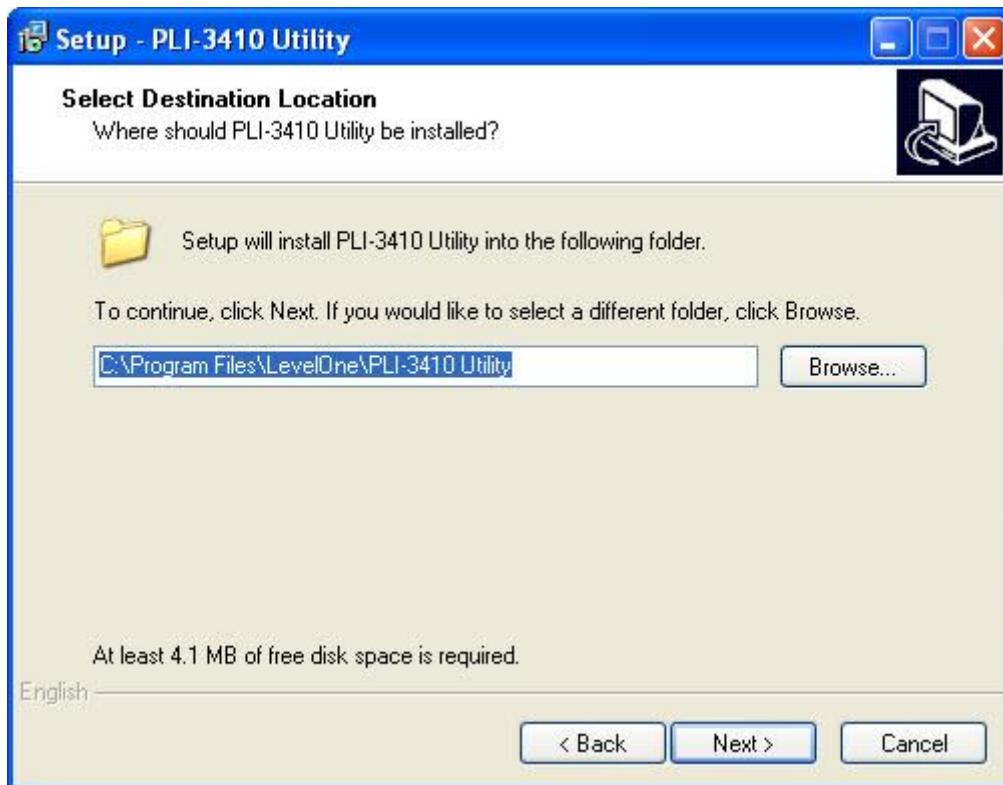


Utility Installation

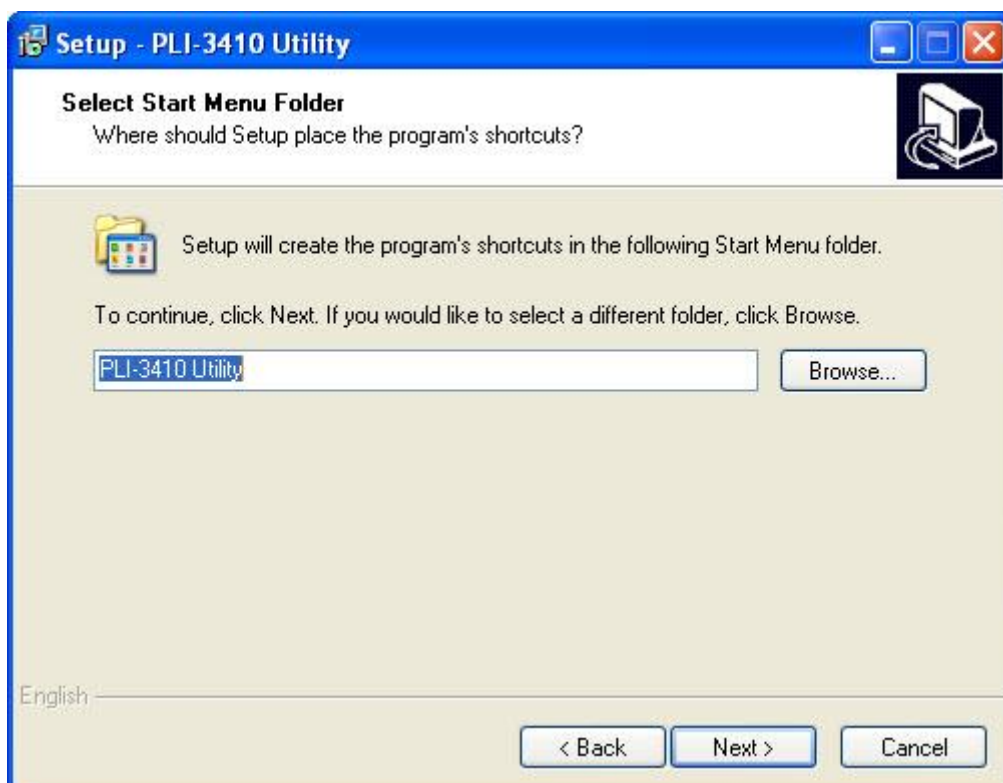
1. After clicking on Utility for Easy Installation, the installation wizard will appear. Click Next.

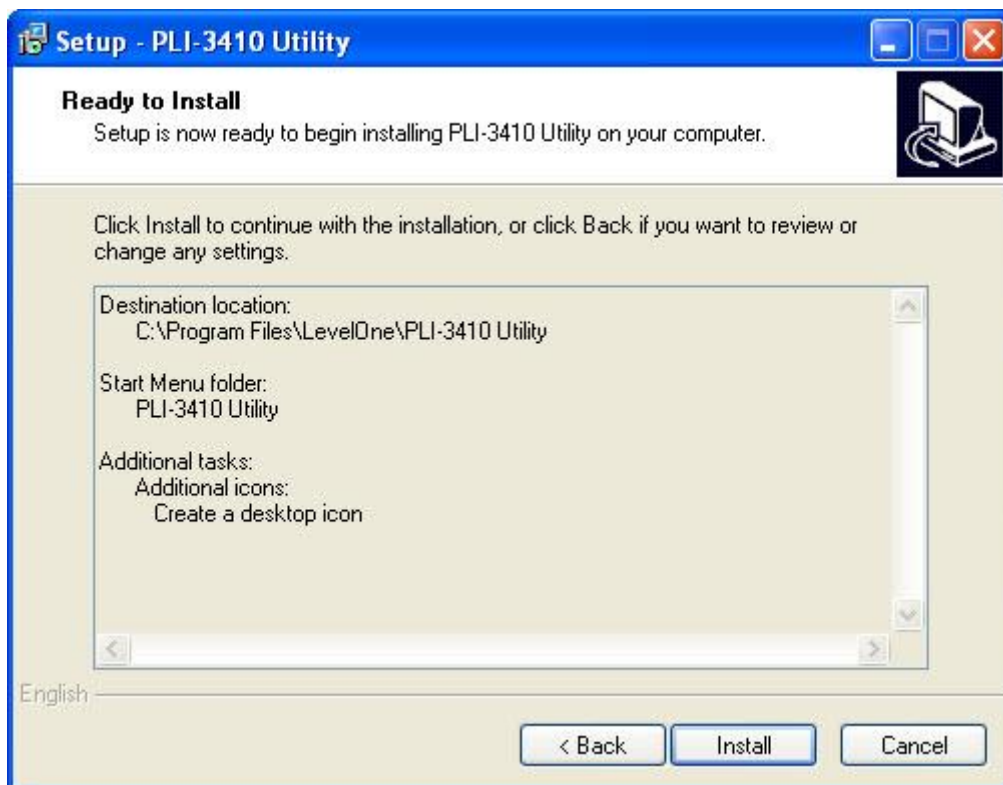
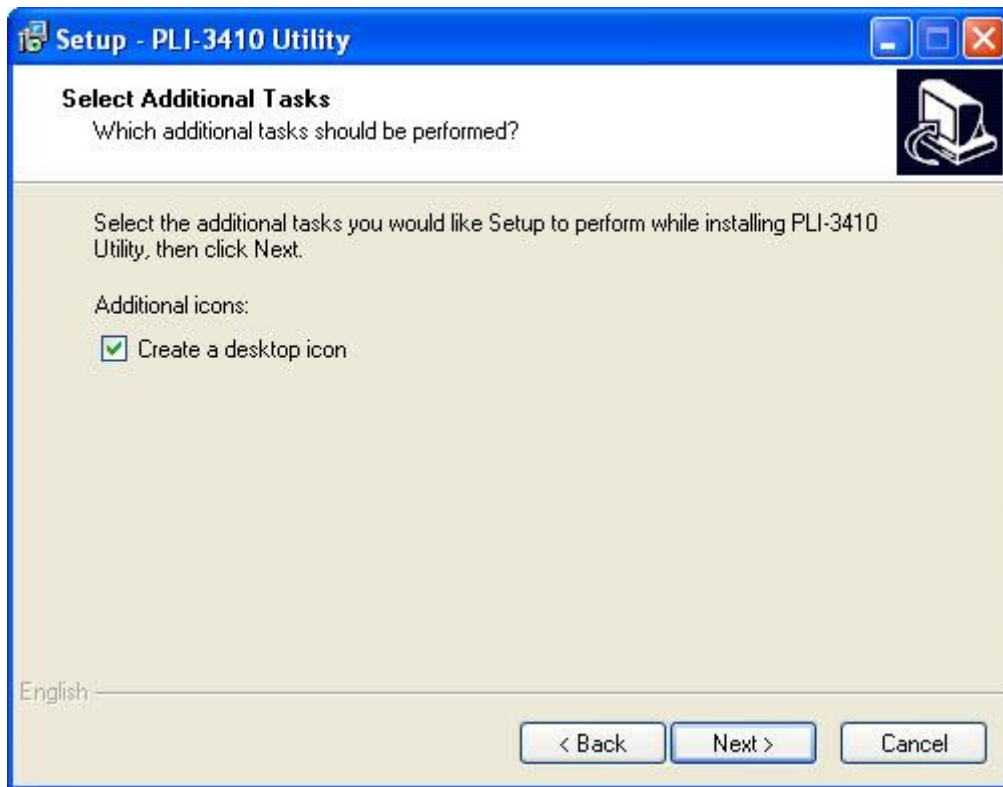


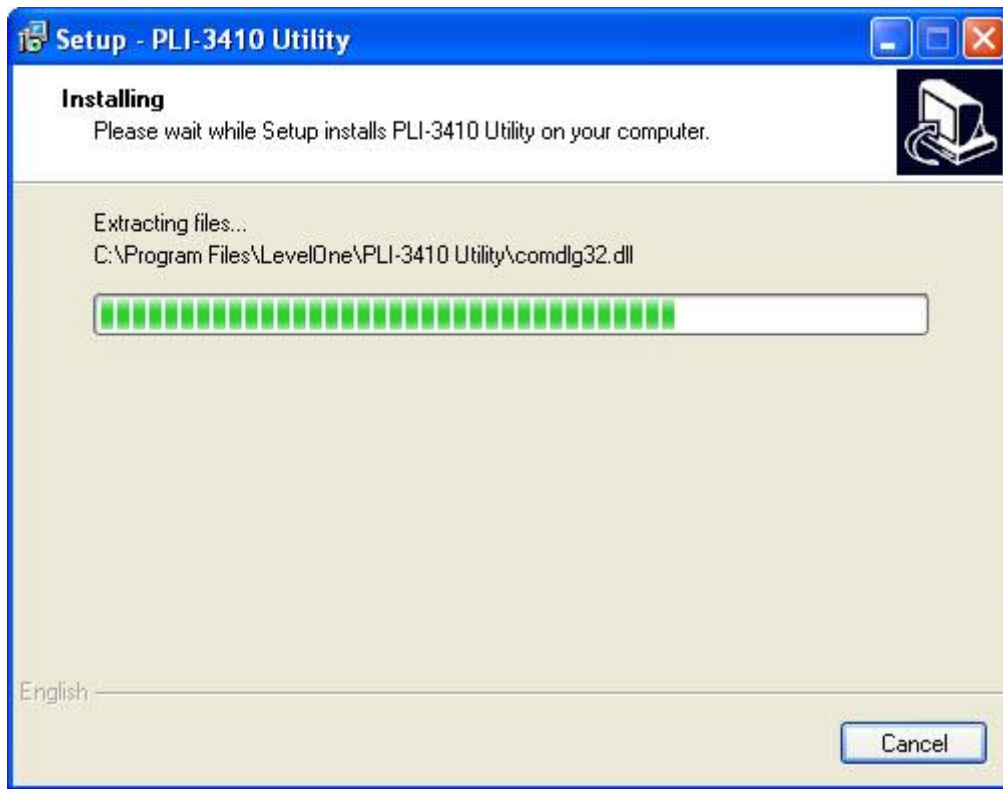
2. You may define the location of the installation folder using the Browse button, however it is highly recommended that you use the default location. In addition, you can also choose to install PLI-3410 200Mbps HomePlug AV Wireless Combo Adapter Utility only for yourself or for all the users who share your PC. When all necessary items are properly selected, press Next to proceed.



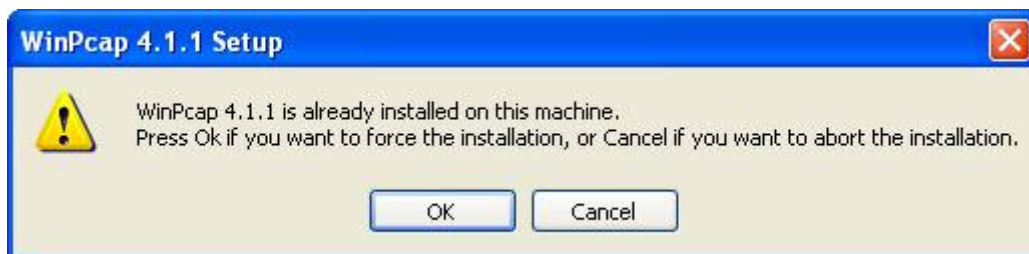
3. Press Next to confirm and start the installation.





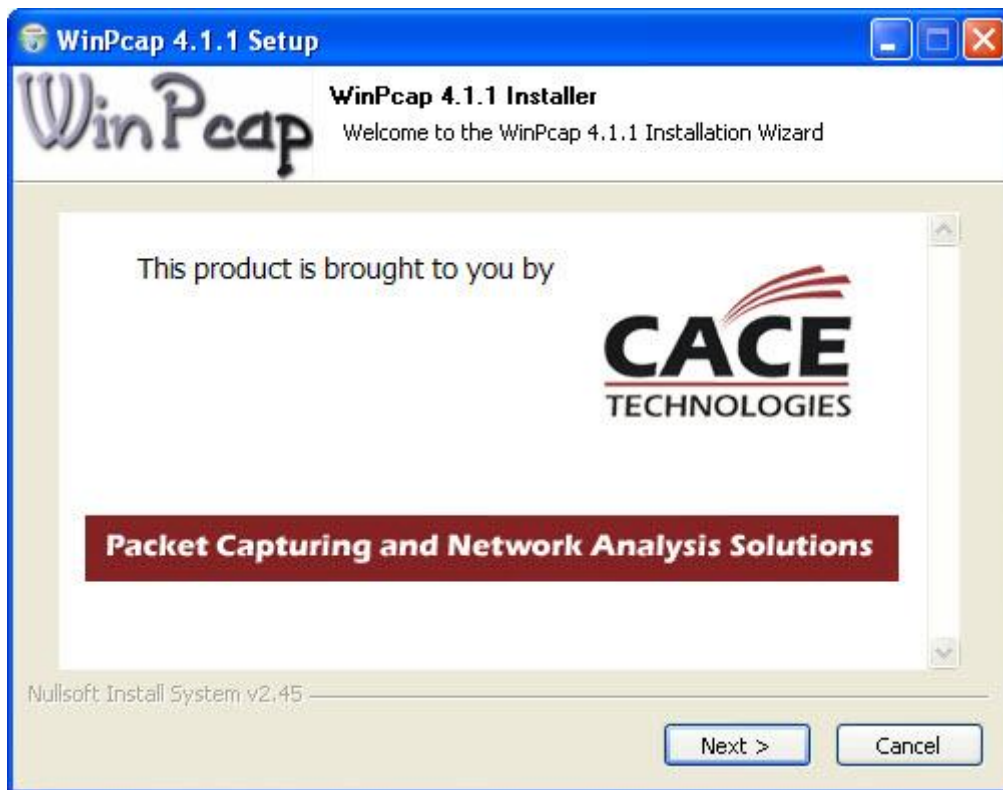


4. While the utility installation is in progress, the system will automatically prompt you to install the WinPcap program in a separate window pop-up. Install this program in order for the utility to work well.



5. While the utility installation is in progress, the system will automatically prompt you to install the WinPcap program in a separate window pop-up. Install this program in order for the utility to work well.

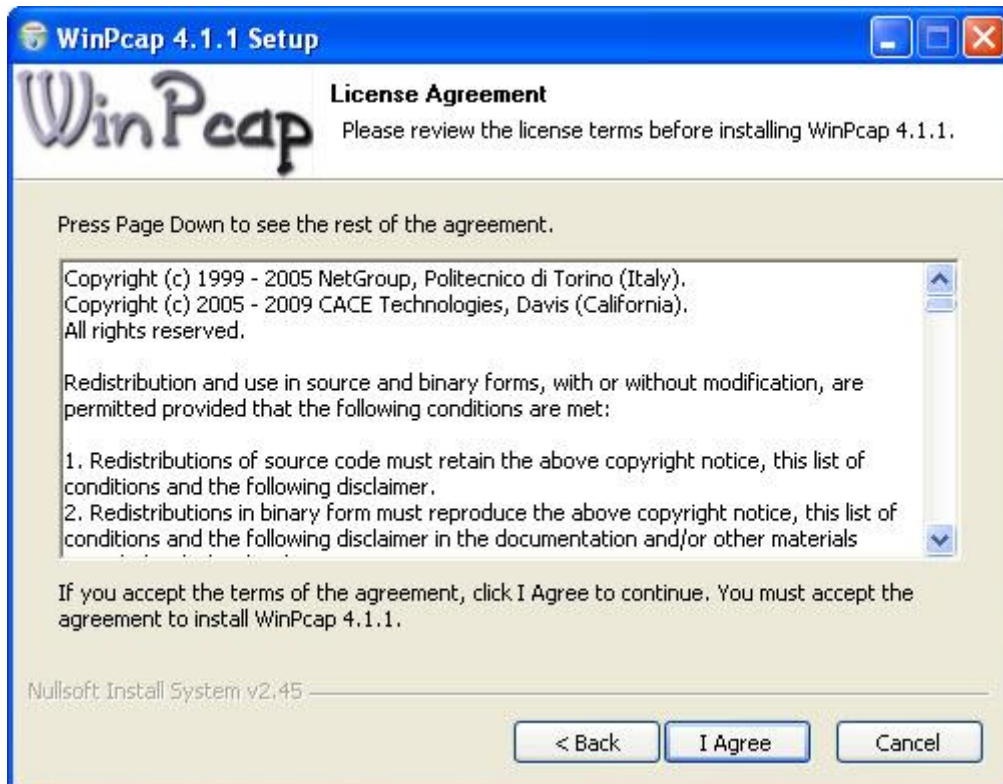
6. When the WinPcap installation window pops up, click Next to proceed with the installation.



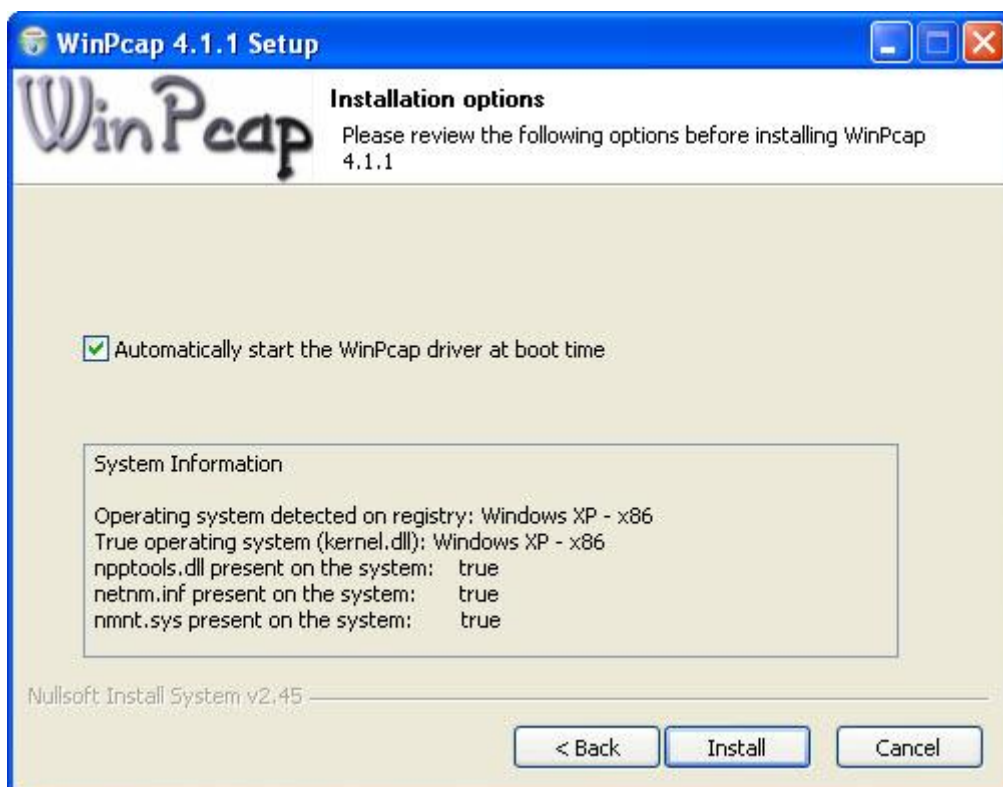
7. Click on Next to proceed to the next step.



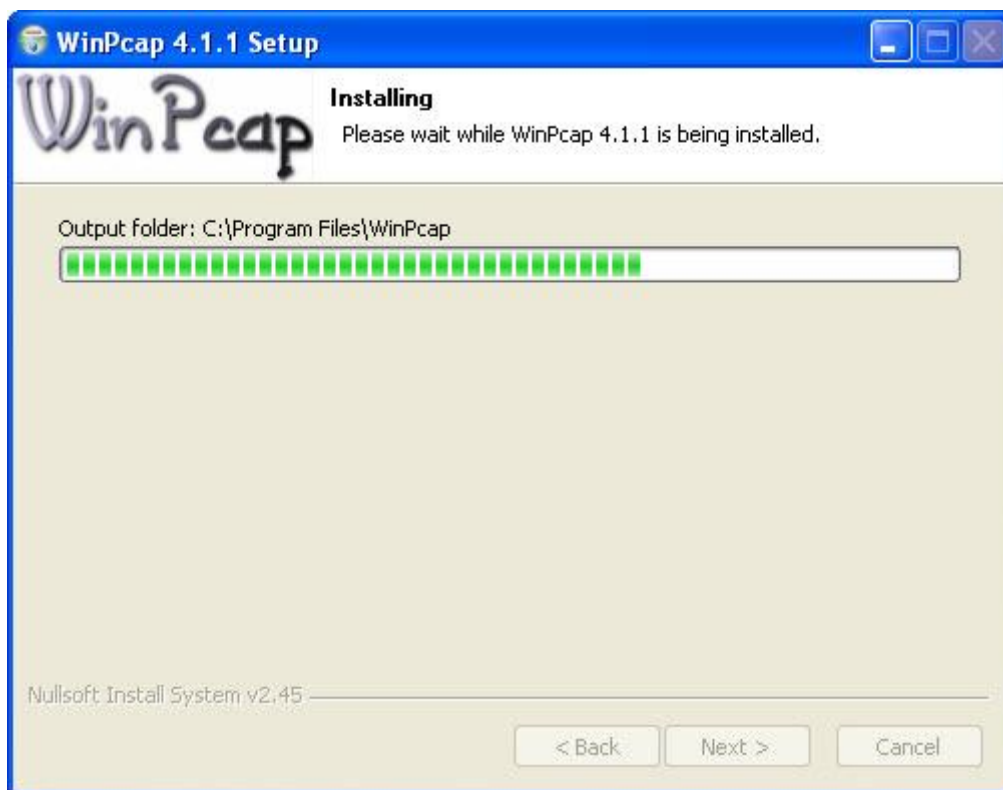
8. Read through the license agreement then click on I Agree button to accept the agreement term.



9. If you want the WinPcap driver run automatically when booting, please tick Automatically start the WinPcap driver at boot time. Then click on install to continue the installation.



10. When the WinPcap installation is done, click on Finish to close the window.



11. When the WinPcap installation is done, you will have also completed the LevelOne PLI-3410 200Mbps HomePlug AV Wireless Combo Adapter Utility installation as well. You may now click on the close button of the Utility installation window to finish the process.



Utility Configuration

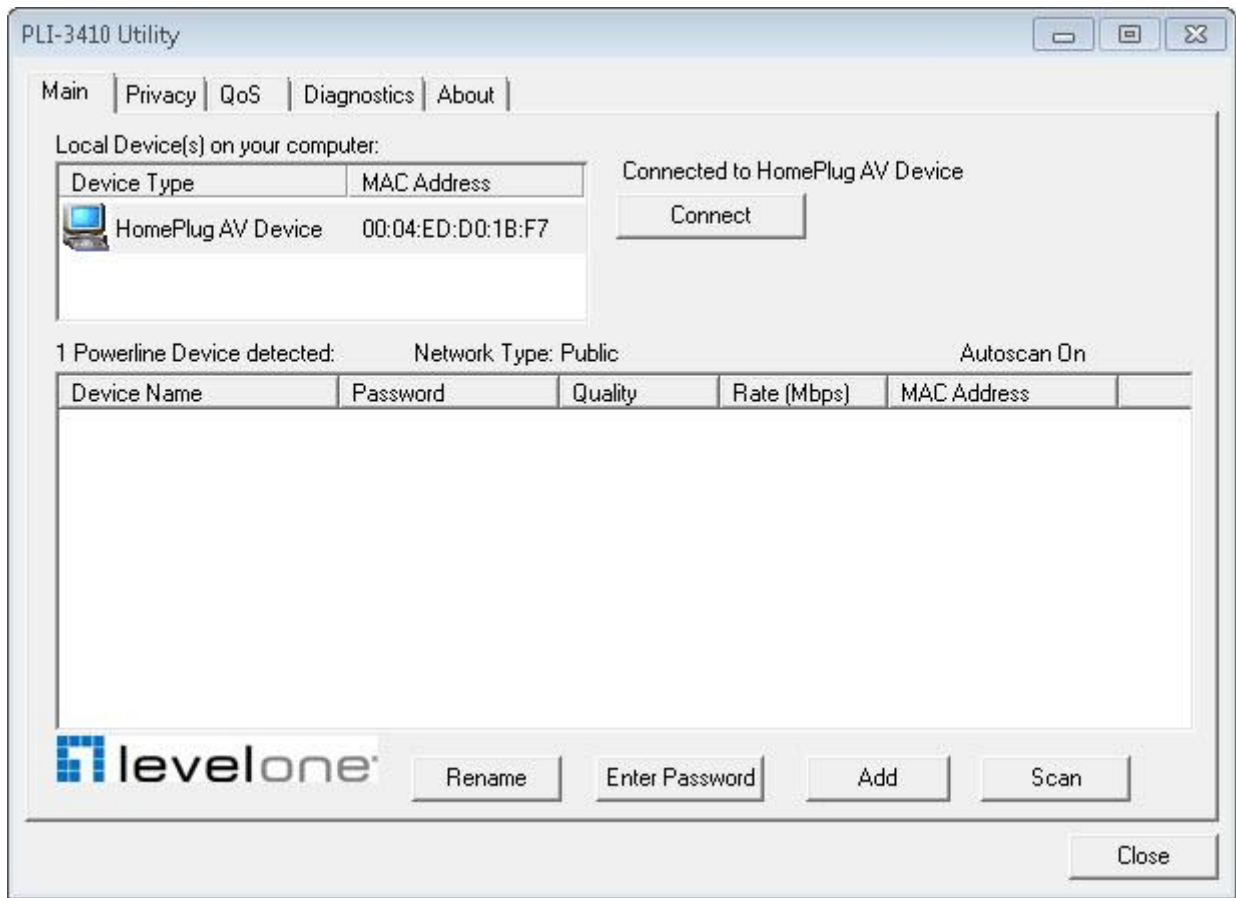
Accessing LevelOne PLI-3410 HomePlug AV 200 Utility

Click the icon of PLI-3410 on desktop



LevelOne PLI-3410 200Mbps HomePlug AV Wireless Combo Adapter Utility consists of 6 screens accessed through these panel tabs. The 5 panels are Main, Privacy, QoS, Diagnostics and About located on the top left corner of the program for configuration convenience.

Main Tab



The Main Tab screen lists all the PowerLine devices that are connected to the host computer when the utility is running. The top left window panel shows all the local HomePlug AV devices that are connected to the computer's NIC (Network Interface Card). Normally, only one device will be seen on the list. If there is more than one local device being connected, user can select the local device by clicking on it and then click the Connect button to its right to use it to connect to the internet. Once connected to the local device, the utility will automatically scan the power line periodically for other newly connected HomePlug AV devices. If no local HomePlug AV devices are discovered, the status area above the connect button will indicate with a message "NO HOMEPLUG ADAPTERS DETECTED". The bottom window panel displays all the HomePlug remote devices that are detected on the current network. The total number of remote devices connected on the same network can be found on top of the Remote device panel. Within this panel, you can also find some useful information of each remote device such as its connection quality, transfer rate and MAC address.

The Network type (Public or Private) is also displayed based on the network status of the local device. The scan status option is displayed on the top right corner above the Remote devices panel showing whether the AutoScan function is turned ON or OFF. The following information is displayed for all devices that appear in the lower panel:

Device Name:

Show the default device name. User can change the name by either clicking on the rename button or by clicking on the name and editing in-place. An icon is usually shown with the device name. Password (*required when one needs to change the Private Network Name of the devices) This column is left blank by default. The password will be displayed only after it has been entered. For

detail information on password setup, please refer to section on Password Setup Instruction. Each device comes with a unique password and it can be found at the back of the device itself.

Quality:

Display the overall quality of the data transmission rate. When the transmission rate is good, the number of line appear will increase.

Rate (Mbps):

Display the data transmission rate of each device.

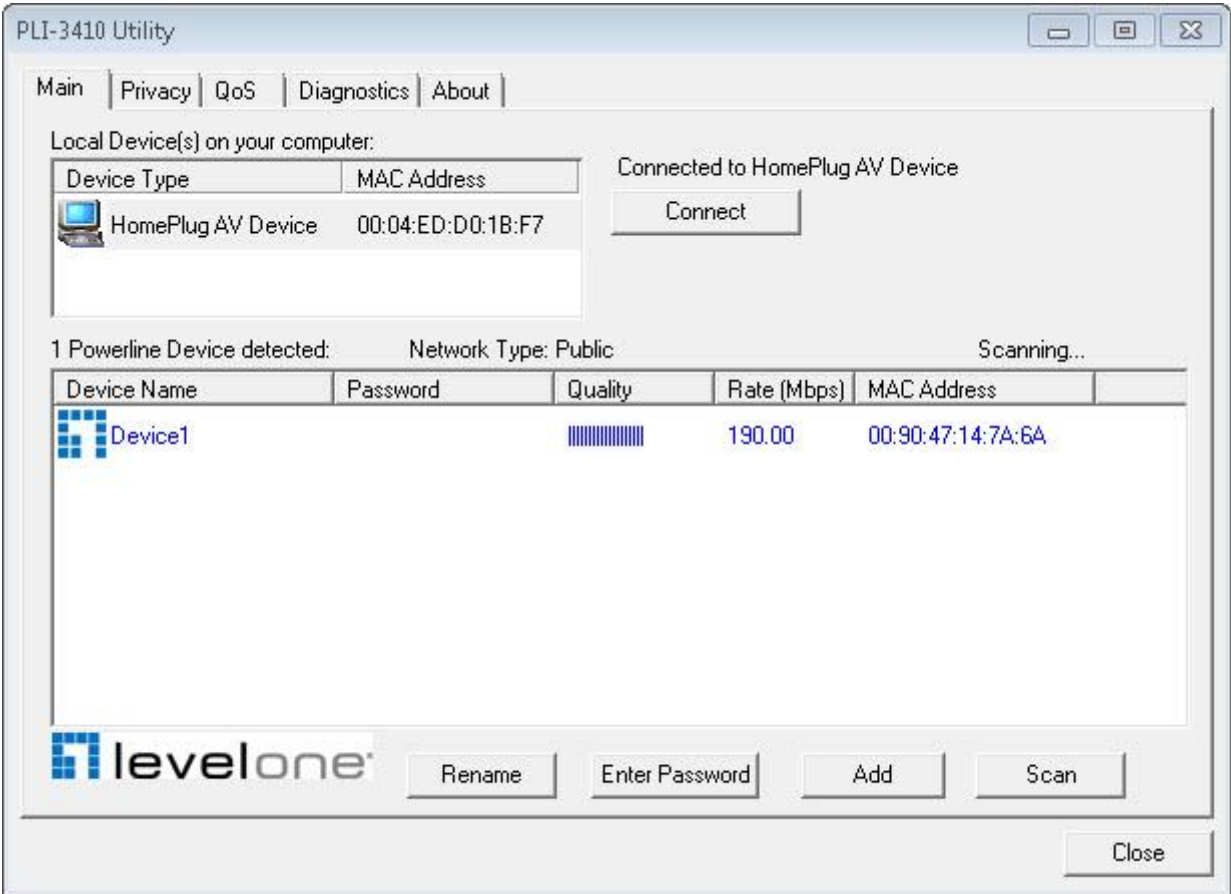
MAC Address:

Show the Remote device MAC address.

Password Setup Instructions:

This feature grants users the access level to change the Private Network Name of both the local & the remote HomePlug AV devices. Password is required if one is to change the Private Network Name of each devices within the PowerLine network in order for all devices to be able to communicate & synchronize with each other within the network.

1. To enter a password for a specific device, select the device and click on the Enter Password button at the bottom of the lower panel to call up the Set Device Password dialog box.



2. Then type in the password in the blank provided and press OK.

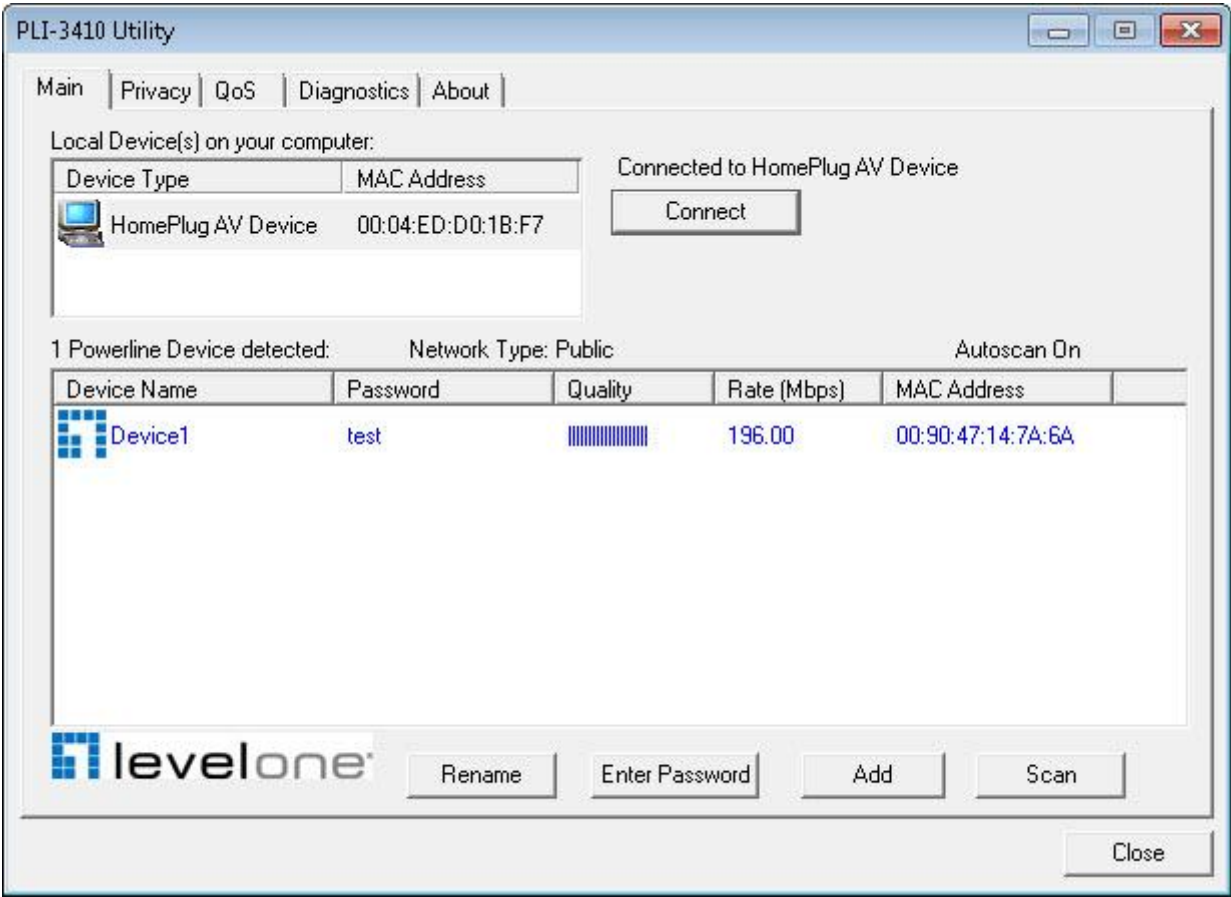


Note: The password of each HomePlug device can be found at the back of the device.

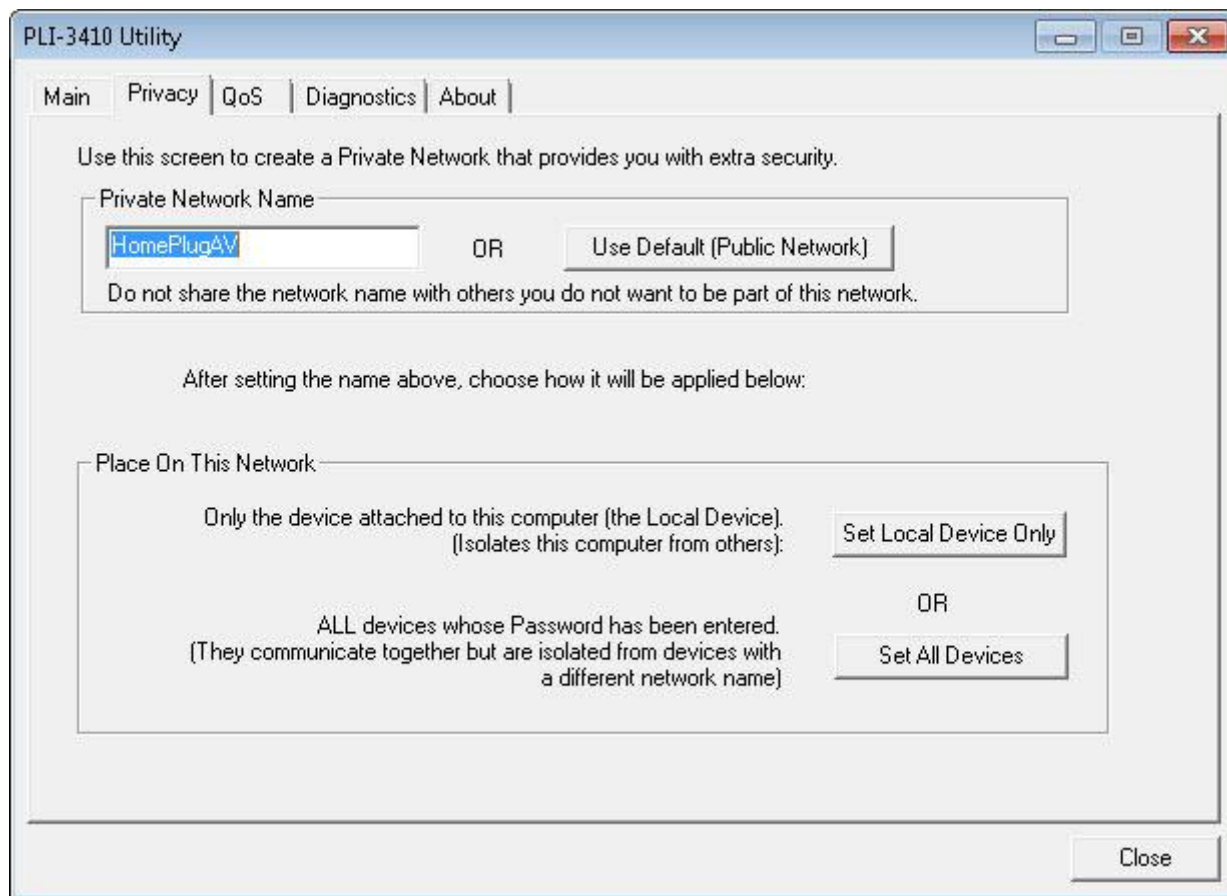
3. If the password entered is not recognized or unacceptable, an error message box will pop up prompting user to change the password. Click OK then re-enter the password again.



4. If the password entered is correct, you will see that the password will be displayed next to the device.



Privacy Tab



Privacy Tab allows user the convenience to manage the security of the private PowerLine network. In addition, user can also utilize this feature to add a new HomePlug device to the private network instead of manually adding the device using its SYNC button. In order to add devices to the network through the utility GUI, Private Network Name of each device is required to be the same with the local device.

All HomePlug AV devices are shipped using a default logical network name “**HomePlugAV**”. The Privacy tab screen allows user to change its default public network type to a private network by changing the network name (network password) of the device. The user can always reset the network type to HomePlug network (Public) by entering “**HomePlugAV**” as the network name or by clicking on the Use Default button.

Note: Changing the network name to anything other than HomePlugAV will show the network type on the main screen as Private.

Set Local Device Only button can be used to change the Private Network Name of the local device. If a new Private Network Name is entered, all associated devices seen on the Main Tab previously will no longer be present in the new network, thus causing the local device unable to communicate with other devices which were in the network previously.

Set All Devices button is used to change the Private Network Name of all devices that appear on the Main tab screen whose Device Password had been entered correctly. For devices whose device passwords were not entered, this operation will fail and will report a failure message.

QoS Tab

This function allows user the flexibility to manage the bandwidth usage for each HomePlug device. The higher the QoS priority the more bandwidth usage is allocated to that particular device.

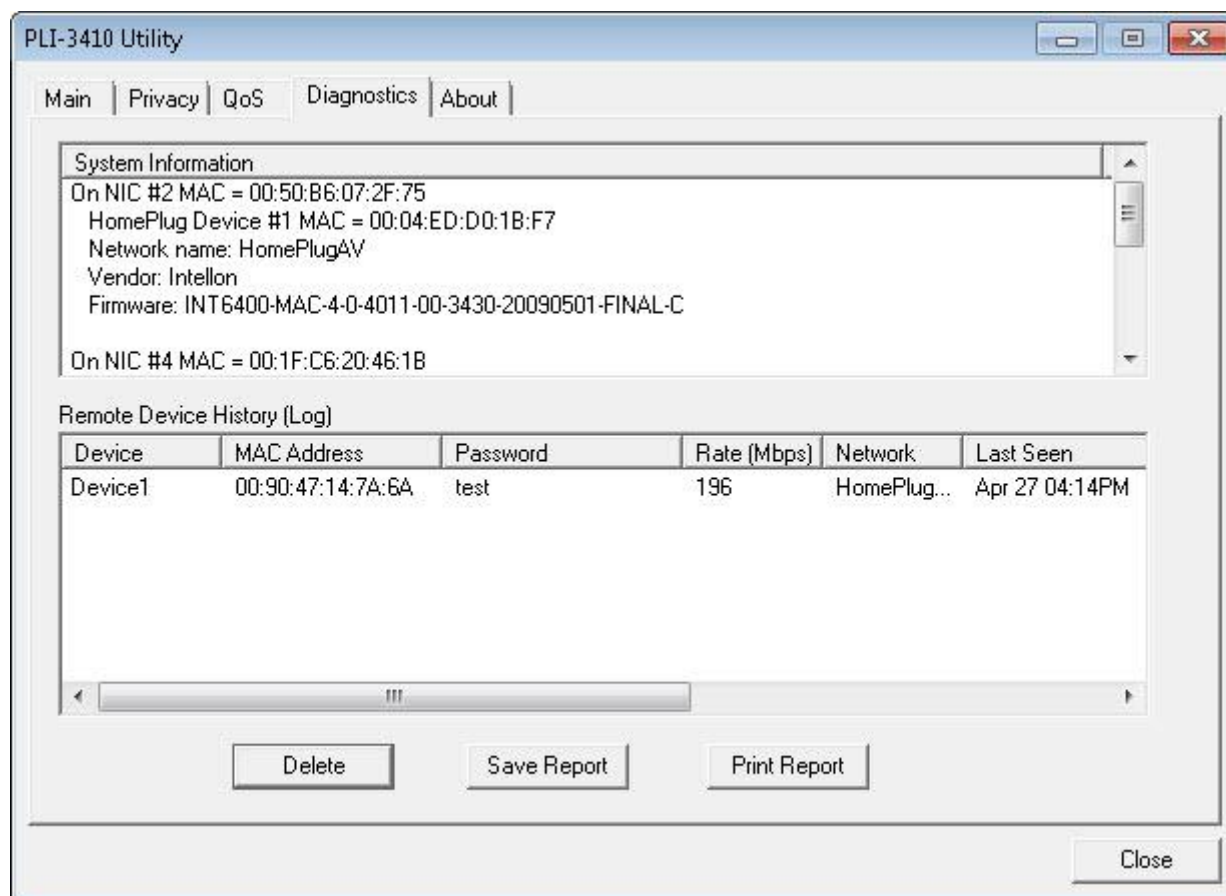
The screenshot shows the 'PLI-3410 Utility' window with the 'QoS' tab selected. The window has a menu bar with 'Main', 'Privacy', 'QoS', 'Diagnostics', and 'About'. Below the menu bar, it displays 'Local host MAC address: 00:50:B6:07:2F:75'. There are two radio buttons: 'Set by IP' (selected) and 'Set by MAC'. Below these is a table with three columns: 'IP Address', 'MAC Address', and 'Priority'. The table is currently empty. At the bottom of the window, there is a 'Priority setting' section with an 'IP Address' field (containing '0.0.0.0'), a 'Priority' dropdown menu (set to 'Normal'), and 'Add/Modify' and 'Delete' buttons. There are also 'Apply' and 'Close' buttons at the bottom right of the window.

IP Address	MAC Address	Priority
------------	-------------	----------

To set the QoS priority of each device:

1. Click to select the type that you want to set the QoS priority.
2. In the Priority setting field, click on Add/Modify button, then enter the IP address/MAC address and drag the Priority slider to either Low, Normal, Medium or High position. When the position of the slider is set, click Confirm to save the settings. You will see a new entry displayed in the table above.
3. After the setting of QoS is completed, click Apply to confirm the setting.

Diagnostic Tab



The Diagnostics Tab screen shows System information and a history of all remote devices seen over a period of time. This screen is available for OEM/ODM Customization. The Upper panel shows technical data concerning software and hardware present on the host computer which were used for communication via HomePlug device on the PowerLine network.

The data includes the following:

- Operating System Platform/Version
- Host Network Name
- MAC Address of all NICs (Network interface card) connected to the host
- Identify versions of all Driver DLLs and Libraries used (NDIS) and optionally
- MAC Firmware Version
- MAC addresses of all devices connected locally to the host
- Version of the Configuration Utility
- Microprocessor

The Lower panel contains a history of all remote devices seen on the computer over a certain period of time. All devices that were on the PowerLine network are listed here along with a few other parameters. Devices that are active on the current logical network will show a transmission rate in the Rate column; devices on other networks, or devices that may no longer exist are shown with a “?” in the Rate column. The following remote device information is available from the diagnostics screen:

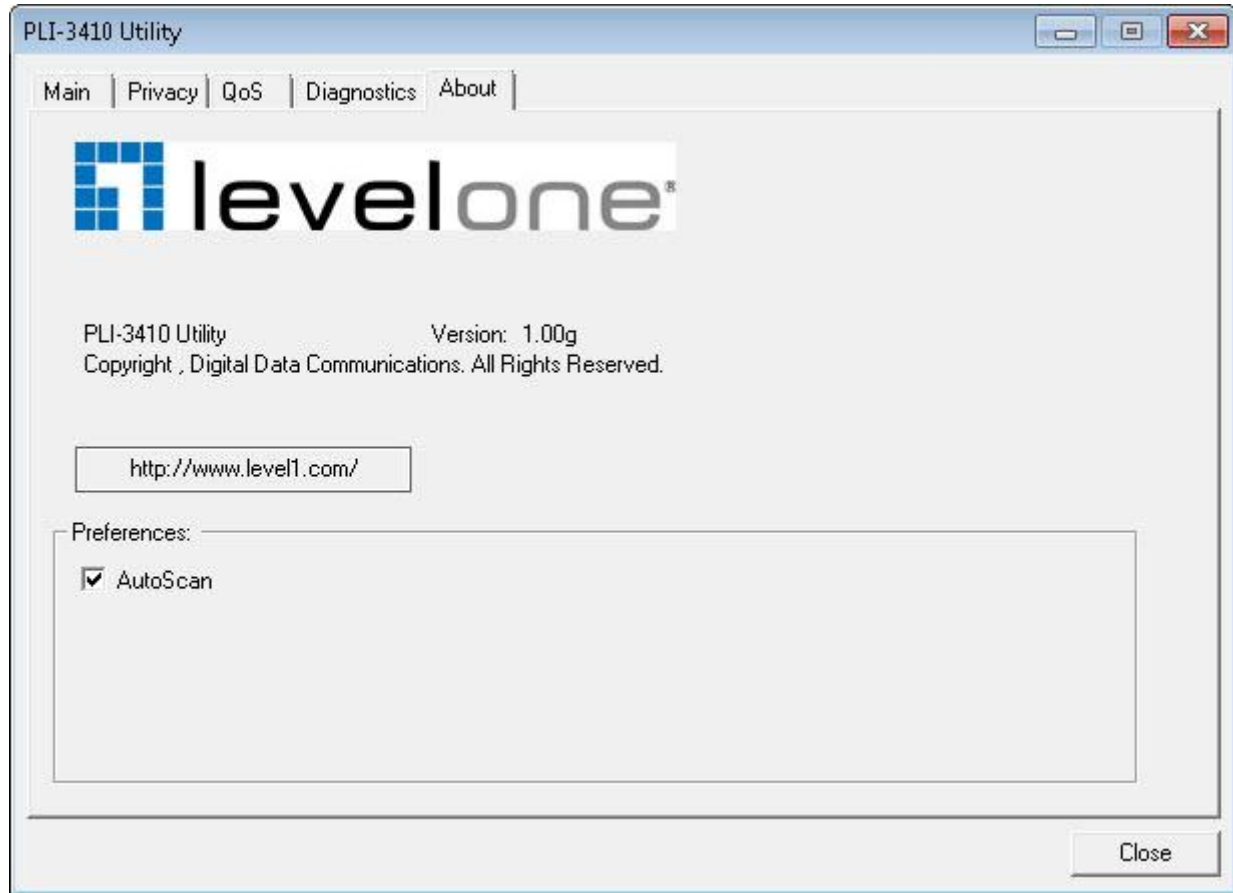
- Device Alias Name
- Device MAC Address
- Device Password

- Transfer rate
- Device Last Known Network name
- Vendor name
- Date device last seen on the network
- MAC Firmware version

The diagnostics information displayed may be saved as a text file for later use, or it can be printed for reference. Devices, which are not part of the network anymore, can be deleted using the delete button. A warning window will pop up requesting for a confirmation when we try to delete a device which password has been entered.

About Tab

The About screen shows the software version.



Under the Preferences panel, user can check the AutoScan box to turn on the Auto Scan function or check off the box to turn off the Auto Scan function.

Chapter 4: UI Configuration

Once you have logged on to your adapter GUI via your web browser, you can begin to configure the device according to your needs. On the configuration homepage, the left navigation pane provides the links to different setup pages.

♣ **Status (Status / Statistic)**

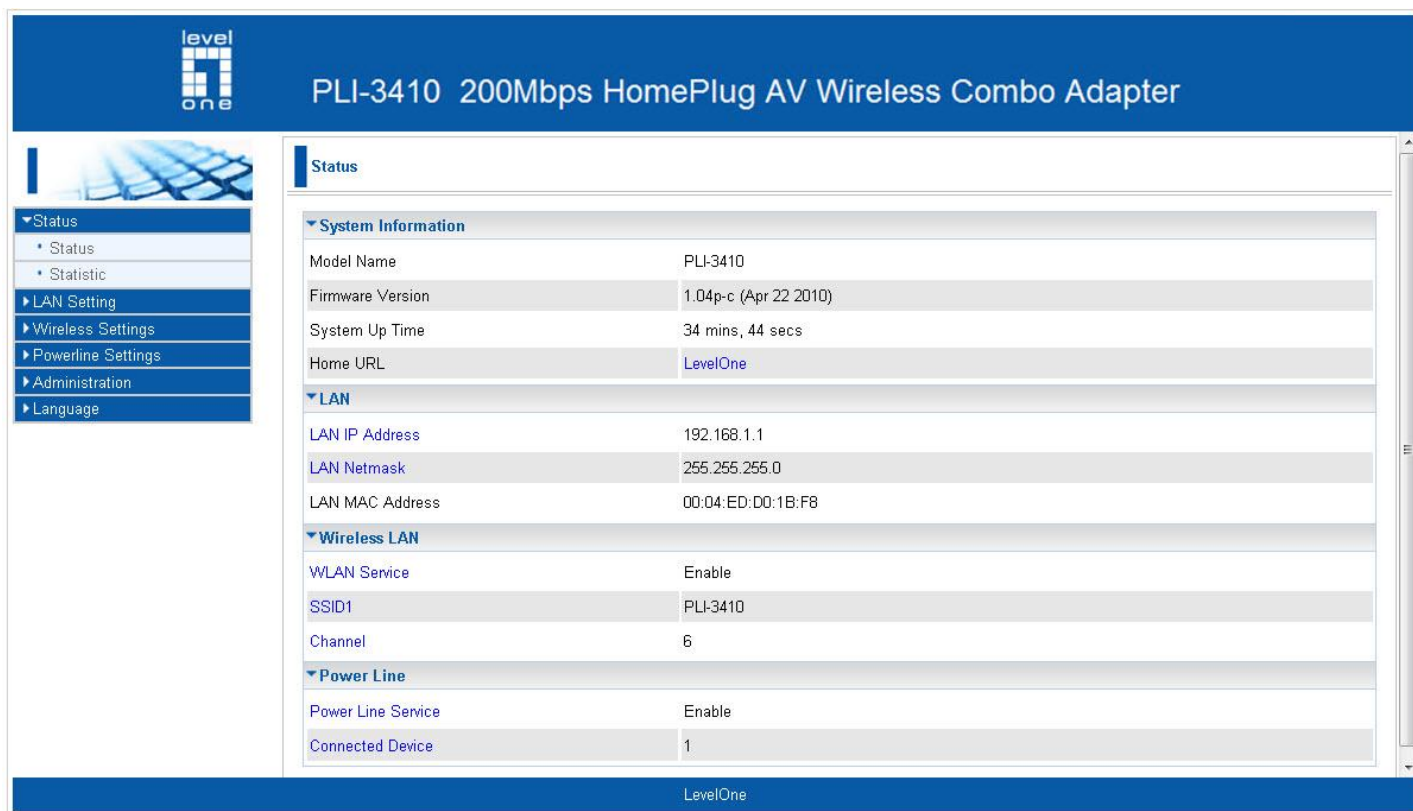
♣ **Internet Setting (LAN)**

♣ **Wireless Settings (Basic / Security / Advanced / WPS / Station List)**

♣ **Power Line Settings (Status / Privacy / QoS)**

♣ **Administration (Management / Upload Firmware / Settings Management)**

Each of these setup pages will be discussed in detail in sections that follow ahead.



level one

PLI-3410 200Mbps HomePlug AV Wireless Combo Adapter

Status

▼ **System Information**

Model Name	PLI-3410
Firmware Version	1.04p-c (Apr 22 2010)
System Up Time	34 mins, 44 secs
Home URL	LevelOne

▼ **LAN**

LAN IP Address	192.168.1.1
LAN Netmask	255.255.255.0
LAN MAC Address	00:04:ED:D0:1B:F8

▼ **Wireless LAN**

WLAN Service	Enable
SSID1	PLI-3410
Channel	6

▼ **Power Line**

Power Line Service	Enable
Connected Device	1

LevelOne

Status

Status	
▼ System Information	
Model Name	PLI-3410
Firmware Version	1.04p-c (Apr 22 2010)
System Up Time	35 mins, 30 secs
Home URL	LevelOne
▼ LAN	
LAN IP Address	192.168.1.1
LAN Netmask	255.255.255.0
LAN MAC Address	00:04:ED:D0:1B:F8
▼ Wireless LAN	
WLAN Service	Enable
SSID1	PLI-3410
Channel	6
▼ Power Line	
Power Line Service	Enable
Connected Device	1

System Information

Model Name: Displays the model name.

Firmware Version: Displays the firmware version for this device.

System Up Time: Records system up-time.

LAN

LAN IP Address: The current IP on this device.

LAN Netmask: The current subnet mask on this device.

Note: Click the **LAN IP Address** or **LAN Netmask** link to change the settings.

LAN MAC Address: The MAC address for the device.

Wireless LAN

WLAN Service: Status of the WLAN connection.

SSID: A unique name used to identify the wireless LAN to which a user wants to connect.

Channel: The current status in WAN interface.

Note: Click the **WLAN Service**, **SSID** or **Channel** link to change the settings.

Power Line

Power Line Service: State of power line.

Connected Device: Displays the number of the remote power line device(s).

Note: Click the *Power Line Service* or *Connected Device* link to display the power line information.

Statistic

Statistic	
▼ Memory	
Memory total	13044 kB
Memory left	3928 kB
▼ LAN	
LAN Rx packets	723430
LAN Rx bytes	63778193
LAN Tx packets	97439
LAN Tx bytes	41012631

Memory

Memory total: Displays the total memory size of the device (in bytes).

Memory left: Displays the amount of memory left (in bytes).

LAN

LAN Rx packets: Displays the number of received packets.

LAN Rx bytes: Displays the received packet traffic (in bytes).

LAN Tx packets: Displays the number of transferred packets.

LAN Tx bytes: Displays the transferred packet traffic (in bytes)

Internet Setting

LAN

Local Area Network (LAN) Settings

▼ LAN Setup

IP Address	<input type="text" value="192.168.1.1"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
LAN2	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
LAN2 IP Address	<input type="text"/>
LAN2 Subnet Mask	<input type="text"/>
DHCP Type	Disable ▼
UPNP	Enable ▼

IP Address: Enter the preferred IP address. Default is 192.168.1.1.

Subnet Mask: Enter the preferred subnet mask. Default is 255.255.255.0.

LAN2: This function enables the creation of multiple virtual IP interfaces for this device. It helps to connect two or more local networks to the ISP or remote node. In this case, an internal device is not required. Default setting is **Disable**. If you want to active IP Alias function, please select **Enable**.

LAN2 IP Address: Specify an IP address for this virtual interface.

LAN2 Subnet Mask: Specify a subnet mask for this virtual interface.

DHCP Type: You can disable or enable the function with DHCP server. The default type is **Disable**. The configuration of each item is described in DHCP Server section.

UPNP: UPnP offers peer-to-peer network connectivity for PCs and other network devices, along with the feature to control data transfer between devices. Default is **Disable**.

♣ **Enable:** Select to activate the device's UPnP function.

♣ **Disable:** Select to inactivate the device's UPnP function.

Click **Apply** to save the changes or **Cancel** to recover the default setting.

DHCP Server

DHCP allows networked devices to obtain information on the parameters of IP, Netmask, and so forth through the Ethernet Address of the device.

▼ LAN Setup	
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
LAN2	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
LAN2 IP Address	
LAN2 Subnet Mask	
DHCP Type	Server ▼
DHCP Start IP	192.168.1.2
DHCP End IP	192.168.1.50
DHCP Subnet Mask	255.255.255.0
DHCP Lease Time	86400 seconds
Statically IP Assigned	MAC address: <input type="text"/> IP address: <input type="text"/>
Statically IP Assigned	MAC address: <input type="text"/> IP address: <input type="text"/>
Statically IP Assigned	MAC address: <input type="text"/> IP address: <input type="text"/>
UPNP	Enable ▼
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

DHCP Type: To configure the device's DHCP Server, select Server from the DHCP Type drop-down menu and you can then configure parameters of the DHCP Server.

DHCP Start IP/ End IP: Enter the starting and ending IP address of the range of IP addresses that you want the DHCP server to assign to DHCP clients. The default DHCP IP range is 192.168.1.2 to 192.168.1.50.

DHCP Subnet Mask: Enter the subnet mask for the network address that you specified. The default is 255.255.255.0.

DHCP Lease Time: Enter the time value (in seconds) that you want the assigned IP address to be valid for. The DHCP client must obtain a new IP address from the DHCP server when this value expires.

Statically IP Assigned: You can map the MAC address for stations that you want to always be assigned the same IP address. Mapped IP addresses must be outside the DHCP start/end IP range. You can configure up to 3 sets of MAC and IP addresses in this table.

Wireless Settings

When you click this item, the column will expand to display the sub-items that will allow you to configure your wireless settings.

Basic, Security, Advanced, WPS and Station List

The function of each configuration sub-item is described in the following sections.

Basic Wireless Settings

Basic Wireless Settings

Wireless Network

Wireless Service

☒ Enable ☐ Disable

Wireless Mode

11b+g+n mixed mode

SSID1

PLI-3410

Multiple SSID Service

Disable

Extension SSID

Client Isolation

☐ SSID1

Hide SSID

☒ Disable ☐ Enable

Country Region

Japan (Channel:1-14)

Channel (Frequency)

Channel 6 (2437MHz)

Channel BandWidth

☐ 20 ☒ 20/40

BSSID

00:04:ED:D0:1B:F8

Wireless Distribution System(WDS)

WDS Mode

Lazy Mode

(AP+Bridge,Auto-Learning other WDS AP MAC Address)

WDS depends on the settings of main security encryption type. [Wireless Security](#)

Apply

Cancel

Wireless Network

WLAN Service: Default setting is Enable. If you do not have any wireless, select Disable.

Network Mode: The default setting is **11b/g/n mixed mode**. If you do not know or have both 11b, 11g and 11b devices in your network, please left this mode selected. If you have only 11b card, please select 11b only from the drop-down menu. If you have only 11g card, please select 11g only from the drop-down menu. If you have both 11b and 11g card, please select 11b/g mixed mode.

Network Name (SSID): The SSID is the unique name of a wireless access point (AP) used to distinguish one from another. For security purpose, you should change the default SSID to a unique ID name that is difficult to guess. Make sure your wireless clients have exactly the SSID as the device in order to connect to your network.

Note: It is case sensitive and can be up to 32 characters.

Broadcast Network Name (SSID): It is used to broadcast its SSID on the network so that when

a wireless client searches for a network, the device can be discovered and recognized. Default setting is **Disable**.

♣ **Enable:** When enabled, the SSID is broadcast for wireless users to use.

♣ **Disable:** When disabled, prevents the SSID broadcast from being seen by wireless users.

Frequency Channel: Select the wireless connection ID channel that you would like to use.

Note: *Wireless performance may degrade if the selected ID channel is already being occupied by other AP(s).*

Channel Bandwidth: Select either 20 MHz or 20/40 MHz for the channel bandwidth. The higher the bandwidth the better the performance will be.

BSSID: Displays the MAC address of the device.

Rate: Available when 11b/g mixed mode, 11b only and 11g are selected in Network Mode. Select the data transmission rate from the drop-down menu. Default is **Auto**.

Wireless Distribution System (WDS)

It is a wireless access point mode that enables wireless link and communication with other access points. It is easy to install simply by defining the peer's MAC address of the connected AP. WDS takes advantage of the cost saving and flexibility which no extra wireless client device is required to bridge between two access points and extending an existing wired or wireless infrastructure network to create a larger network.

WDS Mode: You can disable or enable the WDS functionality. Default setting is **Disable**.

Lazy Mode



▼ Wireless Distribution System(WDS)

WDS Mode Lazy Mode (AP+Bridge,Auto-Learning other WDS AP MAC Address)

WDS depends on the settings of main security encryption type. [Wireless Security](#)

WDS Mode: Select Lazy Mode from the drop-down menu. In this case, WDS peers can be auto-detected.

Phy Mode: Select the appropriate mode from the drop-down menu. There are 4 options: CCK, OFDM, HTMIX and GREENFIELD.

Encrypt Type: You can select None or other types: WEP, TKIP or AES. When WEP, TKIP or AES is selected, the Encrypt Key field will display to allow you to set an encryption key.

Bridge Mode

▼ Wireless Distribution System(WDS)	
WDS Mode	Bridge Mode ▼ (Only Bridge,Disable AP Function)
WDS depends on the settings of main security encryption type. Wireless Security	
Phy Mode	HTMIX ▼
AP MAC Address	<input type="text"/> (All of the AP's channel must be the same in WDS.)
AP MAC Address	<input type="text"/>
AP MAC Address	<input type="text"/>
AP MAC Address	<input type="text"/>

WDS Mode: Select Bridge Mode from the drop-down menu. In this case, AP adapter acts as a wireless bridge and will not respond to wireless requests.

Phy Mode: Select the appropriate mode from the drop-down menu. There are 4 options: CCK, OFDM, HTMIX and GREENFIELD.

Encrypt Type: You can select None or other types: WEP, TKIP or AES. When WEP, TKIP or AES is selected, the Encrypt Key field will display to allow you to set an encryption key.

AP MAC Address: Enter the associated AP's MAC Address(es) in this field and the following fields. It is important that your peer's AP must include your MAC address in order to acknowledge and communicate with each other.

Repeater Mode

▼ Wireless Distribution System(WDS)	
WDS Mode	Repeater Mode ▼ (AP+Bridge)
WDS depends on the settings of main security encryption type. Wireless Security	
AP MAC Address	<input type="text"/> (All of the AP's channel must be the same in WDS.)
AP MAC Address	<input type="text"/>
AP MAC Address	<input type="text"/>
AP MAC Address	<input type="text"/>

WDS Mode: Select Repeater Mode from the drop-down menu. In this case, AP adapter acts as a repeater and interconnects between access points.

Phy Mode: Select the appropriate mode from the drop-down menu. There are 4 options: CCK, OFDM, HTMIX and GREENFIELD.

Encrypt Type: You can select None or other types: WEP, TKIP or AES. When WEP, TKIP or AES is selected, the Encrypt Key field will display to allow you to set an encryption key.

AP MAC Address: Enter the associated AP's MAC Address(es) in this field and the following fields. It is important that your peer's AP must include your MAC address in order to acknowledge and communicate with each other.

Wireless Security/Encryption Settings

Wireless Security/Encryption Settings

▼ Select SSID

SSID choice

PLI-3410

SSID1:PLI-3410

Security Mode

Disable

Wireless MAC Address Filter Table (The maximum item is 64)

Rule

Disable

Index	MAC Address	Index	MAC Address
-------	-------------	-------	-------------

Add a new MAC address (Ex:the format is "00:11:22:33:55:66")

<<

Station MAC address List

Add

(After add the MAC address in to the table, It must press "Apply" button to enable the rule.)

Apply

Cancel

Security Mode: You can disable or enable the wireless security function using WEP or WPA for wireless network protection. The default mode of wireless security is disabled. Please refer to the Security Mode section for detail description.

Access Policy

Policy: Select from the drop-down menu to choose whether the entered MAC Address should be allowed to pass (Allow) or to be blocked (Reject).

Note: When the Policy is selected Allow, all the MAC addresses you entered in the Add a station MAC address field will be pass; when the Policy is selected Reject, all the MAC addresses you entered in the Add a station MAC address field will be blocked.

Add a station MAC address: Enter the MAC address of the wireless client.

53

Security Mode

WEP OPEN / WEP SHARED / WEP AUTO

SSID1:PLI-3410

Security Mode WEP OPEN ▼

WEP

Default Key Key 1 ▼

WEP Keys	WEP Key 1 :	<input type="text"/>	Hex ▼
	WEP Key 2 :	<input type="text"/>	Hex ▼
	WEP Key 3 :	<input type="text"/>	Hex ▼
	WEP Key 4 :	<input type="text"/>	Hex ▼

Wireless MAC Address Filter Table (The maximum item is 64)

Rule	Disable ▼		
Index	MAC Address	Index	MAC Address
Add a new MAC address (Ex:the format is "00:11:22:33:55:66")			
<input type="text"/>		<<	Station MAC address List ▼
Add (After add the MAC address in to the table, It must press Apply button to enable the rule.)			

Apply Cancel

Security Mode: Select WEP OPEN, WEP SHARED or WEP AUTO from the drop-down menu.

Wire Equivalence Protection (WEP)

Default Key: Select the encryption key ID.

WEP Keys (1~4): Enter the key to encrypt wireless data. To allow encrypted data transmission, the WEP Encryption Key values on all wireless stations must be the same as the device. There are four keys for your selection. The input format is in Hex or ASCII style, 5 and 13 ASCII codes are required for WEP64 and WEP128 or 10 and 26 Hex codes are required for WEP64 and WEP128 respectively.

WPA-PSK / WPA2-PSK / WPAPSK/WPA2PSK mix mode

SSID1:PLI-3410

Security Mode WPA-PSK/WPA2-PSK mix mode ▼

WPA

WPA Algorithms ☐ TKIP ☒ AES ☐ TKIP/AES mix mode

Pass Phrase 12345678

Key Renewal Interval 3600 seconds

Wireless MAC Address Filter Table (The maximum item is 64)

Rule	Disable ▼		
Index	MAC Address	Index	MAC Address
Add a new MAC address (Ex:the format is "00:11:22:33:55:66")			
<input type="text"/>		<< Station MAC address List ▼	
<input type="button" value="Add"/> (After add the MAC address in to the table, It must press Apply button to enable the rule.)			

Security Mode: Select WPA-PSK or WPA2-PSK from the drop-down menu.

WPA

WPA Algorithms: There are 3 types of the TKIP, AES & TKIPAES (not available in WPA-PSK mode).

Pass Phrase: Enter a pass phrase to access the network. It can be a password like "12345678" or a pass phrase, from 8 to 63 case-sensitive characters.

Key Renewal Interval: The period of renewal time (in seconds) for changing the security key automatically between wireless client and Access Point (AP). Default value is 3600 seconds.

Advanced Wireless Settings

Advanced Wireless Settings

▼ Advanced Settings

TX Power

100

(range 1 - 100, default 100)

Tx Burst

☒ Enable ☐ Disable

▼ Wi-Fi Multimedia

WMM Capable

☒ Enable ☐ Disable

APSD Capable

☐ Enable ☒ Disable

▼ IGMP Snooping

IGMP Snooping Service

☒ Enable ☐ Disable

Apply

Cancel

Advanced Settings

TX Power: TX Power measurement that enhances the wireless transmission signal strength. You can adjust this power level from minimum (0) to maximum (100). Default is 100.

Tx Burst: This feature is used to activate the transmitted time slot to increase transmission throughput. Default is **Enable**.

Wi-Fi Multimedia

WMM Capable: This feature is used to control the prioritization of traffic according to 4 Access categories: Voice, Video, Best Effort and Background. Default is **Enable**.

APSD Capable: Automatic Power Save Delivery (APSD) is an efficient power management mechanism and is very useful for a VoIP phone. You can select enable or disable this feature. Default is **Disable**.

IGMP Snooping

IGMP Snooping Service: Allows a layer 2 switch to manage the transmission of any incoming IGMP multicast packet groups between the host and the router. Default is set to enable.

Wi-Fi Protected Setup

WPS feature is designed to ease setup of security enabled WiFi networks in small offices or home. It supports methods to you to set a network and enable security by entering a PIN or pushing a button.

Wi-Fi Protected Setup

▼ WPS Config

WPS Service	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
WPS Mode	<input checked="" type="radio"/> PIN <input type="radio"/> PBC
Role	<input checked="" type="radio"/> Registrar <input type="radio"/> Enrollee
PIN	<input type="text"/>
<input type="button" value="Apply"/>	

▼ WPS Summary

WPS Current Status	Idle
WPS Configured	Yes
WPS SSID	PLI-3410
WPS Authentication Mode	Open
WPS Encryption Type	None
WPS Default Key Index	1
WPS Key(ASCII):	
AP PIN	36386482

WPS Config

WPS: Default setting is Enable. If you do not want to activate this functionality, please select Disable and click **Apply** to confirm the setting.

WPS Progress

WPS mode: Define the WPS mode by PIN code or PBC.

- ♣ **PIN:** Select PIN (Personal Identification Number) mode process to connect to the device.
- ♣ **PBC:** Select PBC (Push Button Communication) mode process to connect to the device.

Note: You can enable WPS PBC mode through WPS configuration interface as above or by pushing the WPS button of your HomePlug AV 200 Ethernet Adapter for more than 1 seconds and the WPS will establish the connection automatically.

Role: Select to be the Registrar or Enrollee for this device.

PIN: When PIN mode is selected, this field is displayed to allow you to enter the PIN code which the device uses to authenticate other WPS-enabled wireless devices.

Click **Apply** to save the change.

WPS Summary

WPS Current Status: Displays the WPS status.

WPS Configured: Displays the current WPS configuration status

WPS SSID: Displays the WPS network name.

WPS Authentication Mode: Displays the authentication mode for WPS.

WPS Encryption Type: Displays the encryption type for WPS.

WPS Default Key Index: Displays the Default Key Index. **WPS**

Key(ASCII): Displays the WPS key (ASCII characters). **AP PIN:**

Displays the Access Point's PIN number.

Station List

The Station List displays the Wireless Network information.

Station List					
Wireless Network					
MAC Address	Aid	PSM	MimoPS	MCS	BW

Wireless Network

MAC Address: The Media Access Control (MAC) addresses for each device on your WLAN.

Aid: The association ID.

PSM: The power save mode.

MimoPS: The MIMO power save mode. MIMO, Multiple-input and multiple-output, is the use of multiple antennas at both the transmitter and receiver to improve communication performance.

MCS: The Modulation and Coding Scheme.

BW: The Network Bandwidth.

Power Line Settings

Status



The screenshot shows a web interface titled "Power Line Status". Under the "Local Device" section, the "MAC Address" is displayed as "00:04:ED:D0:1B:F7".

Local Device

Model: Displays the model name for the local power line device.

Firmware: Displays the version number of firmware on the local power line device.

MAC Address: Displays the MAC address of the local power line device.

When you have successfully synchronized two HomePlug AV adapters through the PowerLine, the information of both adapters will display on the Power Line Status screen.



This is a duplicate of the screenshot above, showing the "Power Line Status" interface with the "Local Device" section displaying the MAC Address "00:04:ED:D0:1B:F7".

In the illustration above, there are 1 local device and 1 remote device in the same power loop.

Remote Device

MAC Address: Displays the MAC address for the remote device.

Security

Powerline Security

▼ Security Settings

Network Password(Name)	<input type="text"/>	(10 ~ 64 character)
NMK	50D3E4933F855B7040784DF815AA8DB7(network password and NMK is not equal!)	

Apply

Security Settings

New Network Password (Name): Enter the new network password (name) to apply to the local HomePlug adapter. This allows the HomePlug adapters that have the same network password in the PowerLine network to communicate with each other.

Click **Apply** to confirm the setting.

QoS

Wired networks use QoS to help traffic flow more smoothly. On this screen, you can prioritize traffic passing through your adapter based on the device it is intended for by setting MAC address and the level of priority.

Powerline QoS Settings

▼ Local Device

MAC Address	00:04:ED:D0:1B:F7
-------------	-------------------

▼ Add new rule of Powerline QoS

MAC Address of network card	Priority
<input type="text"/>	Low <input type="button" value="Add"/>
(Ex:the format is 00:11:22:33:55:66.)	(After press Add button to add the MAC Address in to the table, It must press Apply button to enable the rule.)

Apply

Local Device

MAC Address: Displays the MAC address.

Network card MAC Address: Enter the network card MAC address.

Priority: Select a priority from the drop-down menu.

Add: Press this button to add a new MAC address.

Click **Apply** to confirm the settings.

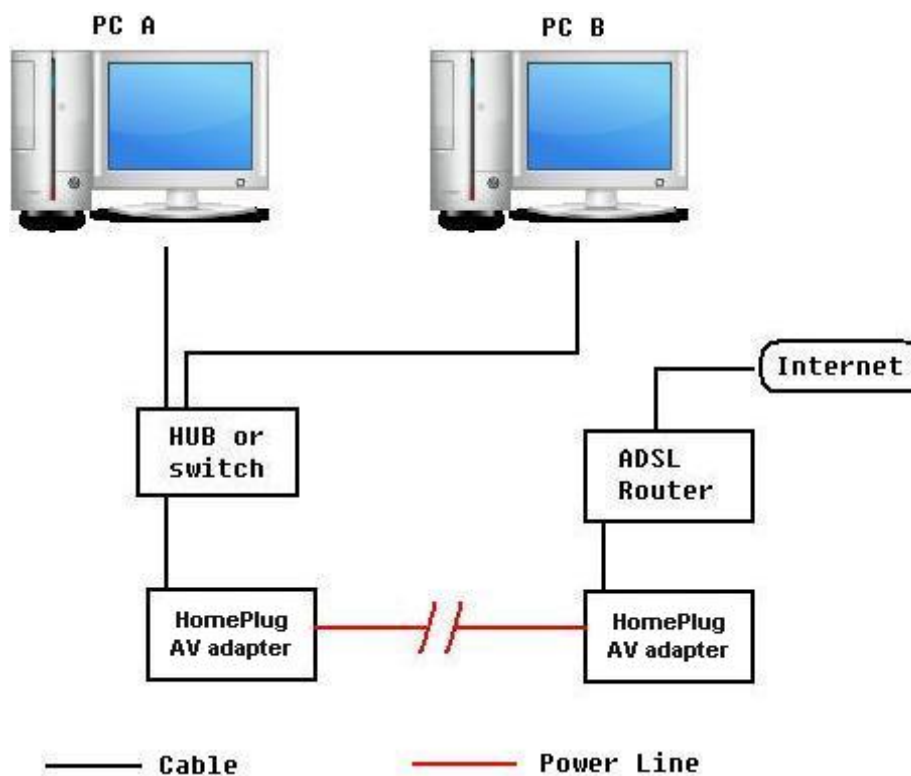
Note: If you set no QoS setting, the QoS setting will be returned to the factory

default settings when you click on Apply button.

Note: When there is no QoS policy on the device, a warning message will pop-up as below after clicking Apply.



QoS example:



The above illustration is an example for QoS topology, commonly in the home and small office environment.

To set the QoS policy, perform the following steps:

1. Select Power Line Settings > QoS. In the Power Line QoS Settings screen, add new policy for QoS.
2. Run the "Command Prompt" (From the Windows desktop click Start > Run, type **cmd** and click OK.). At the command prompt, type **ipconfig /all** and press Enter. Look for the line Physical Address.

```

C:\Documents and Settings\PM Dept.PM-TEST>ipconfig/all

Windows IP Configuration

    Host Name . . . . . : pm-test
    Primary Dns Suffix . . . . . : 
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : Yes
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    Description . . . . . : Marvell Yukon 88E8001/8003/8010 PCI
    Gigabit Ethernet Controller 
    Physical Address. . . . . : 00:11:2F:23:23:42
    Dhcp Enabled. . . . . : Yes
    IP Address. . . . . : 192.168.1.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 

Ethernet adapter Wireless Network Connection 23:

    Media State . . . . . : Media disconnected
    Description . . . . . : LevelOne WUA-0616 N_Max Wireless USB
    Adapter 
    Physical Address. . . . . : 00-02-6F-97-06-6D

C:\Documents and Settings\PM Dept.PM-TEST>

```

3. Go back to Power Line QoS Settings screen, enter you network card MAC address and choose the priority. Click **Add** button to add this new rule. You will see the new address(s) displayed in the QoS Policy table.

Note: Make sure that the MAC Address that you entered is correct. (A MAC address uses 6 pairs of hexadecimal characters, for example 00:11:22:3A:4B:56.)

Powerline QoS Settings

Local Device

MAC Address

00:04:ED:D0:1B:F7

Add new rule of Powerline QoS

MAC Address of network card

(Ex:the format is 00:11:22:33:55:66.)

Priority

Low

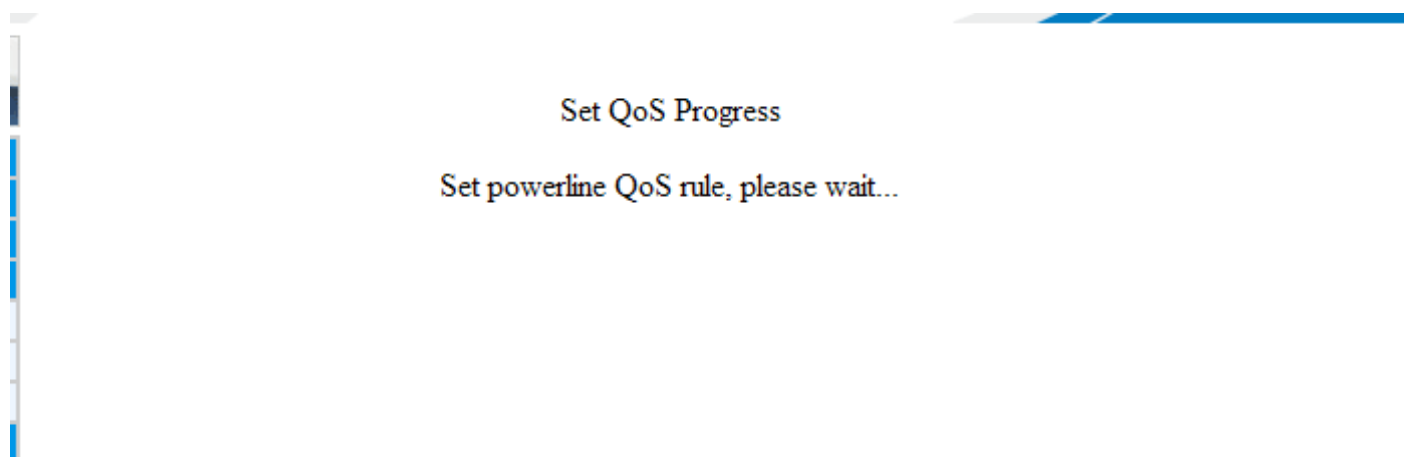
Add

(After press Add button to add the MAC Address in to the table, It must press Apply button to enable the rule.)

Apply

4. You can change the priority of the QoS rule(s) from the Priority drop-down menu or remove the rule(s) by clicking on **Delete** button next to the item you want to delete.
5. Click **Apply** to confirm the configuration.

Note: Do NOT perform any more actions in QoS setting process.



6. Once the setting is complete, you will be returned to the Power Line QoS Settings page.

Administration

System Management

System Management

▼ Administrator Settings

Account

admin

Password

•••••

Apply

Cancel

Administrator Settings

Account: You are allowed to set your own account name. Default is admin.

Password: You are allowed to set your own password. Default is admin.

Click **Apply** to save the changes.

Firmware Upgrade

Upgrading the newly improved version of the firmware allows you to get the advantage to use newly integrated features.

Firmware Upgrade

Firmware Upgrade may take a few minutes. Please be patient and do not perform any actions. Any interruption during the upgrade process could damage the device.

Firmware Upgrade

Restart device with

☐ Factory Default Settings

☒ Current Settings

Settings Management

Export Settings

Export Button

Export

Import Settings

Settings file location

Browse...

Import

Cancel

The system will automatically reboot once the upgrade is complete. You will be returned to the Status page.

Settings Management

These functions allow you to save a backup of the current configuration of your device to a defined location on your PC, to restore a previously saved configuration, or to restart your device with the factory default settings. This is useful if you wish to experiment with different settings, knowing that you have a backup in hand in case any mistakes occur. Besides, you can restart the device to factory default setting after you have accidentally changed your settings that may result in undesirable outcome.

Settings Management

▼ Export Settings

Export Button

Export

▼ Import Settings

Settings file location

Browse...

Import

Cancel

Export Settings

Export Button: Click on **Export** to select where on your local PC you want to store your setting file. You may also change the name of the file if you wish to keep multiple backups.

Note: *It is advisable that you backup your device configuration before making any changes to your device configuration.*

Import Settings

Settings file location: Click on **Browse** to select a file from your PC to restore. You should only restore your device setting that has been generated by the Backup function which is created with the current version of the device firmware. Settings files saved to your PC should not be manually edited in any way.

Select the settings files you wish to use, and press **Import** to load the setting into the device.

Load Factory Defaults

Load Default Button: Click on **Load Default** to initiate the restart process. After restarting, please wait several minutes to let the selected setting applied to the system.

You may also reset your device to factory settings by holding the small **Reset** pinhole button more than 2 seconds.

Chapter 5: Troubleshooting

If your device is not functioning properly, please refer to the suggested solutions provided in this chapter. If your problems persist or the suggested solutions do not meet your needs, please kindly contact your service provider for support.

Problems with the device

Problem	Suggested Solution
I forgot my password.	First try entering the default user name and password: User Name: admin; Password: admin. (Both the User Name and Password are case sensitive, so make sure that CAPS LOCK is not on when entering this information.) If this fails, restore your HomePlug AV device to its factory default settings and then enter the default user name and password.
I can not access the LOGIN Web Configuration Interface.	<ul style="list-style-type: none">• Ensure you are using the correct IP address. (Default is 192.168.1.1.)• Check the hardware connections and ensure all LEDs are behaving as expected.• Ensure your computer's IP address is in the same subnet as the HomePlug device.• Check to see if your browser has Java, JavaScript, or ActiveX enabled. If you are using Internet Explorer, click Refresh to ensure that the Java applet is loaded.• Try closing the browser and re-launching it.• Reset the device to factory defaults and try to access the HomePlug adapter with the default IP address.
How do I reset the HomePlug AV200 adapter?	There are two ways to reset factory default settings: <ul style="list-style-type: none">• Hardware Reset To perform a hardware reset, hold down the reset button for more than 2 seconds, and release it.• Software Reset To initiate a software reset, select Administration > Settings Management and click on Load Default button to initiate the restart process. Then wait several minutes. Note: Restoring to factory default will wipe out all the configurations you have previously set. You are strongly advised to create a backup copy of the settings before resetting the device.
I can not start my HomePlug device.	Please check your power supply is working. HomePlug device operates from the power supplied by the home electrical wiring and can not operate without a working power supply.

My HomePlug device is unable to detect my other HomePlug device.	This may due to the accidental change of the device password. Access the HomePlug AV web interface and select Power Line Settings > Privacy. Fill in the password (case sensitive) in the blank. Then repeat the same procedure to the other HomePlug device via Utility or web interface.
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Appendix: Product Support & Contact

If you come across any problems please contact the dealer from where you purchased your product.

Contact LevelOne

Worldwide:

<http://global.level1.com>

MAC OS is a registered Trademark of Apple Computer, Inc.

Windows 98, Windows NT, Windows 2000, Windows Me, Windows XP and Windows Vista are registered Trademarks of Microsoft Corporation.