

NETGEAR®

XAVN2001 Powerline AV 200 Wireless-N Extender User Manual



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Getting Started

1

This chapter describes your XAVN2001 Powerline AV 200 Wireless-N Extender, and how your adapters can fit into a home network. It also explains the security features and how to customize the encryption key for added security. For more information about the topics covered in this manual, visit the support website at <http://support.netgear.com>.

This chapter includes the following sections:

- *Hardware Features*
- *How the Powerline AV 200 Extender Fits in Your Network*
- *Set Up the Powerline Network*
- *Powerline Network Security*
- *Set Up the Extender Wireless Network*
- *Join the Powerline Extender Wireless Network*
- *Use the Security Button to Set the Encryption Key*
- *Use the Security Button to Set the Encryption Key*
- *Set the Encryption Key*

Hardware Features

The package includes a XAVN2001 Powerline AV 200 Wireless-N Extender, a *Resource CD*, and an Ethernet cable.

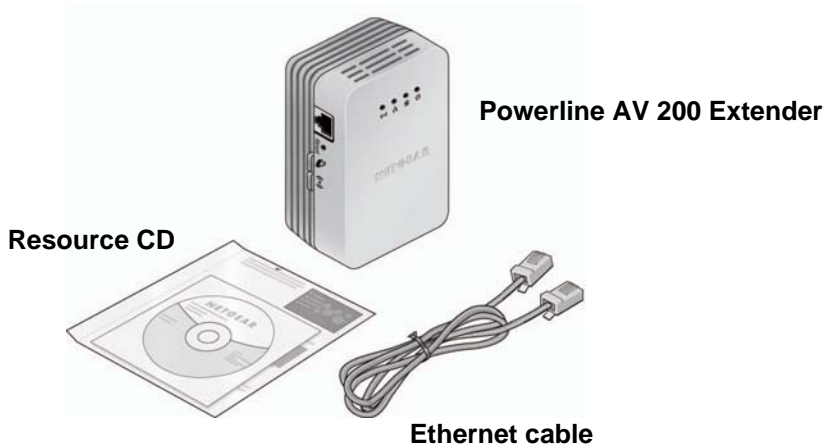


Figure 1. Package contents

The following illustration shows the front and side panels of the XAVN2001:

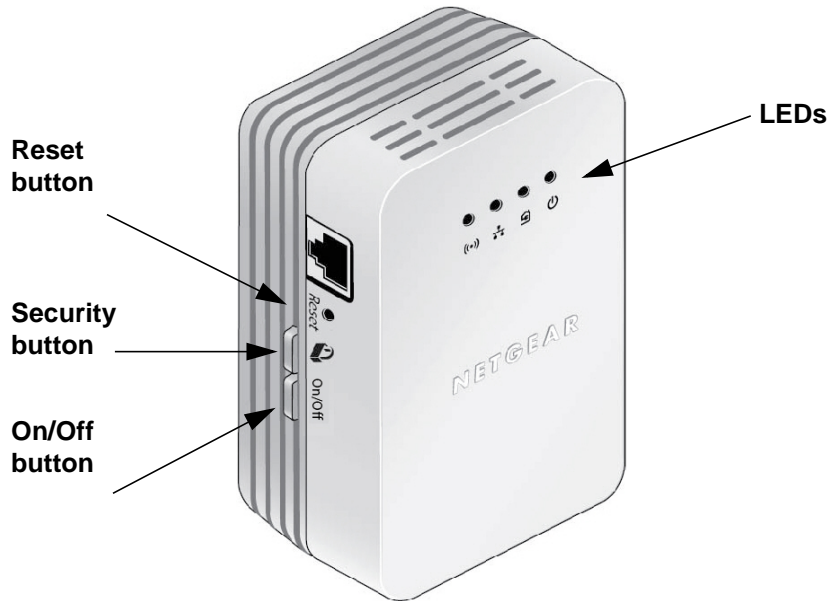





Figure 2. XAVN2001 Powerline AV 200 Wireless-N Extender

LED and Feature Descriptions

The following table describes the status LEDs on the Powerline AV 200 Wireless-N Extender.

Table 1. LED descriptions

| Item | Description | | | |
|---|--|--|--|--|
| Power LED  | <ul style="list-style-type: none"> • Solid green. The electrical power is on. • Blinking green. The adapter is in the process of restarting or setting up security. • Amber. Power saving mode. The unit enters power saving mode if the Ethernet port is not linked for more than 10 minutes. • Off. There is no electrical power, or power has been turned off through the Powerline Utility. | | | |
| Powerline LED  | <ul style="list-style-type: none"> • Solid. The adapter is connected to a Powerline network. • Blinking. The adapter is sending or receiving data. • Off. The adapter has not found any other compatible Powerline devices using the same encryption key, or has been turned off through the Powerline Utility. <p>The Pick A Plug feature lets you pick the electrical outlet with the strongest link rate, indicated by the color displayed by the LED:</p> <table border="1"> <tr> <td>Green. Link rate > 80 Mbps (Best) - Good for HD video</td> <td>Amber. Link rate > 50, < 80 Mbps (Better) - Good for SD Video</td> <td>Red. Link rate < 50 Mbps (Good) - Good for data</td> </tr> </table> | Green. Link rate > 80 Mbps (Best) - Good for HD video | Amber. Link rate > 50, < 80 Mbps (Better) - Good for SD Video | Red. Link rate < 50 Mbps (Good) - Good for data |
| Green. Link rate > 80 Mbps (Best) - Good for HD video | Amber. Link rate > 50, < 80 Mbps (Better) - Good for SD Video | Red. Link rate < 50 Mbps (Good) - Good for data | | |
| Ethernet LED  | <ul style="list-style-type: none"> • Solid. The Ethernet port is linked, but there is no activity. • Blinking. There is traffic on the Ethernet port. • Off. There is no Ethernet connection, or it has been turned off through the Powerline Utility. | | | |

Buttons

Three buttons are located on the side of the Powerline Extender:

- **Reset.** Press the **Reset** button for 1 second, and then release it to return the Powerline adapter to its factory default settings.
- **Security.** After you plug in your new AV adapters, press the **Security** button for 2 seconds on both of the AV adapters. You have to press both buttons within 2 minutes.

The Security button does not work in power saving mode. The unit enters power saving mode if the Ethernet port is idle (not linked) for more than 10 minutes.

- **On/Off.** This button is used for wireless setup with WPS. See [Method B: Use the WPS Button for Wireless Setup](#) on page 11.

Ethernet Port

Plug one end of the Ethernet cable that comes with the XAVN2001 Powerline AV 200 Wireless-N Extender into this port and the other end either into your router, or into the computer or another peripheral device.

Product Label

The product label shows unique details specific to your adapter. The product label is located on the back of the adapter. The label contains the following information.

- Model number
- MAC address
- Device password
- Serial number

How the Powerline AV 200 Extender Fits in Your Network

You can use one or more Powerline AV 200 Wireless-N Extenders to extend your home network anywhere in your house using your electrical power lines.

A Powerline network consists of two or more compatible Powerline devices that communicate with each other. 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). That way each Powerline device can communicate with the router and use its Internet connection.

The following illustration shows an existing Powerline network with one Powerline device in Room 1, a second Powerline device in Room 2, and an XAVN2001 Powerline extender in Room 3:

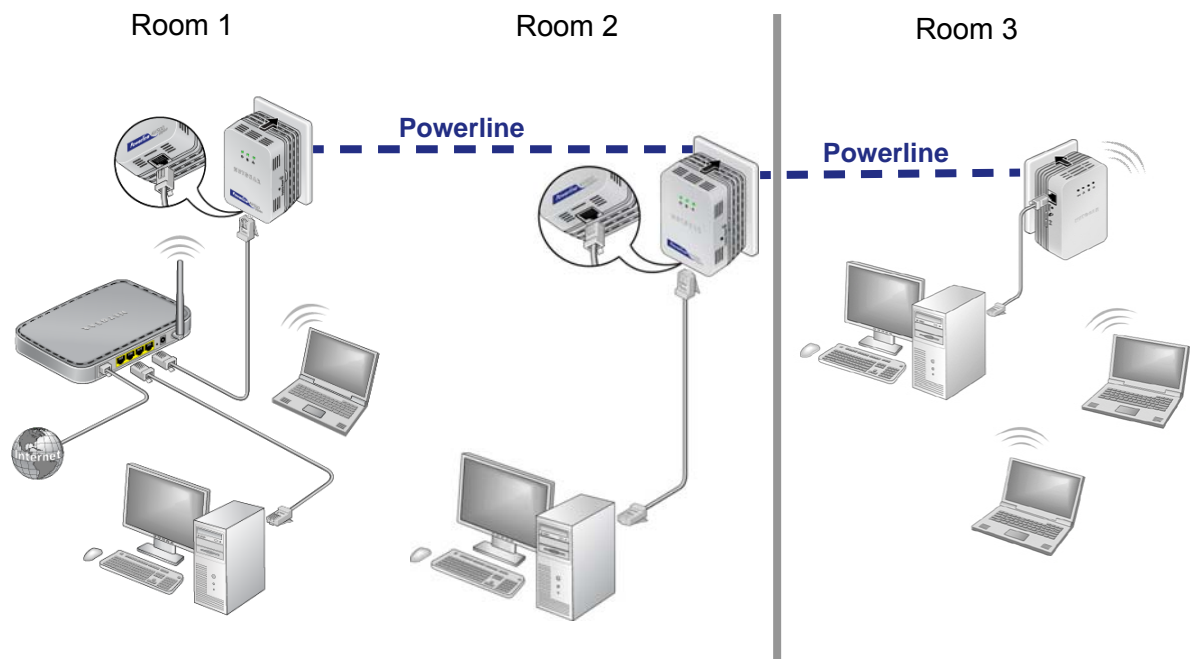


Figure 3. Powerline extender connected to the Powerline network and wireless network

To form a Powerline network you need at least two compatible Powerline devices (including the Powerline AV 200 Wireless-N Extender).

For best performance, plan the location of your Powerline devices:

- Use an electrical outlet that is not controlled by a wall switch to avoid someone unknowingly turning off the power to the outlet.
- Do not plug in Powerline products to a power strip, extension cord, or surge protector as this might prevent them from working correctly or reduce the network performance.
- Avoid plugging Powerline products into electrical outlets located near an appliance that uses a lot of power, such as a washer or dryer, or a refrigerator. This could potentially prevent the adapters from working correctly, or reduce network performance.

Set Up the Powerline Network

You can set up a Powerline network that includes the Powerline Extender, or you can add the Powerline Extender to an existing Powerline network.

Set Up a New Powerline Network

Different Powerline adapter models can share the network. All NETGEAR Powerline AV products (models XAV101, XAV1004, XAV2001, XAV2501, and XAVN2001) are compatible.

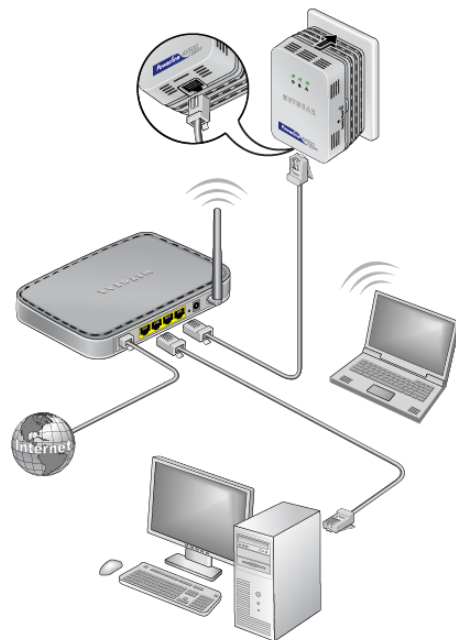
➤ **To set up a new Powerline network:**

1. Make sure that your home router is up and running and that Ethernet wired connections are working.

2. Install the first Powerline adapter based on the installation instructions that came in the package.

Plug a compatible NETGEAR Powerline adapter (sold separately) into a wall outlet near your router, and connect it to the LAN port on your router using an Ethernet cable.

3. For convenience during setup, plug the Powerline Extender into a wall outlet near your router.



4. Connect a computer to the Powerline Extender for initial setup.

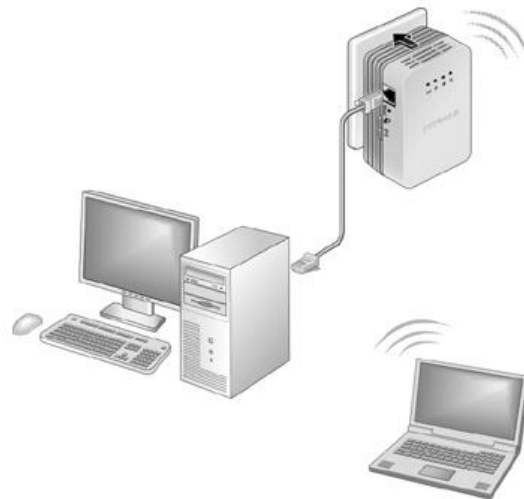
Use the supplied Ethernet cable to connect the Powerline Extender to an Ethernet port on a computer.

The Powerline devices attempt to detect each other and form a Powerline network. This could take a few minutes.

5. Plug any additional Powerline devices you are using into power outlets near the other computers and devices to be included in your Powerline network.
6. Wait for each Powerline adapter or extender to be recognized by the Powerline network.

The Power, Ethernet, and Powerline LEDs should turn on. This could take as little as 5 seconds, or up to 80 seconds. If the Powerline LEDs are green or amber, the devices are successfully connected. A red LED indicates a weak link rate. In this case, move the adapter or the extender to another electrical outlet with a better connection.

7. Set up the Powerline Extender wireless network as explained in [Set Up the Extender Wireless Network](#) on page 10.



Add the Powerline Extender to an Existing Powerline Network

Your existing Powerline network needs to have two or more compatible Powerline devices that communicate with each other. (models XAV101, XAV1004, XAV2001, XAV2501, and XAVN2001). One of these Powerline devices has to be cabled with Ethernet to your router so that the Powerline network is linked to your local area network (LAN).

➤ To add the Powerline Extender to an existing Powerline network:

1. If you used the Security buttons or the Powerline Utility to secure your Powerline network, press the **Reset** button on each Powerline device to return it to its factory settings.

This is the quickest way to allow your new Powerline AV 200 Wireless-N Extender to communicate with the other Powerline devices.

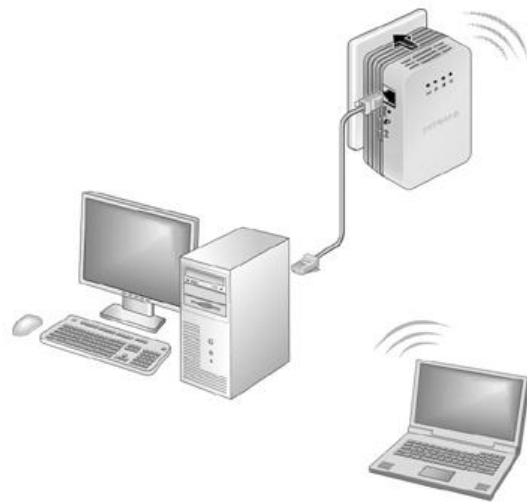
2. Connect a computer to the Powerline Extender for initial setup.

Use the supplied Ethernet cable to connect the Powerline Extender to an Ethernet port on a computer.

3. For convenience during setup, plug the Powerline Extender into an electrical outlet near your router.

The Powerline Extender attempts to detect the other compatible Powerline devices in your network and join the Powerline network. This could take a few minutes.

4. Check the Powerline LEDs to make sure that the Powerline devices are communicating with each other. If the LEDs are green or amber, the devices are successfully connected. A red LED indicates a weak link rate. In this case, move the adapter or the extender to another electrical outlet with a better connection.
5. Set up the Powerline Extender wireless network as explained in [Set Up the Extender Wireless Network](#) on page 10.



Set Up the Extender Wireless Network

You need to set up the extender so that it can join your wireless network. To do this you can use either the Powerline Utility or Wi-Fi Protected Setup (WPS).

- If your router does not have WPS, or you are not sure, use Method A.
- If your router does have WPS, use Method B.

Method A: Use the Powerline Utility for Wireless Setup

➤ To set up your Extender wireless network:

1. On the computer that is cabled to the Powerline Extender (XAVN2001), insert the *Resource CD*, and install the Powerline Utility.
2. Follow the onscreen prompts:
 - If you have a NETGEAR router, the Utility automatically finds the router, retrieves the wireless settings, and then prompts you to confirm the settings.
 - If the router is *not* a NETGEAR router, or the NETGEAR router is not detected, manually enter the wireless settings.
3. Disconnect the Ethernet cable from the Powerline Extender (XAVN2001).
4. Move the Powerline Extender to the area (or dead zone), where you want to extend wireless coverage, and plug it into an electrical outlet.

