# NETGEAR®
# User Manual

# PowerLINE 1000, 1010 and 1200 Adapters

Models
  PL1000, PL1000v2
  PL1010, PL1010v2
  PLP1000
  PLW1000, PLW1000v2
  PLW1010, PLW1010v2
  PL1200
  PLP1200

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See the regulatory compliance document before connecting the power supply.

# Contents

# 1

# Your PowerLINE Adapter

This chapter describes your PowerLINE adapter and how your adapter fits into a home network. It also explains the security features and how to secure your PowerLINE network with a private encryption key.

The chapter contains the following sections:

- PL1000 and PL1010
- PL1000v2 and PL1010v2
- PLP1000
- PLW1000 and PLW1010
- PLW1000v2 and PLW1010v2
- PL1200
- PLP1200
- LED Descriptions
- Button Descriptions
- Ethernet Port
- Extra Outlet
- Adapter Label

For more information about the topics covered in this manual, visit the NETGEAR support website at netgear.com/support.

# PL1000 and PL1010

The hardware features of the PowerLINE PL1000 and PL1010 adapters are shown in the following figure. Note that adapters vary by region. Your adapter might look different.



Figure 1. Hardware features

1    Power LED

2    Ethernet LED

3    Pick A Plug LED

4    Ethernet port

5    Factory Reset button

6    Security button

# PL1000v2 and PL1010v2

The hardware features of the PowerLINE PL1000v2 and PL1010v2 adapters are shown in the following figure. Note that adapters vary by region. Your adapter might look different.



Figure 2. Hardware features

| 1 | Power LED |
|---|---|
| 2 | Ethernet LED |
| 3 | Pick A Plug LED |
| 4 | Ethernet port |
| 5 | Factory Reset button |
| 6 | Security button |

# PLP1000

The hardware features of the PowerLINE PLP1000 adapter are shown in the following figure. Note that adapters vary by region. Your adapter might look different.



Figure 3. Hardware features

| 1 | Power LED |
|---|-----------|
| 2 | Ethernet LED |
| 3 | Pick A Plug LED |
| 4 | Ethernet port |
| 5 | Factory Reset button |
| 6 | Security button |

# PLW1000 and PLW1010

The hardware features of the PowerLINE PLW1000 and PLW1010 adapters are shown in the following figure. Note that adapters vary by region. Your adapter might look different.



Figure 4. Hardware features

| 1 | Power LED |
|---|---|
| 2 | Ethernet LED |
| 3 | Pick A Plug LED |
| 4 | Ethernet port |
| 5 | Factory Reset button |
| 6 | Security button |
| 7 | Wireless LED |
| 8 | On/Off switch |
| 9 | WPS button |

# PLW1000v2 and PLW1010v2

The hardware features of the PowerLINE PLW1000v2 and PLW1010v2 adapters are shown in the following figure. Note that adapters vary by region. Your adapter might look different.
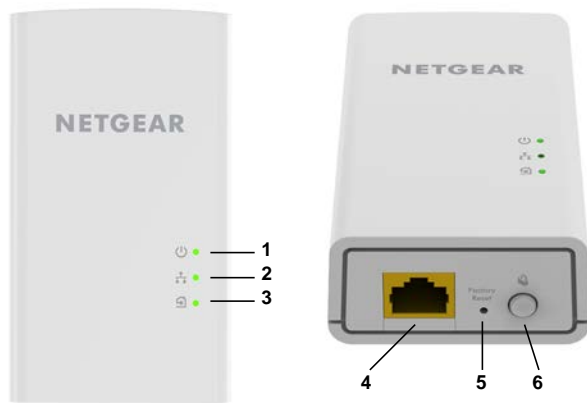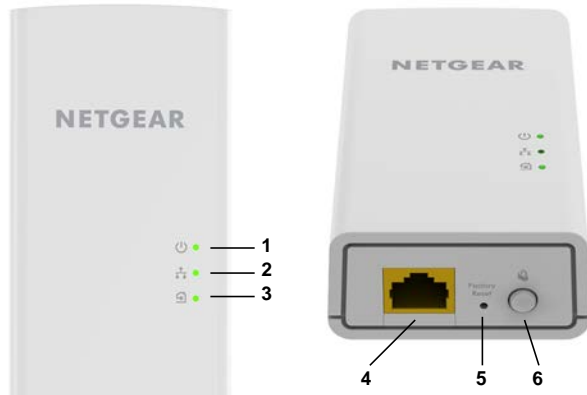


Figure 5. Hardware features

| 1 | Power LED |
|---|---|
| 2 | Ethernet LED |
| 3 | Pick A Plug LED |
| 4 | Ethernet port |
| 5 | Factory Reset button |
| 6 | Security button |
| 7 | Wireless LED |
| 8 | On/Off switch |
| 9 | WPS button |

# PL1200

The hardware features of the PowerLINE PL1200 adapter are shown in the following figure. Note that adapters vary by region. Your adapter might look different.
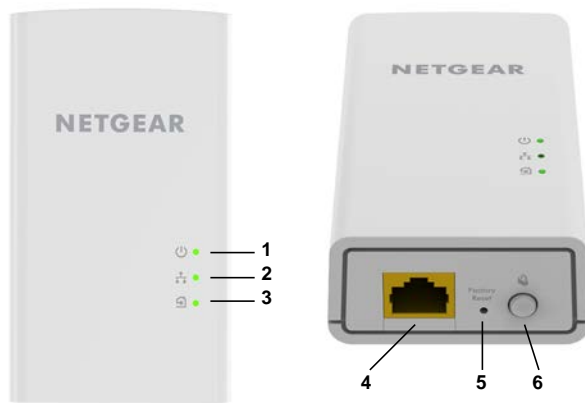


Figure 6. Hardware features

| 1 | Power LED |
| 2 | Ethernet LED |
| 3 | Pick A Plug LED |
| 4 | Ethernet port |
| 5 | Factory Reset button |
| 6 | Security button |

# PLP1200

The hardware features of the PowerLINE PLP1200 adapter are shown in the following figure. Note that adapters vary by region. Your adapter might look different.
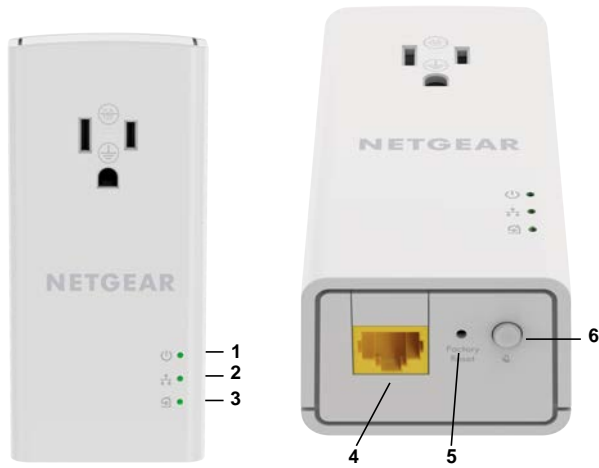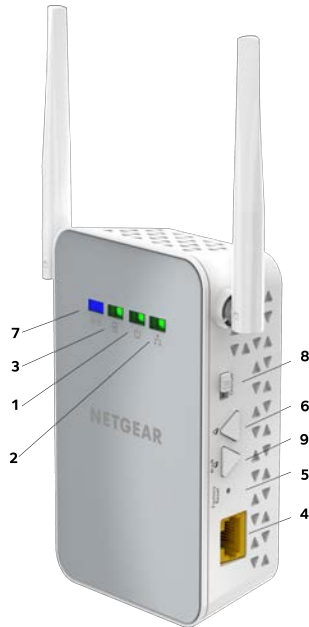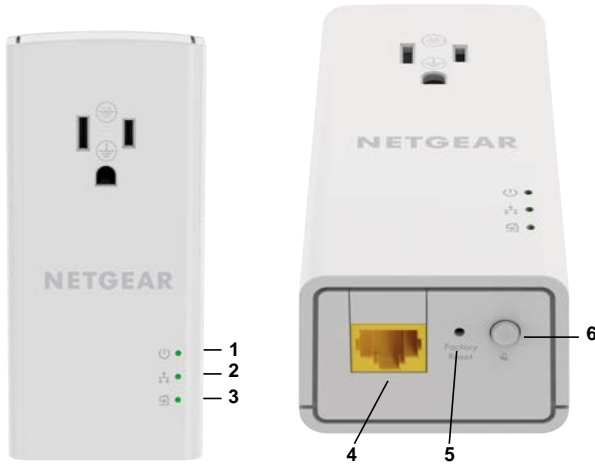


Figure 7. Hardware features
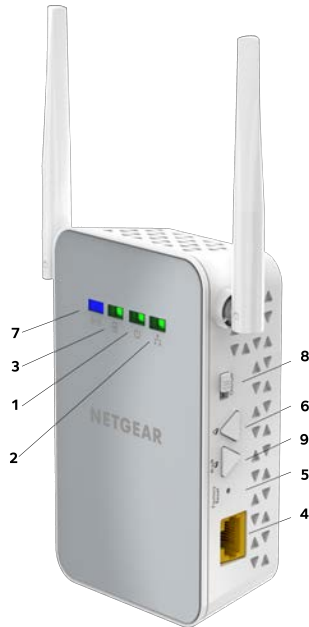
| 1 | Power LED |
|---|---|
| 2 | Ethernet LED |
| 3 | Pick A Plug LED |
| 4 | Ethernet port |
| 5 | Factory Reset button |
| 6 | Security button |

# LED Descriptions

The LEDs indicate the status of your PowerLINE adapter.

Table 1. LED descriptions

| Item | Description |
|---|---|
| Power LED  | **Solid green**. The electrical power is on. <br> **Solid amber**. The adapter is in power saving mode. (Power saving mode is not supported on model PLW1000.) <br> **Blinking green**. The adapter is in the process of setting up security. <br> **Off**. The adapter is not receiving electrical power. |
| Ethernet LED  | **Solid green**. The Ethernet port is linked. <br> **Off**. No Ethernet connection is detected. |
| Pick A Plug LED  | The Pick A Plug feature lets you pick the electrical outlet with the strongest performance, indicated by the color displayed by the LED: <br> **Red**. Link rate < 50 Mbps (good). <br> **Amber**. Link rate > 50 and < 80 Mbps (better). <br> **Green**. Link rate > 80 Mbps (best). <br> **Off**. The adapter did not find any other compatible PowerLINE devices using the same encryption key. |
| WiFi LED (PLW models only)  | **Solid blue**. The WiFi radio is on. <br> **Off**. The WiFi radio is off. |

# Button Descriptions

Use the buttons to restore the adapter to the factory configuration and to create a secure network.

Table 2. Button descriptions

| Button or Switch | Description |
| --- | --- |
| Factory Reset | Press the **Factory Reset** button for one second, and then release it to return the adapter to its factory default settings. |
| Security | Use the **Security** button to create a secure network. |
| WPS (PLW models only) | Use the **WPS** button to automatically connect your computer or other WiFi devices that support WPS to your PowerLINE network. |
| On/Off (PLW models only) | Use the **On/Off** switch to turn the device on and off. |

# Ethernet Port

PowerLINE adapters use Ethernet ports to convert a standard electrical wall outlet into a high-speed wired network connection. You can use the wired network connection to bring Internet connectivity to any device with an Ethernet port, such as a computer, game console, Blu-ray player, smart TV, HD set-top box, or network DVR.

# Extra Outlet

For models with an extra outlet, you must observe a few restrictions on how you use the extra outlet.

The technical specifications for your model provide socket outlet ratings. See Technical Specifications and Safety Information on page 28. See Safety Information on page 36 for general guidelines for use.

# Adapter Label

The adapter label provides unique details specific to your device. It displays the following:

- Model number
- PowerLINE MAC address (except PL1000, PL1010, PLP1000)
- Ethernet MAC address (except PL1000, PL1010, PLP1000)
- MAC address (PL1000, PL1010, PLP1000 only)
- Serial number
- Device password

# 2

# PowerLINE Networks

This chapter describes the setup and configuration of PowerLINE networks.

The chapter contains the following sections:

-

# How the PowerLINE Adapter Fits Into Your Network

You can use one or more PowerLINE adapters to extend Internet access throughout your home.

A PowerLINE network consists of two or more compatible PowerLINE devices that communicate with each other using your electrical power lines. One of the PowerLINE devices is connected with an Ethernet cable to your router so that the PowerLINE network is linked to your local area network (LAN). Connecting one PowerLINE device to your router allows all the PowerLINE devices on the PowerLINE network to communicate with the router and use its Internet connection.

The following illustration shows a PowerLINE network with one PowerLINE device in Room 1 and a second PowerLINE device in Room 2.
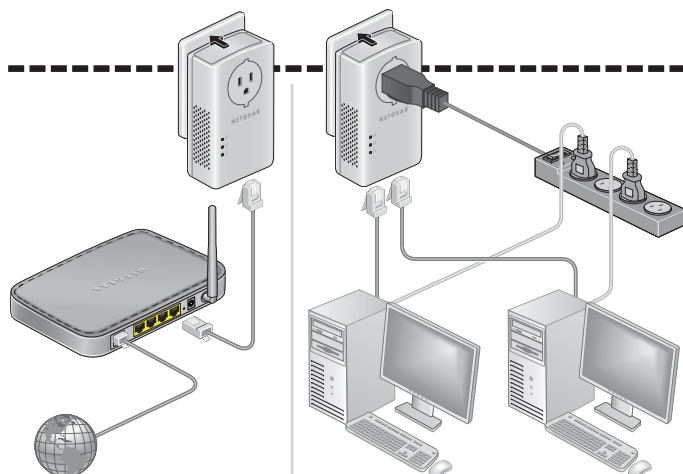


Figure 8. Poweline adapters connecting two rooms

To form a PowerLINE network, you need at least two compatible PowerLINE devices.

For best performance, follow these guidelines when you plan the location of your PowerLINE devices:

* Use an electrical outlet that is not controlled by a wall switch to avoid accidentally turning off the power to the outlet.

* Avoid plugging PowerLINE products into electrical outlets that are located near appliances that consume a lot of power, such as washers, dryers, or refrigerators.

Interference from these appliances might prevent PowerLINE products from working correctly or reduce PowerLINE network performance.

- Do not plug PowerLINE products into a power strip, extension cord, or surge protector. Connecting a PowerLINE product to one of these devices might prevent the product from working correctly or reduce PowerLINE network performance.
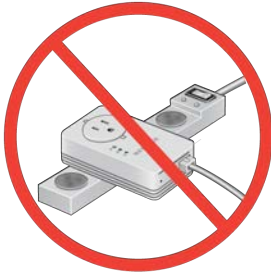


# Set Up a New PowerLINE Network

You can use two or more PowerLINE adapters to form a network or extend an existing network to additional wired Ethernet devices.

PowerLINE networks use an encryption key common to all adapters on the network. You can use the default key or a private key. We recommend that you use a private key. This procedure sets a private key.

**To set up a new PowerLINE network:**

1. If you are extending an existing wired network, make sure that your wired Ethernet connections are working by navigating to a web page from a computer connected to your router or gateway using an Ethernet cable.

2. Plug one PowerLINE device into a wall outlet near your router or gateway.
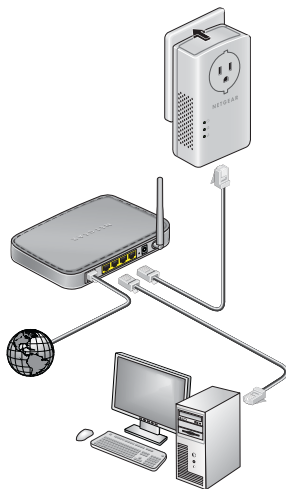
3. Connect the device to the LAN port on your router or gateway using an Ethernet cable.

4. Plug the second PowerLINE device into a wall outlet where you want to add Internet access.
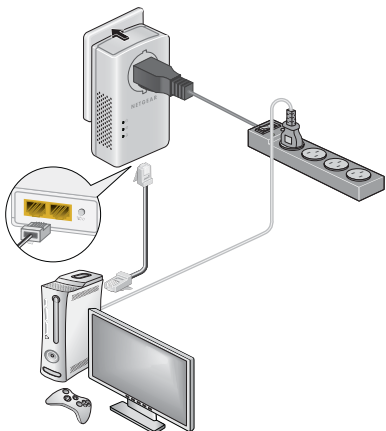


5. Use the Ethernet cable that came with your adapter to connect the PowerLINE device to an Ethernet port on a computer, game console, Blu-ray player, or other peripheral device.

6. Wait until the Pick A Plug LEDs are lit.

7. To use a private encryption key, press the  button on one of the adapters for two seconds, and then press the  button on the other adapter for two seconds.

   Both buttons must be pressed within two minutes.

   **WARNING:** Do not press the  button on the PowerLINE adapter until installation is complete and the adapters are communicating with each other (indicated by the blinking Power LED). Pressing this button too soon can temporarily disable PowerLINE communication. If this occurs, use the **Factory Reset** button to return the PowerLINE adapter to its factory default settings.

   **Note:** The  button does not work in power saving mode.

8. Wait for the PowerLINE network to recognize each PowerLINE device.

   This process could take as little as 5 seconds or up to 80 seconds.

   When the Power LEDs stop blinking, the process is complete. If the Pick A Plug LEDs are green or amber, the devices are successfully connected to the PowerLINE network. A red Pick A Plug LED indicates a slow link rate. In this case, move the PowerLINE device to another electrical outlet with a faster connection.

9. If you are installing additional adapters, repeat <u>Step 7</u> with one of the secure adapters and one of the adapters that is not yet secured.

   See <u>Use the Button to Set the Encryption Key</u> on page 22.

# Connect to the PowerLINE Access Point

You can connect your WiFi devices (laptop, tablet, or smartphone) to the PowerLINE access point using WPS or the SSID and WiFi key.

**To connect to the PowerLINE access point:**

1. On your computer or WiFi device (tablet, smartphone) use the adapter's normal method of connecting to a wireless network.

   **Note:** The product label includes the default SSID and WiFi key.

# Use WPS to Connect to Your Network (PLW Models)

After your PowerLINE network is installed and running, you can use WPS to connect your access point to your WiFi network.

**To automatically connect to the PowerLINE access point using the WPS button:**

1. Press and hold the **WPS** button on the PowerLINE access point for two seconds and release it.
   The Wireless LED starts to blink.

2. Press the **WPS** button on your WiFi device for two seconds and release it.
   When the Wireless LED stops blinking, your WiFi device is automatically connected to the PowerLINE access point.

# Customize Your Network Settings (PLW Models)

You can use a web browser–based setup guide as a simple way to customize the WiFi settings of your PowerLINE access point.

Before changing your network settings, connect using the default settings. For information see either <u>Connect to the PowerLINE Access Point</u> on page 20, or <u>Use WPS to Connect to Your Network (PLW Models)</u> on page 20.

**To change your settings:**

1. With your WiFi–enabled computer or WiFi device connected to your WiFi network, open a web browswer window.

2. Navigate to the following address: www.mywifiext.net.
   A login window opens.

3. Enter the user name **admin** and the password.

   The initial password depends on the model. For newer PLW1000v2 and PLW1010v2 models, the initial password is the same as the WiFi key password and is printed on the adapter label. For all PLW1000 and PLW1010 models, and older PLW1000v2 and PLW1010v2 models, the password is **password**.

   The user name and password are case-sensitive.

4. Record the new SSID and key.

# Add an Adapter to an Existing PowerLINE Network

You can add additional adapters to an existing PowerLINE network.

**To add an adapter to a PowerLINE network:**

1. Plug the adapter into a wall outlet where you want to add Internet access.
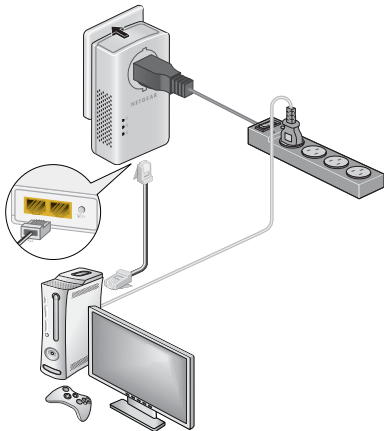


2. (Optional) Use the Ethernet cable that came with your adapter to connect the adapter to an Ethernet port on a computer, game console, Blu-ray player, or other peripheral device.
   The PowerLINE devices attempt to detect each other and form a PowerLINE network.

3. If you used a private encryption key, press the button on one of the adapters that is already a part of the network for two seconds, and then press the button on the new adapter for two seconds.

   Both buttons must be pressed within two minutes.

   See Use the Button to Set the Encryption Key on page 22.

   **WARNING:** Do not press the button on the PowerLINE adapter until installation is complete and the adapters are communicating with each other (indicated by the blinking Power LED). Pressing this button too soon can temporarily disable PowerLINE communication. If this occurs, use the button to return the PowerLINE adapter to its factory default settings.

   **Note:** The button does not work in power saving mode.

4. Wait for the PowerLINE network to recognize each PowerLINE device.

   This process could take as little as 5 seconds or up to 80 seconds.

   When the Power LED stops blinking, the process is complete. If the Pick A Plug LEDs are green or amber, the devices are successfully connected to the PowerLINE network. A red Pick A Plug LED indicates a slow link rate. In this case, move the PowerLINE device to another electrical outlet with a faster connection.

# About PowerLINE Network Security

A PowerLINE network consists of two or more PowerLINE devices using the same network encryption key. By setting up security, you configure your PowerLINE network to use a private key instead of the default key. If you do not set up security on your network, anyone nearby with a PowerLINE network can potentially use his or her connection to gain access to your network and information that you send over the Internet.

You can use the button on the PowerLINE device to create a private encryption key and secure your PowerLINE network. See Use the Button to Set the Encryption Key on page 22.

# Use the Button to Set the Encryption Key

All PowerLINE networks start with the same default encryption key. You can use the button to replace the default key with a random private key. This is especially relevant in settings such as apartment buildings, office buildings, dorm rooms, and other more populated areas.

**Note:** A PowerLINE device can generate a random private encryption key only once. If you want to generate a new random key, first reset the PowerLINE device to its factory default settings. Press the button for two seconds, and then release it.

### To set the encryption key:

1. Make sure that all of the PowerLINE devices that you want to configure are plugged in by checking that the Power and Pick A Plug LEDs on each device are lit solid green.

   **Note:** Do not press the button on the PowerLINE devices until the Power and Pick A Plug LEDs on each PowerLINE device are lit solid green. Pressing the button too soon can temporarily disable PowerLINE communication. If PowerLINE communication is disabled, reset the PowerLINE device to its factory default settings by pressing the button for two seconds and then releasing it.

2. Press the button on the first PowerLINE device for two seconds.

   The Power LED starts blinking after you release the button, and then the PowerLINE device automatically creates a new, randomly generated encryption key that all other PowerLINE devices on the network will use.

   At this point, the PowerLINE devices cannot communicate with each other.

3. Within two minutes of pressing the button on the first PowerLINE device, press the button on the second PowerLINE device for two seconds.

   You must press both buttons within two minutes.

   The Power LED starts blinking after you release the button. This process allows the second PowerLINE device to use the same private encryption key as the first device so that they can communicate.
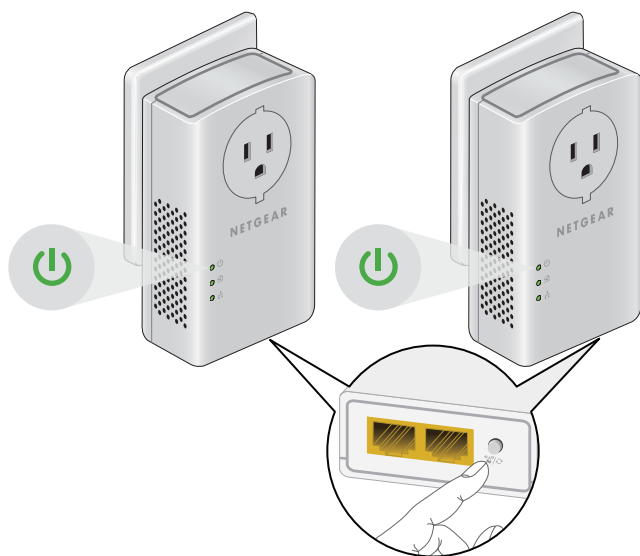


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When the Power LEDs stop blinking and the Pick A Plug LEDs are lit solid green, the two devices can communicate over the PowerLINE network in a secure way.
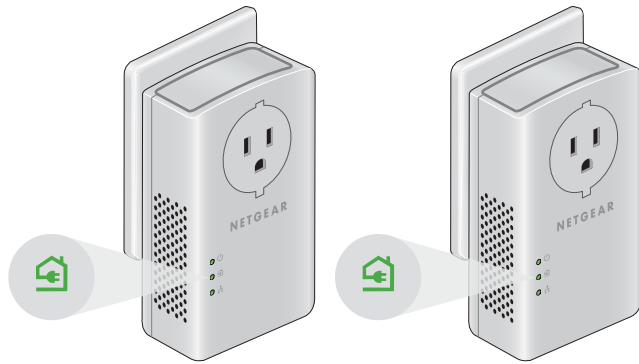
# 3

# Troubleshooting

You can take various steps to diagnose and solve problems that you might encounter.

The first step in troubleshooting your PowerLINE adapter is to check the LEDs. After you plug in the PowerLINE device, the following sequence of events occurs:

1. The Power LED lights.

2. After approximately 10 seconds, verify the following:

   - The Power LED is solid green. The device is powered on.

   - If the device is connected to a PowerLINE network, the Pick A Plug LED is lit.

   - If the PowerLINE device is connected through the Ethernet port to a powered-on Ethernet device, the Ethernet LED is lit.

If no LEDs are lit, see LEDs Are Off When the PowerLINE Device Is Plugged In on page 26.

If the Power LED is not lit, see Power LED Is Off on page 26.

If the Power LED is amber, see Power LED Is Amber on page 26.

If the Pick A Plug LED is not lit, see Pick A Plug LED Is Off, Amber, or Red on page 26.

If the Ethernet LED is not lit, see Ethernet LED Is Off on page 27.

If you do not find the solution here, visit the NETGEAR support site at support.netgear.com for product and contact information.

# LEDs Are Off When the PowerLINE Device Is Plugged In

The common reason the LEDs are off is that power is not being provided to the device. Make sure that power is supplied to the electrical outlet.

## Power LED Is Off

If the Power LED is off, the adapter is not receiving electrical power. You can try several troubleshooting tips.

Try these steps:

1. Make sure that power is supplied to the electrical outlet and that the PowerLINE device is not plugged into an extension cord, power strip, or surge protector.

2. Press the  button on the PowerLINE device for two seconds to return the device to its factory default settings.

## Power LED Is Amber

If the Power LED is amber, the adapter is in power saving mode. You can investigate why the adapter is in power saving mode, and wake it.

The adapter enters power saving mode when the Ethernet link is inactive for more than 10 minutes. The Ethernet link is inactive if any of the following occurs:

- The Ethernet cable is unplugged.

- The peripheral device that is connected through the Ethernet port is turned off.

- The PowerLINE adapter is idle.

**To wake a PowerLINE device from power saving mode:**

1. Connect a powered-on Ethernet device to one end of the Ethernet cable.

2. Connect the PowerLINE device to the other end of the Ethernet cable.
   The PowerLINE device returns to normal mode within two seconds.

## Pick A Plug LED Is Off, Amber, or Red

If the Pick A Plug LED is off, the PowerLINE devices cannot find each other.

Try these troubleshooting tips:

- Make sure that the PowerLINE devices are plugged into wall outlets with power and that they use the same network encryption key.

- Move the PowerLINE device to an outlet that is closer to the computer or devices.

- If you set a private encryption key, make sure that all PowerLINE devices are using the same encryption key.

- If the problem occurred after you set the encryption key, reset each device to its factory default settings. Then try setting the encryption key again.

- If the LED is amber or red, move the PowerLINE device to another electrical outlet with a faster connection.

# Ethernet LED Is Off

If the Ethernet LED is off, the Ethernet port on the adapter is not linked. You can try various troubleshooting tips.

Try these steps:

1.  If your PowerLINE device is connected to the LAN port of your router, make sure of the following:

    - Your router and modem are turned on.

    - The computer connected directly to the router can access the Internet.

2.  If your PowerLINE device is connected to a computer, game console, Blu-ray player, or other peripheral device, make sure of the following:

    - The peripheral device is turned on.

    - The PowerLINE device is securely connected to the peripheral device using an Ethernet cable.

3.  Press the  button on each PowerLINE device for two seconds to return the device to its factory default settings.

# A

# Technical Specifications and Safety Information

This appendix provides technical specifications and safety information for PowerLINE adapters.

# PowerLINE PL1000 and PL1010 Technical Specifications

The PL1000 and PL1010 adapters meet the technical specifications defined in the following table.

Table 3. Technical specifications

| Feature | Specification |
| --- | --- |
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.1A (max.) |
| Socket-outlet rating (max. load) | AU: 10A, 250V; EU: 16A, 250V; NA: 15A, 125V; UK: 13A, 250V |
| Power consumption | Normal: < 3.73W; Power saving mode: < 0.5W |
| Dimensions | 100 x 59 x 35.9 mm (3.9 x 2.3 x 1.4 in.) |
| Weight | 126 g (0.28 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 8 (total): number of nodes that can be added to a single network |
| Bandwidth | 1000 Mbps |
| Data transfer rate | Up to 1000 Mbps with real throughput greater than 80 Mbps |
| Frequency band | 2–86 MHz |
| Modulation type | OFDM windowed modulation |

# PowerLINE PL1000v2 and PL1010v2 Technical Specifications

The PL1000v2 and PL1010v2 adapter meets the technical specifications defined in the following table.

Table 4. Technical specifications

| Feature | Specification |
| --- | --- |
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.1A (max.) |
| Socket-outlet rating (max. load) | AU: 10A, 250V; EU: 16A, 250V; NA: 15A, 125V; UK: 13A, 250V |
| Power consumption | Normal: < 3.73W; Power saving mode: < 0.5W |
| Dimensions | 100 x 59 x 35.9 mm (3.9 x 2.3 x 1.4 in.) |
| Weight | Varies by region. About 126 g (0.28 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 8 (total): number of nodes that can be added to a single network |
| Bandwidth | 1000 Mbps |
| Data transfer rate | Up to 1000 Mbps with real throughput greater than 80 Mbps |
| Frequency band | 2–86 MHz |
| Modulation type | 4096/1024/256/64/16/8-QAM |

# PowerLINE PLP1000 Technical Specifications

The PLP1000 adapter meets the technical specifications defined in the following table.

Table 5. Technical specifications

| Feature | Specification |
| --- | --- |
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.2A (max.) |
| Socket-outlet rating (max. load) | EU: 16A, 250V; NA: 11.8A, 125V; UK: 13A, 250V |
| Power consumption | Normal: < 4W; Power saving mode: < 0.5W |
| Dimensions | 120 x 58 x 42 mm (4.72 x 2.28 x 1.65 in.) |
| Weight | Varies by region. About 183 g (0.40 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 16 (total): number of nodes that can be added to a single network |
| Bandwidth | 1000 Mbps |
| Data transfer rate | Up to 1000 Mbps with real throughput greater than 80 Mbps |
| Frequency band | 2–68 Mbps |
| Modulation type | 4096/1024/256/64/16/8-QAM |

# PowerLINE PLW1000 and PLW1010 Technical Specifications

The PLW1000 and PLW1010 adapters meet the technical specifications defined in the following table.

Table 6. Technical specifications

| Feature | Specification |
|---|---|
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.2A (max.) |
| Socket-outlet rating (max. load) | AU: 10A, 250V; EU: 16A, 250V; NA: 15A, 125V; UK: 13A, 250V |
| Power consumption | Normal: < 7W |
| Dimensions | 121 x 87 x 38 mm (4.75 x 3.44 x 1.5 in.) |
| Weight | 266 g (0.59 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 8 (total): number of nodes that can be added to a single network |
| Bandwidth | 1000 Mbps |
| Data transfer rate | 200 Mbps @ 2.4GHz using 256-QAM; 433 Mbps @ 5GHz using 256-QAM |
| Frequency band | 2–86 MHz |
| Modulation type | OFDM windowed modulation |

# PowerLINE PLW1000v2 and PLW1010v2 Technical Specifications

The PLW1000v2 and PLW1010v2 adapters meet the technical specifications defined in the following table.

Table 7. Technical specifications

| Feature | Specification |
| --- | --- |
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.2A (max.) |
| Socket-outlet rating (max. load) | AU: 10A, 250V; EU: 16A, 250V; NA: 15A, 125V; UK: 13A, 250V |
| Power consumption | Normal: < 7W |
| Dimensions | 121 x 87 x 38 mm (4.75 x 3.44 x 1.5 in.) |
| Weight | 266 g (0.59 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 8 (total): number of nodes that can be added to a single network |
| Bandwidth | 1000 Mbps |
| Data transfer rate | 200 Mbps @ 2.4GHz using 256-QAM; 433 Mbps @ 5GHz using 256-QAM |
| Frequency band | 2–86 MHz |
| Modulation type | OFDM windowed modulation |

# PowerLINE PL1200 Technical Specifications

The PL1200 adapter meets the technical specifications defined in the following table.

Table 8. Technical specifications

| Feature | Specification |
|---|---|
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.2A (max.) |
| Socket-outlet rating (max. load) | AU: 10A, 250V; EU: 16A, 250V; NA: 15A, 125V; UK: 13A, 250V |
| Power consumption | Normal: 2.6W; Power saving mode: < 0.5W |
| Dimensions | 100 x 56 x 30 mm (4.5 x 2.2 x 1.18 in.) |
| Weight | 112.5 g (0.25 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 16 (total): number of nodes that can be added to a single network |
| Bandwidth | 1200 Mbps |
| Data transfer rate | Up to 1200 Mbps with real throughput greater than 80 Mbps |
| Frequency band | 2–68 Mbps |
| Modulation type | OFDM windowed modulation |

# PowerLINE PLP1200 Technical Specifications

The PLP1200 adapter meets the technical specifications defined in the following table.

Table 9. Technical specifications

| Feature | Specification |
| --- | --- |
| Data and routing protocols | IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-T), IEEE 802.3ab (1000BASE-T) |
| AC input | 100–240V, 0.2A (max.) |
| Socket-outlet rating (max. load) | AU: 10A, 250V; EU: 16A, 250V; NA: 11.8A, 125V; UK: 13A, 250V |
| Power consumption | Normal: 2.6W; Power saving mode: < 0.5W |
| Dimensions | 120 x 58 x 42 mm (4.72 x 2.28 x 1.65 in.) |
| Weight | 183 g (0.40 lb) |
| Operating temperature | 0° to 40°C (32° to 104°F) |
| Operating humidity | 10–90% maximum relative humidity, noncondensing |
| Storage humidity | 5–95% maximum relative humidity, noncondensing |
| Security encryption type | 128-bit AES |
| MAC addresses | 8 (active), 16 (total): number of nodes that can be added to a single network |
| Bandwidth | 1200 Mbps |
| Data transfer rate | Up to 1200 Mbps with real throughput greater than 80 Mbps |
| Frequency band | 2–68 Mbps |
| Modulation type | OFDM windowed modulation |

# Safety Information

Follow these safety guidelines to ensure your own personal safety and to help protect your system from potential damage:

- For national approvals (approval schemes other than CB), relevant national standards for plug, socket-outlet, and direct plug-in units (for example, US) shall also be consulted while you are testing and approving such products according to the national standards.

- Check the electrical current for any device plugged into the filtered AC socket. Do not exceed home and product outlet ratings and electrical requirements.

- The socket-outlet shall be installed near the equipment and be easily accessible.

- Only power cords are allowed to be inserted into the filtered AC socket; no other equipment with a direct plug-in is allowed. Power cords must be a maximum of 1 m long and a minimum of 0.75 mm$^2$ of cross-sectional area.

- Do not plug devices into the PowerLINE PassThru Adapter filtered AC outlet that exceed the product ratings. The output voltage of the filtered AC outlet is the same as the power outlet that the PowerLINE PassThru Adapter is plugged into. To help avoid damaging your system, be sure that the attached devices are electrically rated to operate with the power available in your location.

- If the input AC voltage is less than 100 VAC, the device plugged into the filtered AC socket of the PowerLINE PassThru Adapter might not perform as well as expected.

- DO NOT PLUG MAJOR HOME APPLIANCES into the filtered AC socket or into an attached power strip. The device is not intended to be used with home appliances such as air conditioners, power tools, space heaters, fans, hair dryers, ovens, or refrigerators.

- Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate.

- Do not service any product except as explained in your system documentation.

- Opening or removing covers that are marked with the triangular symbol with a lightning bolt can expose you to electrical shock. Only a trained service technician should service components inside these compartments.

- Use the product only with approved equipment.

- Allow the product to cool before removing covers or touching internal components.

- To help avoid damaging your system, be sure that the voltage selection switch (if provided) on the power supply is set to match the power available at your location:
  - 110 volts (V), 60 hertz (Hz) in most of North and South America and some Far Eastern countries such as South Korea and Taiwan
  - 100V, 50 Hz in eastern Japan and 100V, 60 Hz in western Japan
  - 230V, 50 Hz in most of Europe, the Middle East, and the Far East

- The peripheral power cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable.

- Observe extension cable and power strip ratings. Make sure that the total ampere rating of all products plugged into the extension cable or power strip does not exceed 80 percent of the ampere ratings limit for the extension cable or power strip.