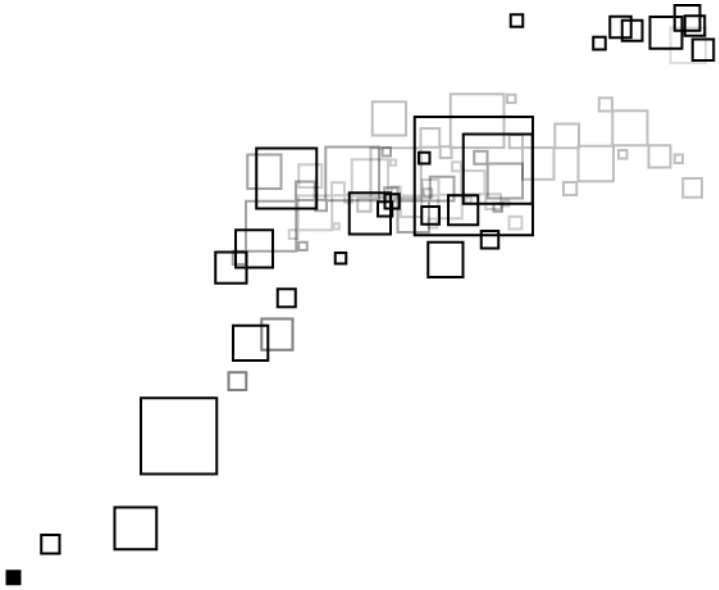

Easy Start Guide

HomePlug AV 200Mbps 4-Port Wireless-N Router

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Declaration of Conformity CE

Marking by the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

EN300 328, EN301 489-17, EN60950

Countries of Operation and Conditions of Use in the European Community

This device is intends to be operated in all countries of the European Community. Requirement is for indoors vs. outdoors operation, license requirements and allowed channels of operation apply in some countries as described in this document.

Note: The user must use the configuration utility provided with this product to check the current channel of operation and confirm that the devices operating in conformance with the spectrum usage rules for the European Community countries as described below.

If operation is occurring outside of the allowable channels as indicated in this guide, then the user must cease operating the product and consult with the local technical support staff responsible for the wireless network.

This device may be operated indoors or outdoors in all countries of the European Community using the 2.4GHz band: Channels 1 – 13, except where noted below:

- In Italy the end-user must apply for a license from the national spectrum authority to operate this device outdoors.
- In France outdoor operation is only permitted using the 2.4 – 2.454 GHz band: Channels 1 – 7.

Contents

About the Product

The HomePlug AV 200Mbps 4-port Wireless-N Router offers an All-in-one In-house Networking Device. The HomePlug wireless router offers high capacity for HD and SD multimedia distribution, while carrying other Internet services, is easy to use, simple to install and requires no new wires. It instantly converts existing power lines installations into high-speed virtual Ethernet networks.

The HomePlug Wireless Router combines the benefits of HomePlug AV and 802.11n Wireless-N features, provides dedicated powerline date rate up to 200Mbps - perfect for streaming HD IPTV and VoD (Video-on-Demand) while offering full in-house wireless coverage at a speed up to 300Mbps*. On top of that, the HomePlug wireless router has built-in QoS (Quality-of-Service) engine for enhanced Internet experience.

For powerline security, HomePlug AV 4-port wireless 802.11n Router supports 128-bit Advanced Encryption Standard (AES) to ensure maximum security. Coupled with "Simple Connect" button to enable the security and pairing up of HomePlug Adapters at a simple touch of a button. For maximum wireless security, the HomePlug wireless router supports WEP, WPA and WPA2 with WPS (Wi-Fi Protected Setup) feature.

Applications: High Definition (HD) and Standard Definition (SD) video distribution, TV over IP (IPTV), Higher data rate broadband sharing, Shared broadband internet access, Audio and video streaming and transfer, Expanding the coverage of wireless LANs, Voice over Internet Protocol (VoIP), PC files and applications sharing, Printer and peripheral sharing, Network and online gaming, Security camera.

Requirements

Your computer must meet the following minimum requirements.

- Any operating system can be used for device configuration.

  - Resource CD requires Windows ME and above.

- Internet Explorer 4.0 or Netscape Navigator 3.02
- 233MHz processor
- CD-ROM Drive
- Ethernet network adapter

Package Contents

Package contents are listed below. For any missing items, please contact your dealer immediately. Product contents vary for different models.

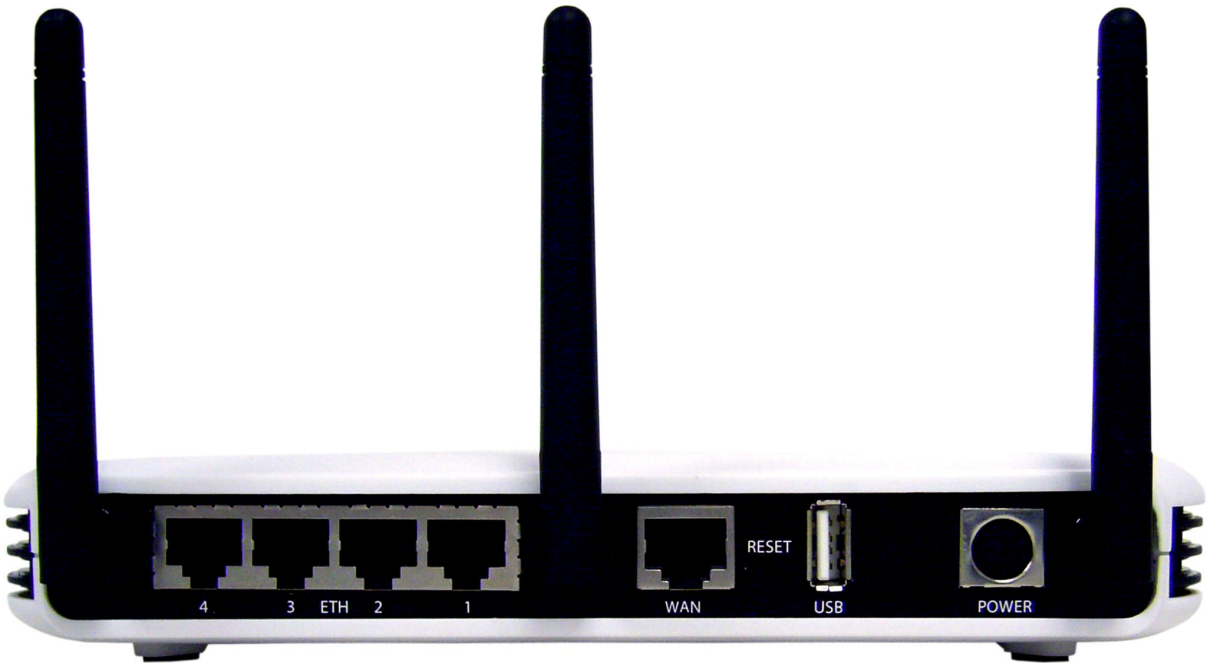
- HomePlug AV Wireless-N Router
- Ethernet cable
- ＋12VDC, 1.67A Power Adapter (Model: SHP10)
- Easy Start Guide
- Resource CD

Device Design

Front Panel

	Label	Action	Description
A	Simple Connect Button		Press for 2 seconds to create or join a HomePlug AV network. Press for 10 seconds to reset the Private Network Name to a random key.
B	Power	Off	No power is supplied to the device
		Steady light	Connected to an AC power supply
C	Powerline Activity	Off	No Homeplug connection
		Steady light	Homeplug connection established The LED colors represents the connection rate within the HomePlug AV network whether it is good (red), better (amber), or best (green).
		Blinking light	Transmitting/Receiving data
D	USB	Blinking light	Will blink 3 times indicating Windows Connect Now (WCN) Process
E	WLAN	Off	Wireless Disabled
		Steady Light	Wireless Enabled
		Blinking light	Transmitting/Receiving data wirelessly
F	WAN	Off	No modem connection
		Steady light	Connected to an active modem
		Blinking light	Transmitting/Receiving data
G	Ethernet 1-4	Off	No Ethernet connection
		Steady light	Connected to an active Ethernet device
		Blinking light	Transmitting/Receiving data
H	WPS (Wi-Fi Protected Setup)		Press for two seconds (or until the LED blinks) to start WPS pairing. Wireless client must be WPS-enabled and must be pressed within 3 minutes.

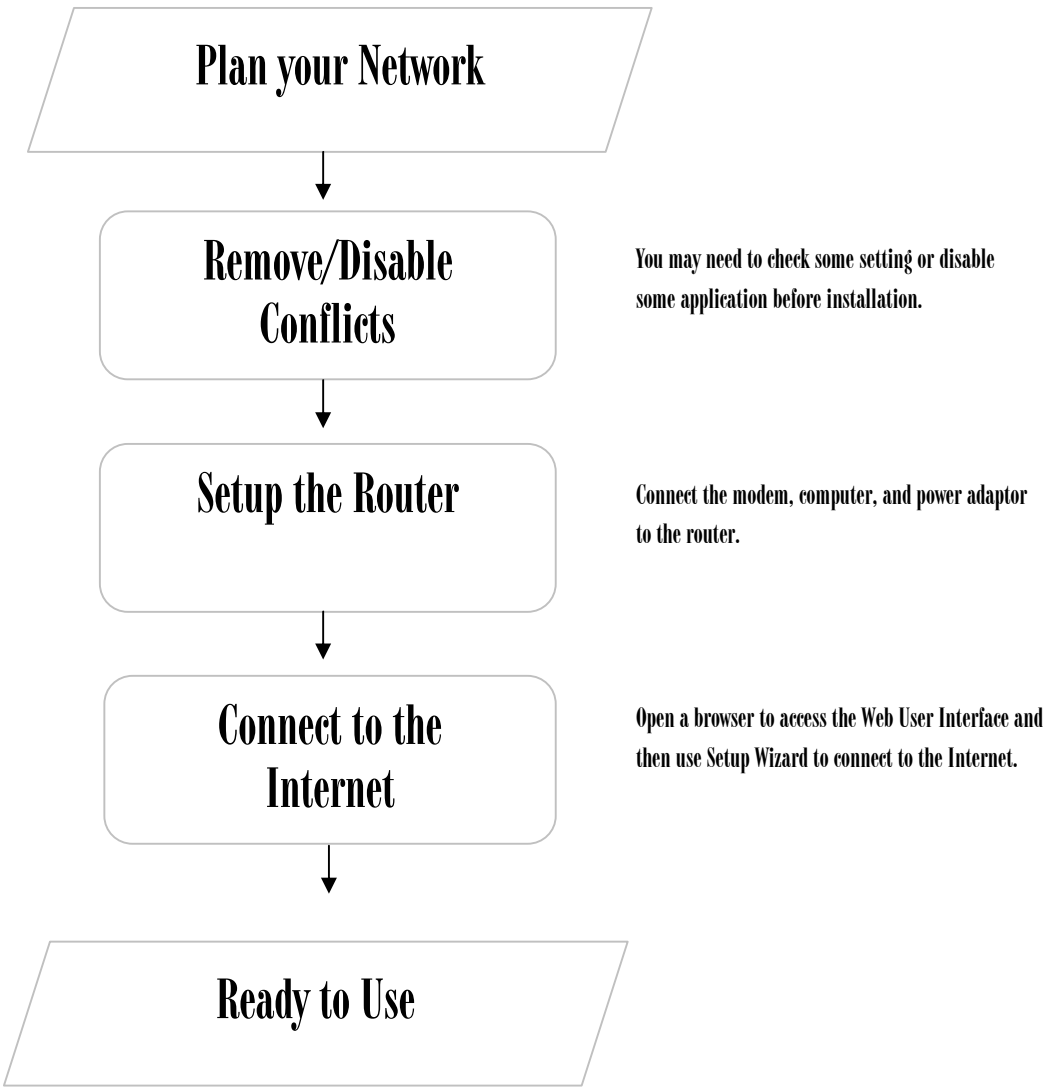
Back Panel



	Label	Used for…
1	Power	Connecting the +12VDC, 1.67A DC power adapter Note: Only SHP10 Power Adapter can be used with this Product.
2	USB	Windows Connect Now (WCN)
3	Reset	Press for 2 seconds to reset the Router and HomePlug to default settings.
4	WAN	Connecting with a modem using an Ethernet cable
5	Ethernet 1-4	Connecting with computers/devices using an Ethernet cable
6	Antenna 1-3	Sending/receiving wireless signals

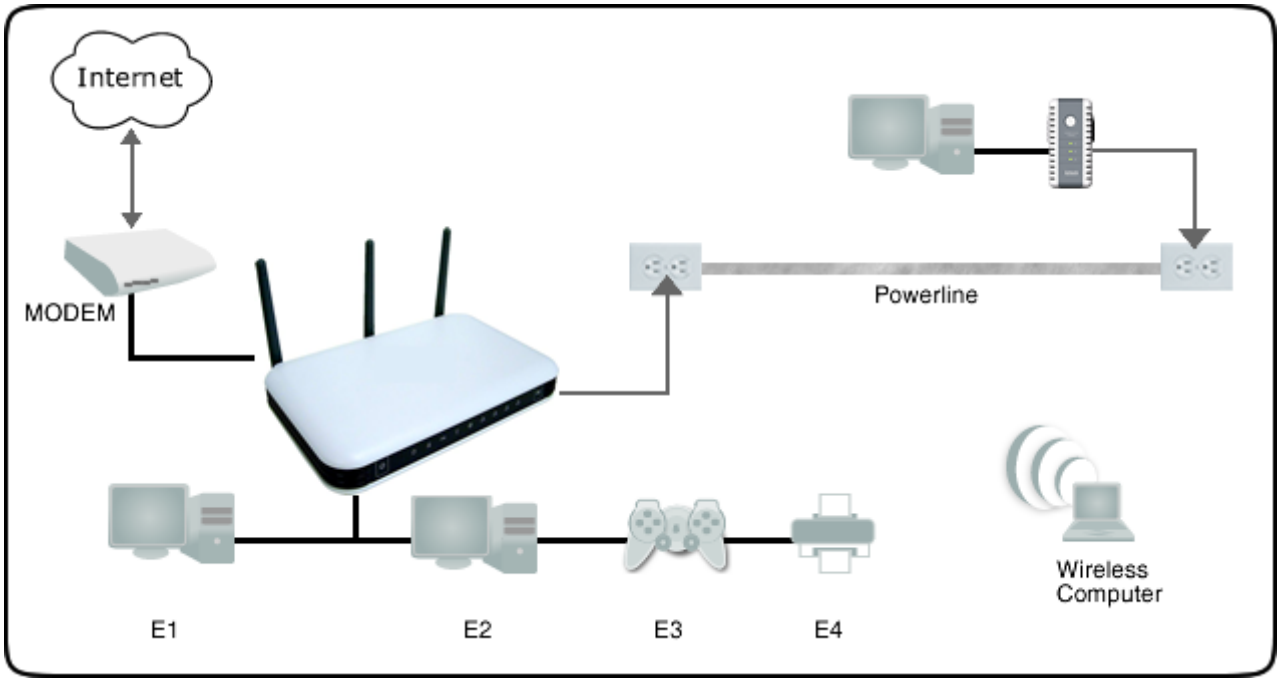
Getting Started

Setting up the device is easy. The flowchart below provides an outline of the steps needed to complete the installation. Brief descriptions appear beside each step. Detailed instructions are provided in the subsequent pages.



Planning Your Network

Before moving ahead to setup your network, it is a good idea to draw out a network diagram to help identify your network devices and plan out how to connect these devices. The illustration below is an example of a network diagram.



To create a network diagram:

- For wireless devices, identify the wireless devices you want to include in the network
- For wired devices, identify which router port you want to use for each device.
- For HomePlug devices, identify the HomePlug devices you want to include in the network.

Remove or Disable Conflicts

To make sure the router installation moves on smoothly, you need to remove or disable conflicts that may interfere the installation. Probable conflicts may include:

- Internet sharing applications
- Proxy software
- Security software
- TCP/IP settings
- Internet properties
- Temporary Internet files

Internet Sharing, Proxy, and Security Applications

Internet sharing, proxy software, and firewall applications may interfere with the router installation. These should be removed or disabled before start the installation.

If you have any of the following or similar applications installed on your computer, remove or disable them according to the manufacturer's instructions.

Internet Sharing Applications	Proxy Software	Security Software
Microsoft Internet Sharing	WinGate	Symantec
	WinProxy	Zone Alarm

Configuring TCP/IP Settings

Check if your computer uses the default TCP/IP settings.

To check the TCP/IP properties:

1. Click the Start button, and then click Run. This opens the Run dialog box.
2. Type control ncpa.cpl, and then click OK. This opens the Network Connections in your computer.
3. Right-click LAN, and then select Properties. This opens the Local Area Connection Properties dialog box.
4. Select Internet Protocol (TCP/IP), and then click Properties. This opens the Internet Protocol (TCP/IP) dialog box.
5. Check Obtain an IP address automatically.
6. To close the Internet Protocol (TCP/IP) dialog box, click OK.
7. To close the Local Area Connection Properties dialog box, click OK.

Configuring Internet Properties

To set the Internet Properties:

1. Click the Start button, and then click Run. This opens the Run dialog box.
2. Type control inetcpl.cpl, and then click OK. This opens Internet Properties.
3. Click Connections tab.
4. In Dial-up and Virtual Private Network settings, check Never dial a connection.
5. To close Internet Properties, click OK.

Removing Temporary Internet Files

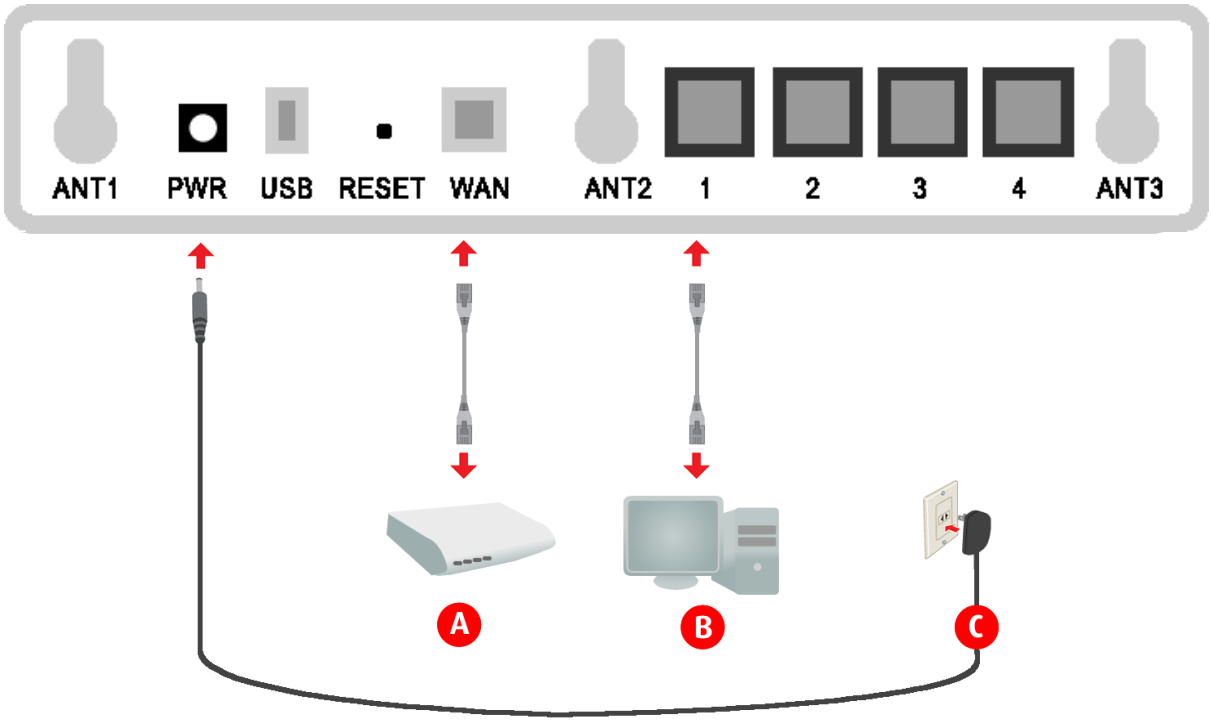
Temporary Internet files are files from Web sites that are stored in your computer. Delete these files to clean the cache and remove footprints left by the Web pages you visited.

To remove temporary Internet files:

1. Click the Start button, and then click Run. This opens the Run dialog box.
2. Type control, and then click OK. This opens Control Panel.
3. Double-click Internet Options. This opens Internet Options.
4. In the Temporary Internet Files pane, click Delete Cookies.
5. Click Delete Files.
6. To close Internet Properties, click OK.

Setup the Device

When installing the router, find an area where there are enough electrical outlets for the router, the main computer, and your other computer devices.



To setup the router:

A. Use an Ethernet cable to connect a modem to the WAN port.

B. Use an Ethernet cable to connect a computer to any of the available Ethernet ports from 1-4.

C. Connect the power adapter and then plug it to an electrical source.

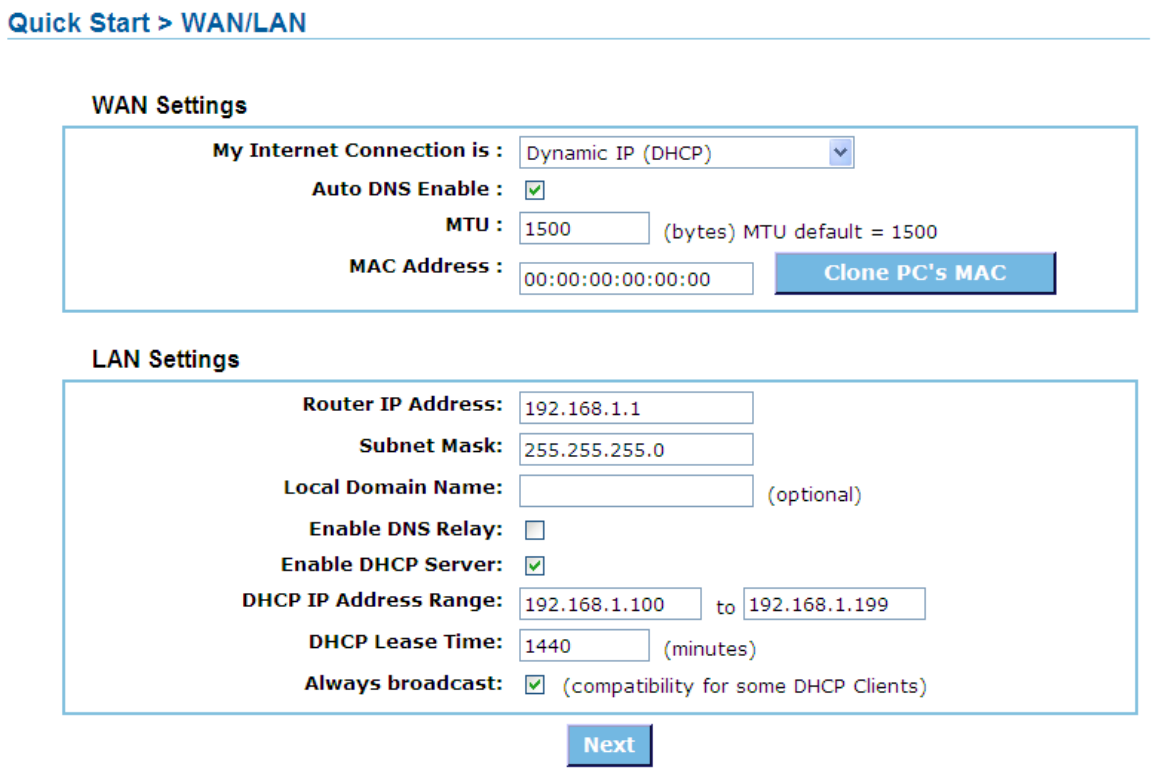
Connecting to the Internet

To connect to the Internet, use the Web User Interface's Setup Wizard.

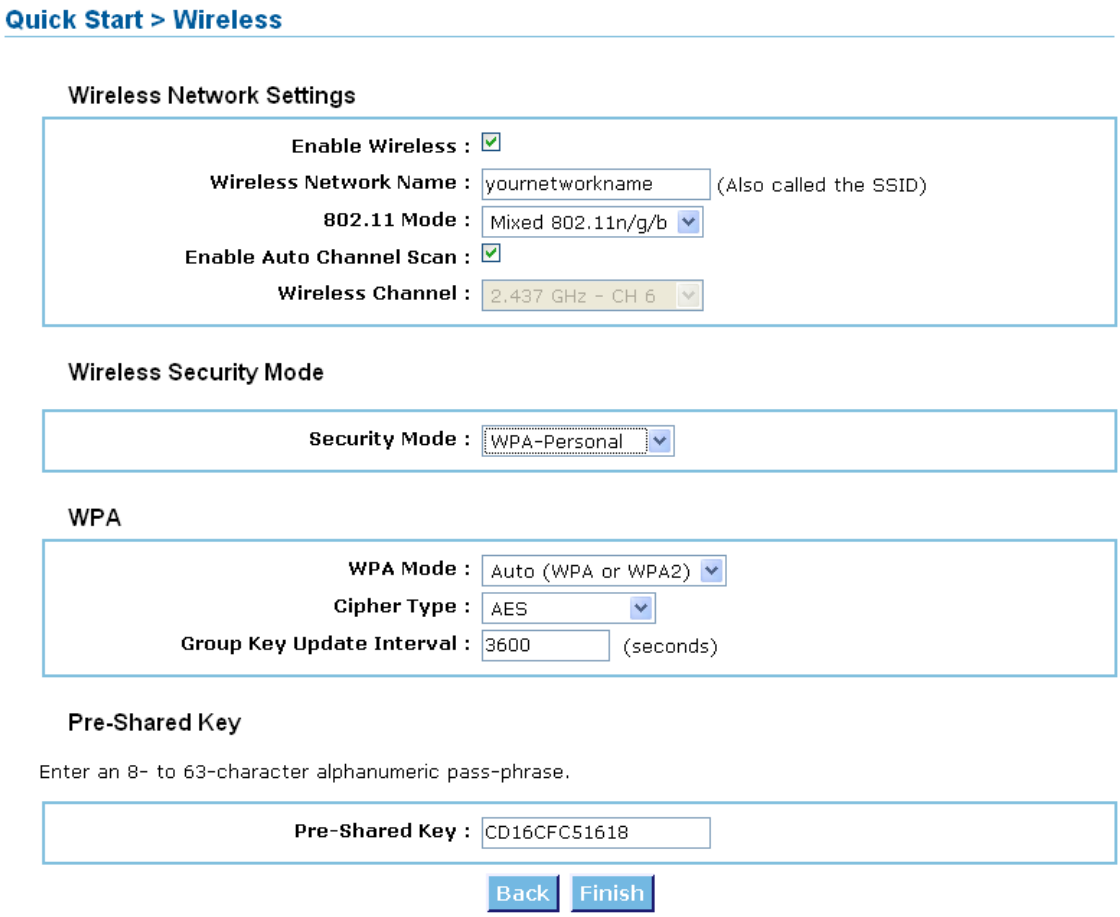
Note: To connect to the Internet, make sure that your router is connected to a modem and you have an active Internet service account.

To connect to the Internet via the Web User Interface:

1. Open your browser.
2. Type 192.168.1.1 in the address field and then press Enter. This opens the Log In Authentication page.
3. Type your Username and Password. The default username is admin, with blank password.
4. Quick Start Setup opens. You will be asked to provide the WAN and LAN Settings.



5. Configure the WAN and LAN settings, and click Next.

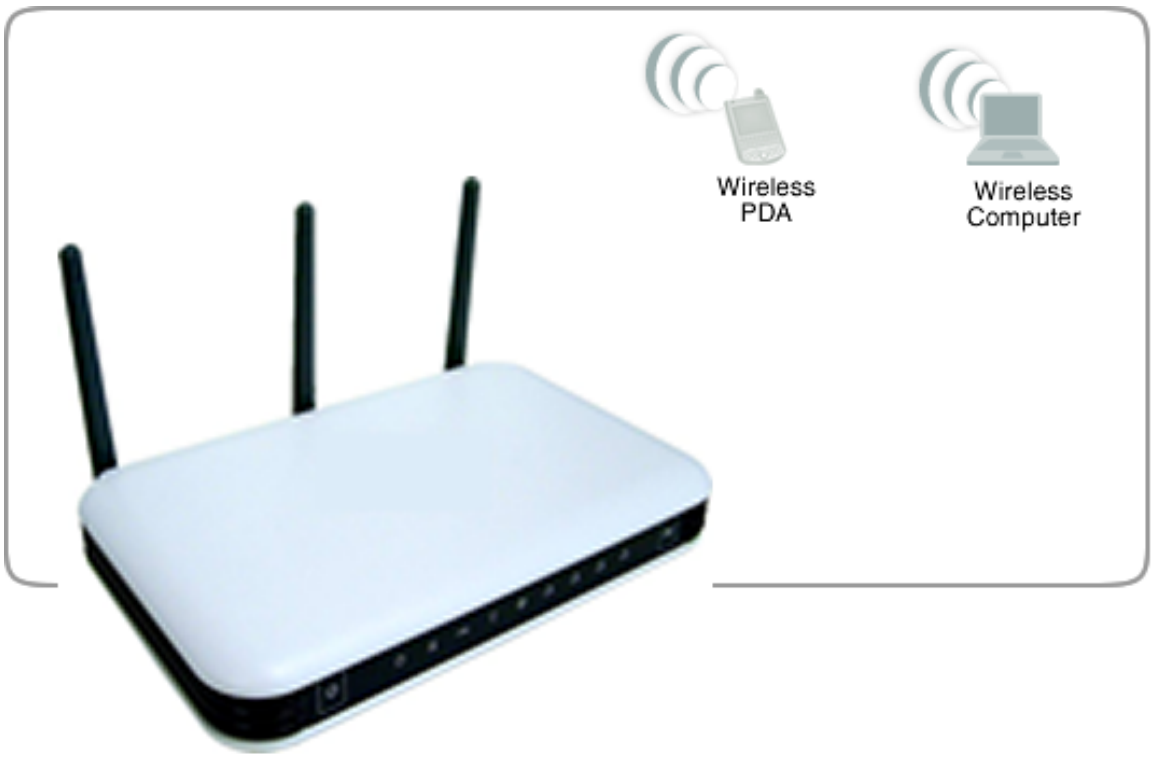


6. Configure the Wireless Network Settings including the Wireless Security Mode and click Finish.
7. After you click Finish, the router will save the new settings and then try to establish a connection with your Internet service provider.

To verify if your connection has been successful, click Product Info under the Basic Menu. A WAN IP address will appear under the WAN Connection Information pane.

Connecting Wireless Devices

- Manual Setup
- Using WPS (Wi-Fi Protected Setup)
- Using WCN (Windows Connect Now)



Manual Setup

After you setup the Router settings through the main computer, you can connect other devices with wireless capabilities. Wireless devices relieve you from the task of laying out cables and allow you to use the Internet connection from your router.

To connect with wireless devices:

1. Turn on your wireless device.
2. Open the software you use to detect a wireless connection. This opens a window to ask for the connection settings.
3. Enter the connection settings for the wireless network. These settings are defined in your router during setup.

WPS (Wi-Fi Protected Setup)

WPS button allows you to enable Wi-Fi Protected Setup (WPS). When enabled, Wi-Fi Protected Setup automatically detects and connects wireless clients into the wireless network by broadcasting the wireless network settings from your Access Point to you wireless device/s.

To setup WPS:

1. Press the WPS button on the router for two seconds, or until the LED blinks
2. Within 3 minutes, press the WPS button on the Wireless Client.

Note: WPS can only be used with wireless client devices that have a compatible WPS component.

WCN (Windows Connect Now)

WCN (Windows Connect Now) technology allows users to easily create a wireless network and add additional wireless devices using a USB flash drive.

With Windows Connect Now, users running Windows XP Service Pack 2 and later Windows OS version can create wireless network configuration settings and transmit them to the access point and other wireless devices.

To setup WCN (Windows Connect Now):

1. Click Start and then click Control Panel.
2. For Control Panel Category View: click Network and Internet Connections, and then click Wireless Network Setup Wizard.

   For Control Panel Classic View: click Wireless Network Setup Wizard.
3. Follow the instructions on your screen.
4. Choose "Use a USB flash drive"
5. Insert the USB Flash drive into your computer. Wireless network configuration settings will be saved to the flash drive.
6. Plug the flash drive into your Access Point, wireless client or Windows Connect Now compatible device that you want to add to the wireless network.

Note: Windows Connect Now can only be used with WCN compatible devices.

Creating a HomePlug AV Network

To create a HomePlug AV network, you need at least two HomePlug AV devices using random Private Network Names. When you press Simple Connect on both devices, a common Private Network Name will be automatically generated to enable them to communicate with each other.

Using Simple Connect Button

Simple Connect provides a more convenient way of creating your HomePlug AV network without the need to open the HomePlug AV Utility software from a computer.

To create a HomePlug AV network using Simple Connect:

Plug your HomePlug AV adaptor near your Router where you can easily observe the LED behavior.

1. Upon connection, the LEDs will blink simultaneously and then the Power LED lights on steadily.
2. Press Simple Connect for two seconds on your Router. After you release the button, the Simple Connect will blink. If the Simple Connect did not blink, press button again for two seconds.

Note: Do not press Simple Connect for more than 2 seconds.

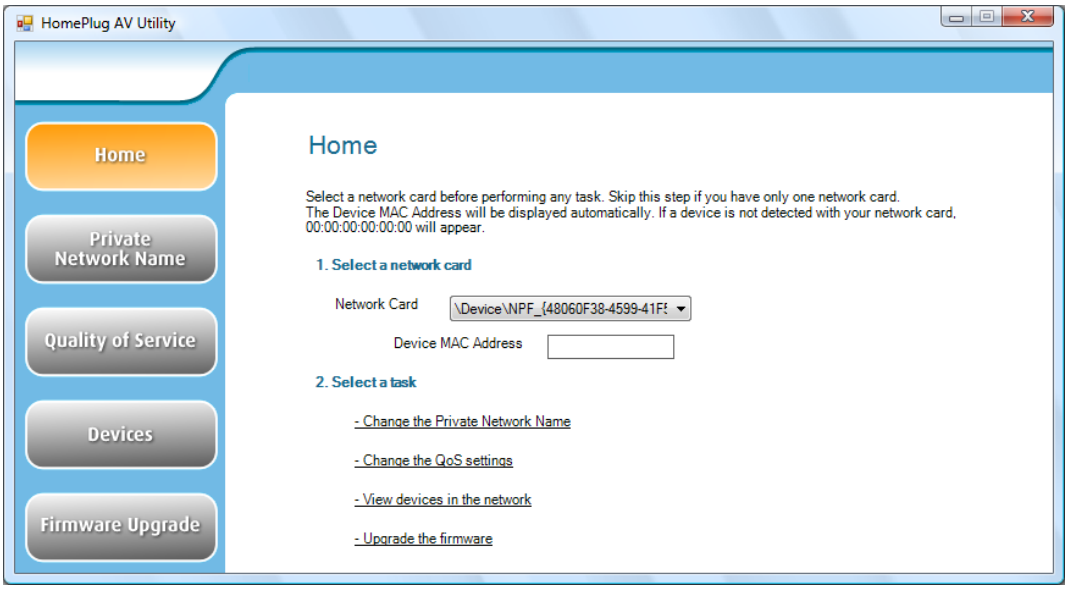
3. Press Simple Connect for two seconds on your HomePlug AV adaptor. After you release the button, the Simple Connect will blink. If the Simple Connect did not blink, press button again for two seconds.
4. Make sure to press Simple Connect on your HomePlug AV adaptor within two minutes after you press Simple Connect on your Router. The LEDs on both devices will switch off and on twice to signify that they are searching for another device to pair with.
5. To confirm if the connection was established, check the LEDs. The Powerline Activity LEDs on your Router and HomePlug Adaptor are on. When the Powerline Activity LED on either Router or HomePlug Adaptor is off, this means the pairing is not successful. In this case, press the Simple Connect button for 10 seconds (or until all the LEDs turns Off and On) to reset to a random Private Network Name, and redo the Pairing process (Step 1-4).
6. Unplug the HomePlug AV adaptor and then connect it to your Ethernet-enabled device using an Ethernet cable. After connecting the Ethernet cable, plug the HomePlug adaptor directly to a wall outlet.

Note: HomePlug AVs work best when connected directly to a wall socket. Avoid plugging it to a power strip or power extension. Other electrical devices in the power strip produce electrical noise that may affect the performance of the HomePlug.

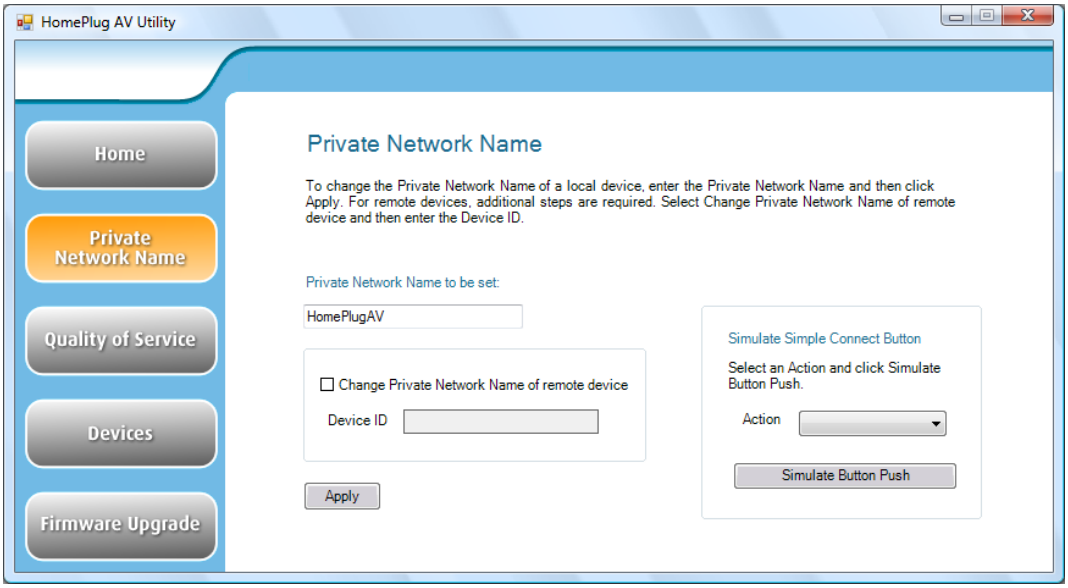
Using HomePlug AV Utility

HomePlug AV Utility is a software application that allows you to configure HomePlug AV. To create a HomePlug AV network using HomePlug AV Utility:

1. Install HomePlug AV Utility to your computer. Utility installer can be found in the Resource CD included with your Router.
2. After installation, click the Start button, click Programs, click HomePlug AV, click HomePlug AV Ethernet Adapter, and then click HomePlug AV Utility.



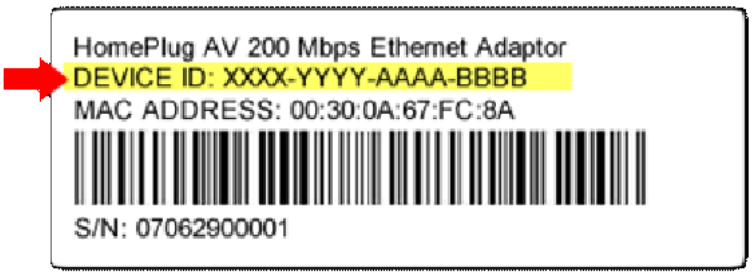
3. Select Private Network Name Tab.



4. Type the new Private Network Name. This field is case sensitive. It accepts 8 to 64 alphanumeric characters including punctuation marks but no spaces.
5. Click Apply. When the process is complete, the message Settings Applied appears.

To setup the Private Network Name of a remote HomePlug AV Adaptor:

1. Select Change Private Network Name of remote device.
2. Type the Device ID of the remote device. The Device ID can be found on the label pasted on the device.



3. Click Apply. When the process is complete, the message Settings Applied appears.

⚠ Safety Precautions

- Do not open, service, or change any component.
- Only qualified technical specialists are allowed to service the equipment.
- Observe safety precautions to avoid electric shock
- Check voltage before connecting to the power supply. Connecting to the wrong voltage will damage the equipment.