Linksys PLW400 | Powerline AV Wireless Network Extender
Thank you for choosing this Linksys PLW400 wireless Powerline network adapter. This adapter provides easy setup and let you connect wireless network devices to your Powerline network.

This setup guide assumes you already have a working Powerline network. You can find more help from our award-winning, 24/7 customer support at Linksys.com/support.

**Overview**

**Features**

- **Wi-Fi Protected Setup™** button—Press this button to connect with other wireless network devices that have a Wi-Fi Protected Setup button.
- **HomePlug Simple Connect** button—Configures advanced security (the network password) for your Powerline network.
- **Reset** button (recessed)—To restore the factory default settings (including the advanced security settings and the network password), use a pointed object to press and hold the Reset button for at least ten seconds.
- **Powerline** LED—The Powerline LED turns on when the adapter is connected to the Powerline network. The LED flashes to indicate network activity.
- **Ethernet** LED—The Ethernet LED turns on when a wired network device is turned on and connected to the adapter's Ethernet (network) port. The LED flashes to indicate network activity.
- **Wireless** LED—The Wireless LED turns on when a wireless network device is connected to your PLW400.
- **Wi-Fi Protected Setup** LED—This LED flashes while a wireless network device is connecting with your PLW400 using Wi-Fi Protected Setup.
- **Power** LED—The power LED turns on when the adapter is connected to a powered electrical outlet.
- **Ethernet** port—Use a network (Ethernet) cable to connect this port to a wired network device.
How Powerline networking works

Electrical wiring runs through your home or office, carrying power to electrical outlets in every room. The typical wired Ethernet network uses Ethernet network cables to connect your wired network devices. A Powerline network uses your existing household wiring as the wiring for your Powerline network.

To create your Powerline network, use two or more Powerline adapters. Each device on your Powerline network requires a connection (either wired or wireless) to a Powerline adapter.

Your PLW400 contains one Ethernet port and a wireless access point. You can connect one wired device and several wireless devices to it.

Example installation

This diagram shows a basic Powerline network in a house. The router upstairs is connected to a Powerline adapter, which is plugged into an electrical outlet. Downstairs, the gaming console and a computer are connected to the PLW400, which is plugged into an electrical outlet.

Using the household wiring of the home, the router expands the local network to include the gaming console and desktop computer in the living room. Internet access, files, and printers can be shared between the computers and other networked devices. For online gaming, you can play downstairs in the comfort of your living room, while using the high-speed Internet connection of the router and modem upstairs.
Installing the PLW400

Installation overview

To set up your Powerline network, you should:
• Make sure you already have Internet access and a working home Powerline network.
• Make sure that the wireless devices that you want to connect to the PLW400 have a working wireless feature. An easy way to test this is to first try to connect the wireless network device to your home’s wireless router while near the router.

Tips
• If possible, connect Powerline adapters directly to a wall power outlet, and not to an extension cord, power strip, or surge protector.
• If a Powerline adapter must be installed onto a power strip, make sure that no other electronic devices are connected to the same power strip.
• If possible, position the PLW400 near the wireless devices that you want to connect.
• Avoid obstructions (such as metal file cabinets, mirrors, and thick walls) between the PLW400 and any wireless device you want to connect.

How to connect your PLW400

After you have a basic Powerline network set up, you can add this PLW400 anywhere in your home.

TIP
You can also set up and configure all of your Linksys Powerline devices using the configuration utility. For more information, see "Using the Utility" on page 6.

To connect your PLW400:

1. Make sure that the power switch on the right side is set to I (on).

2. If your home network already has security set up (recommended):
   a. Connect the PLW400 to a power outlet near your main wireless router.
   b. On the PLW400, press and hold the Wi-Fi Protected Setup button at least one second, until the the Wi-Fi Protected Setup LED flashes.
c. Within two minutes, press the Wi-Fi Protected Setup button on your wireless router. The PLW400 retrieves the security settings from the router and connects to your wireless network.

3. Move your PLW400 to a power outlet near the wireless network device(s) you want to connect. Typically, this area is not covered well by your home’s wireless network router. The Powerline LED flashes, then stays on when the connection to the rest of the Powerline network is finished. Your home’s wireless network is now available in the area surrounding the PLW400.

4. Connect the wireless network device to the wireless network in the usual manner. For instructions, see your wireless network device’s user documentation. The PLW400’s Wireless LED flashes, then stays on when a wireless network device successfully connects.

Setting up advanced security

NOTE
The devices connected to the Powerline adapters will temporarily lose Internet connection during the security setup.

To configure your network adapter with advanced security:
1. On one of the existing Powerline adapters that already have advanced security set up, press and hold the HomePlug Simple Connect button for at least one second, until the Powerline LED begins flashing slowly.
2. On your PLW400, press and hold the HomePlug Simple Connect button for at least one second, until the Powerline LED begins flashing slowly. When the LED stops flashing, the network key has been shared with the PLW400.

NOTE
The devices connected to the adapters will regain Internet access within five minutes.

Using the Utility

If you’re having difficulty connecting the adapters using the previous method, or if you’d like to set more advanced options, you can use the configuration utility.

To install the configuration utility:
1. Connect a computer’s Ethernet port to the PLW400’s Ethernet port using the provided cable.
2. Insert the setup CD into the computer’s CD or DVD drive, then follow the on-screen instructions.

To use the configuration utility:
1. After the utility is installed:
   On Windows systems:
   a. Click Start, All Programs, Cisco Systems, then Cisco Powerline AV Utility. The utility opens.
   On Mac OS X systems:
   a. Open the Applications folder, then double-click the Cisco Powerline AV Utility icon. The utility opens.
NOTE
If you try to change the settings of a Powerline device from a computer that is not connected directly to that device with a cable, you are prompted for a password. The device password is printed on the back of the device.

2. Click the Network Status tab to view details of the Powerline adapters that are connected to your network.

   ![Network Status Tab](image)

   - If a connected adapter is not listed here, click Refresh.
   - To change information for any adapter that’s listed, select the adapter, then click Edit.

3. Click the Security tab to manually change the network key for each device. If you need to revert to the default key, click Restore Default Key.

   ![Security Tab](image)

4. Click the Quality of Service tab to specify how the network prioritizes network bandwidth.

   ![Quality of Service Tab](image)

5. Click the Administrator tab to restart an adapter, restore factory defaults, or upgrade the adapter’s firmware.

   ![Administrator Tab](image)
6. Click the **Wireless Settings** tab to change the wireless network name (SSID), wireless security type, or passkey.

![Wireless Settings](image)

Settings are applied to the adapter(s) immediately. Close the window to exit the utility.

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## Troubleshooting

**Your wireless network device is not recognized by your network.**

Try the following:

- Make sure that the wireless device is turned on and that its wireless networking is turned on.
- If possible, position the PLW400 near the wireless device that you want to connect.
- Avoid obstructions (such as metal file cabinets, mirrors, and thick walls) between the PLW400 and any wireless device you want to connect.

If you have set up advanced security for the Powerline network, check the following:

- Make sure all adapters on the Powerline network have been configured with the same network password. The network password must be identical in order for them to communicate with each other. See “Setting up advanced security” on page 6 or “Using the Utility” on page 6.

**The Ethernet LED does not turn on after you connected a wired Ethernet device to the Powerline adapter.**

Follow these instructions:

1. Make sure that the Ethernet network cable is securely connected to the adapter.
2. Make sure that the Ethernet network cable is securely connected to the network device you are connecting.

Or:

1. Disconnect the adapter from the power outlet.
2. Disconnect the Ethernet network cable from the adapter.
3. Wait five seconds.
4. Re-connect the Ethernet network cable to the adapter.
5. Re-connect the adapter to the power outlet.
6. If this solution does not work, make sure that the electrical outlet is working properly. Plug a different device into the outlet, and try to turn it on.

**You cannot connect to other computers on your local network or to the Internet.**

If you did not set up advanced security for the Powerline network, follow these instructions:

1. Locate the Powerline adapter connected to the computer that cannot connect.

2. On the left side of the adapter, use a pointed object to press and hold the **Reset** button for at least ten seconds. This resets the adapter to its factory default settings.

If you have set up advanced security for the Powerline network, check the following:

- Make sure all adapters on the Powerline network have been configured with the same network password. The network password must be identical in order for them to communicate with each other. See “Setting up advanced security” on page 6 or “Using the Utility” on page 6.

- If you are adding a new adapter to a pre-existing Powerline network with a unique network password, follow the instructions in “Using the Utility” on page 6.

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**The LEDs are flashing and I don’t know what it means.**

Refer to the following table of LED behavior to help diagnose the problem:

<table>
<thead>
<tr>
<th>LED Type</th>
<th>Off</th>
<th>Flashing Fast</th>
<th>Flashing Slow</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Powerline LED</strong></td>
<td>Not connected to Powerline network</td>
<td>Send/Receive data</td>
<td>Pairing</td>
<td>Connected to Powerline network</td>
</tr>
<tr>
<td><strong>Ethernet LED</strong></td>
<td>Not connected to Ethernet network</td>
<td>Send/Receive data</td>
<td>Solid</td>
<td>Connected to Ethernet network</td>
</tr>
<tr>
<td><strong>Wireless LED</strong></td>
<td>Wireless not connected</td>
<td>Send/Receive data</td>
<td>Wireless enabled</td>
<td></td>
</tr>
<tr>
<td><strong>Wi-Fi Protected Setup</strong></td>
<td>Connection in progress (up to two minutes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power LED</strong></td>
<td>Device power off</td>
<td>Device power on and ready</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Wi-Fi Protected Setup**     | Connection error.                        |                             |                             |                             |
| **Power LED**                 | Factory default                          |                             |                             |                             |
| **Power LED**                 | Pairing error/system error               |                             |                             |                             |

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**WEB**

If your questions are not addressed here, go to the Linksys Support website at [Linksys.com/support](http://Linksys.com/support).
## Specifications

<table>
<thead>
<tr>
<th><strong>Model</strong></th>
<th><strong>PLW400</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standards</strong></td>
<td>HomePlug AV, IEEE 801.11b/g/n, 802.3, 802.3u</td>
</tr>
<tr>
<td><strong>Ports</strong></td>
<td>Fast Ethernet (10/100)</td>
</tr>
<tr>
<td><strong>Buttons</strong></td>
<td>Wi-Fi Protected Setup, Easy Connect, Reset</td>
</tr>
<tr>
<td><strong>LEDs</strong></td>
<td>Powerline, Ethernet, Wireless, Wi-Fi Protected Setup, Power</td>
</tr>
<tr>
<td><strong>Security Features</strong></td>
<td>128-Bit AES Link Encryption, WPA2, WPA, WEP</td>
</tr>
<tr>
<td><strong>Modulation schemes</strong></td>
<td>1024/256/64/16/8 QAM, QPSK, BPSK, ROBO</td>
</tr>
<tr>
<td><strong>Network client support</strong></td>
<td>Up to 8 Powerline client devices, up to 32 wireless client devices</td>
</tr>
<tr>
<td><strong>Utility OS requirements</strong></td>
<td>Windows 7/Vista/XP, Mac OS X v10.5 or higher</td>
</tr>
<tr>
<td><strong>Default SSID</strong></td>
<td>“CiscoXXXXX” where XXXXX is the last 5 digits of the adapter’s serial number</td>
</tr>
</tbody>
</table>

### Environmental

| **Dimensions** | 113 × 73 × 33 mm (4.45 × 2.87 × 1.3 inches) |
| **Weight** | 158 g (5.6 oz.) |
| **Power** | 100-240V AC, 50-60 Hz |
| **Certifications** | FCC, IC, CE, WiFi, HomePlug AV |
| **Operating Temp.** | 0 to 40°C (32°F to 104°F) |
| **Storage Temp.** | -20 to 70°C (-4°F to 158°F) |
| **Operating Humidity** | 10 to 85% Non-condensing |
| **Storage Humidity** | 5 to 90% Non-condensing |