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XAV2001 Powerline AV Ethernet Adapter



NETGEAR

NETGEAR, Inc.
350 East Plumeria Drive
San Jose, CA 95134 USA

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Manual abstract:

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B. Testsender) kann jedoch gewissen Beschränkungen unterliegen. Lesen Sie dazu bitte die Anmerkungen in der Betriebsanleitung. Das Bundesamt für Zulassungen in der Telekommunikation wurde davon unterrichtet, daß dieses Gerät auf den Markt gebracht wurde und es ist berechtigt, die Serie auf die Erfüllung der Vorschriften hin zu überprüfen. Voluntary Control Council for Interference (VCCI) Statement This equipment is in the Class A category (business use only) and conforms to the standards set by the Voluntary Control Council for Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential areas.

When used near a radio or TV receiver, it may become the cause of radio interference. Read instructions for correct handling. ii v1.0, November 2009 XAV2001 Powerline AV Ethernet Adapter User Manual FCC Statement · · The XAV2001 has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

·These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: · · · · Reorient or relocate the receiving antenna Increase the separation between the equipment or devices Connect the equipment to an outlet other than the receiver's Consult a dealer or an experienced radio/TV technician for assistance Canadian Department of Communications Industry Canada (IC) Notice · This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. · Europe EU Declaration of Conformity · · A printed copy of the EU Declaration of Conformity certificate for this product is provided in the XAV2001 product package. Visit the NETGEAR EU Declarations of Conformity website at: http://kb.netgear.com/app/answers/detail/a_id/11621/sno/0 iii v1.0, November 2009 XAV2001 Powerline AV Ethernet Adapter User Manual iv v1.

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This manual uses the following formats to highlight special messages: *Note*: This note highlights information of importance or special interest. *Tip*: This note highlights a procedure that will save time or resources. *Warning*: This note warns against a malfunction or damage to the equipment. *Danger*: This safety warning warns against personal injury or death. i v1.

0, November 2009 XAV2001 Powerline AV Ethernet Adapter User Manual Revision History Version Publication Number Date 1.0 November 2009 Part Number 202-10531-01 Description XAV2001 Powerline AV Ethernet Adapter User Manual First publication. ii v1.0, November 2009 Chapter 1 Installation and Basic Configuration This chapter describes how to install and configure the XAV2001 Powerline AV Ethernet Adapter.



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It also explains the security features and how to customize the encryption key for added security.

How the Powerline AV Ethernet Adapter Fits in Your Network You can use one or more Powerline AV Ethernet Adapters to extend your Ethernet network anywhere in your house using your existing electrical power lines. The illustration below (Figure 1-1) shows an example of a Powerline network using a single Powerline device, which is connected to an Ethernet network: Room 1 XAV2001 Room 2 XAV2001 Ethernet connection Ethernet connection Desktop PC Internet connection Figure 1-1 Powerline Adapter Connected to an Ethernet Network 1-1 v1.0, November 2009 XAV2001 Powerline AV Ethernet Adapter User Manual Powerline AV Ethernet Adapter Features The following illustration (Figure 1-2) shows the front and side panels of the Powerline AV Ethernet Adapter: LEDs Security button Factory Reset button Ethernet port Figure 1-2 XAV2001 Powerline AV Ethernet Adapter XAV2001 Label The label on the rear panel of the XAV2001 contains the items listed below. . . . Model number MAC address Device password Serial number 1-2 v1.0, November 2009 Installation and Basic Configuration XAV2001 Powerline AV Ethernet Adapter User Manual LED and Feature Descriptions The following table describes the buttons, status lights, and Ethernet port on the XAV2001 Powerline AV Ethernet Adapter. Table 1-1. XAV2001 Feature Descriptions Item Power LED Description · 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 has been turned off through the Powerline utility. · 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. The Pick A Plug feature lets you pick the electrical outlet with the strongest link rate, indicated by the color displayed by the LED: Green: Link rate > 80 Mbps (Best) - Good for HD video Ethernet LED Amber: Link rate >50, <80 Mbps (Better) - Good for SD Video Red: Link rate < 50 Mbps (Good) - Good for data Powerline LED · 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. Factory Reset Security Button Press the Factory Reset button to be recognized by the Powerline network. The Power, Ethernet, and Powerline lights should turn on. This could take as little as 5 seconds, up to 80 seconds. For details about how the lights work, see Table 1-1 on page 1-3. 5. Test to make sure that each computer connected to a Powerline AV Ethernet Adapter can access the Powerline network. For example, be sure that you can access the Internet from a remote computer. If there is a problem, see "Connecting a Powerline AV Ethernet Adapter to the Router" on page 1-5. Figure 1-4 Add an adapter One way to test this is to install the Powerline utility and use it to view all the computers connected by the Powerline AV Ethernet adapter. Warning: NETGEAR recommends that you secure your Powerline network from unauthorized access. This is especially relevant in settings such as apartment buildings. See "Understanding Powerline Network Security" on page 1-7. 1-6 v1.

0, November 2009 Installation and Basic Configuration XAV2001 Powerline AV Ethernet Adapter User Manual Understanding Powerline Network Security A Powerline network consists of two or more Powerline adapters using the same network encryption key. Securing your network is crucial. By encrypting the information you send over the Powerline AV Ethernet Adapter, you help to keep it secure from hackers. If you do not set up security on your network, anyone nearby with a Powerline network can potentially use their connection to gain access to your network and information you send over the internet. This is especially relevant in settings such as apartment buildings, office buildings, dorm rooms, and other more populated areas. Powerline devices connected to the same network must use an identical encryption key. The security used by Powerline AV Ethernet Adapters is similar to the SSID and encryption keys used in wireless networks, but you do not need software to configure Powerline AV Ethernet Adapters. There are two ways to secure your Powerline network. · Use the Powerline AV Ethernet Adapter Security button located on the adapter to automatically generate a random encryption key. See "Changing the Default Encryption" on page 1-8.

Use the XAV2001 Powerline Utility to configure your Powerline network with an encryption key that you specify. If you are already using Powerline or HomePlug devices then you will need to use the Powerline Utility. If not already installed, the Powerline Utility is located on your Resource CD, and should be installed on your computer. See "Security" on page 2-9. For information about using the XAV2001 Powerline Utility to configure Powerline security or to prioritize Powerline network traffic using the Quality of Service (QoS) feature, see Chapter 2, "Using the XAV2001 Powerline Utility.

Note: To return the XAV2001 Powerline AV Ethernet Adapter to its factory default settings, see "Resetting to Factory Defaults" on page 2-16. · Installation and Basic Configuration v1.0, November 2009 1-7 XAV2001 Powerline AV Ethernet Adapter User Manual Changing the Default Encryption You can use the security button to change the default encryption key and set a private encryption key instead. The default encryption key is HomePlugAV. To set a private encryption key: 1.

Verify that all the Powerline AV Ethernet Adapters to be configured are plugged in. Warning: Do not press the Security button on the Powerline adapter until installation is complete and all adapters on your network are plugged in and communicating with each other. Pressing the Security button too soon can temporarily disable Powerline communication. If this should occur, reset the Powerline adapter to its factory default settings. See "Resetting to Factory Defaults" on page 2-16. 2. On the first Powerline AV Ethernet Adapter, press its security button for 2 seconds. The power LED will start blinking after you release the button. The adapter will automatically produce a new, randomly generated network encryption key that each Powerline AV Ethernet Adapter will use. At this point, the other adapters in your network cannot communicate with each other.

3. Within 2 minutes of pushing the security button on the first adapter, push the security button on the second adapter for 2 seconds.



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In order to pair the devices, both buttons must be pushed within 2 minutes. This securely configures your Powerline network with the same network encryption key. 4. If your network has more than 2 adapters, push the security button on the additional adapter for 2 seconds, then push the security button on any additional adapters in your existing network for 2 seconds. Both buttons must be pushed within 2 minutes. The adapters retain security settings even if they are unplugged. Note: An adapter can only generate a private key once. To replace a private key, first reset the adapter back to its factory defaults, then follow the procedure above.

See "Resetting to Factory Defaults" on page 2-16. 1-8 v1.0, November 2009 Installation and Basic Configuration Chapter 2 Using the XAV2001 Powerline Utility This chapter explains how to install and use the XAV2001 Powerline Utility. The Powerline Utility is used for all Powerline AV products. All Powerline AV products (XAV101, XAV1004, XAV2001, XAV2501, and XAVN2001) are compatible and can be installed on the same powerline network. The NETGEAR Powerline Utility can be used to: configure encryption for your Powerline network perform diagnostics and monitor performance set quality of service (QoS) features to prioritize Powerline network traffic reset adapters to factory default settings 2-1 v1.0, November 2009 XAV2001 Powerline AV Ethernet Adapter User Manual Installing the XAV2001 Powerline Utility This utility allows you to set your own unique Powerline network encryption key, and prioritize traffic passing through your Powerline network. To install the XAV2001 Powerline Utility: 1. Insert the Resource CD into a CD drive on the computer that is connected to your router. The CD automatically starts and displays the following screen: Figure 2-1 If the Resource CD does not start automatically: . . . Go to My Computer on the Windows Start menu, and double-click the drive that represents the location of the Resource CD or Select the CD drive, and click the Autorun.

exe executable file. 1. All devices on a Powerline network can be managed from one computer. If you add another Powerline AV Ethernet Adapter to a Powerline network, you can install the Powerline Utility on the computer connected locally to the new adapter, or open the utility on the computer originally used to set up the Powerline network encryption key. You can use any computer to manage the network, but this procedure assumes that you are working from the computer that is connected to a powerline adapter. 2-2 v1.0, November 2009 Using the XAV2001 Powerline Utility XAV2001 Powerline AV Ethernet Adapter User Manual 2. Click Install Software. a. Check for Updates: Click this option to be sure you have the most current software.

b. Install from CD: Click this option to install the Powerline Utility from the CD. Figure 2-2 3. Click Continue, and follow the wizard prompts. Figure 2-3 Using the XAV2001 Powerline Utility v1.0, November 2009 2-3 XAV2001 Powerline AV Ethernet Adapter User Manual 4. Click Next on the Setup Screen, and click Finish when the wizard is done. The XAV2001 Powerline Utility shortcut icon (Figure 2-5) will appear on your desktop. Figure 2-4 5. There are two ways to launch the XAV2001 Powerline Utility: . . . Click the XAV2001 Powerline Utility shortcut icon located on your desktop.

Navigate to Start > Programs > NETGEAR > NETGEAR Powerline Utility. Desktop Shortcut Icon Powerline Utility Landing Page Figure 2-5 2-4 v1.0, November 2009 Using the XAV2001 Powerline Utility XAV2001 Powerline AV Ethernet Adapter User Manual Device Settings Tab When launched, the Powerline Utility opens to the Device Settings tab. If all devices are not shown, click the refresh button to detect all Powerline Adapters on your network. By clicking the LED status light you can toggle the LED between on and off.

4 Figure 2-6 Note: You may see a message at the bottom of the screen regarding the power saving feature. If the unit goes into power saving mode, the Powerline Utility will not find it. Keeping a connected Ethernet cable plugged into the device will keep it active. Using the XAV2001 Powerline Utility v1.0, November 2009 2-5 XAV2001 Powerline AV Ethernet Adapter User Manual The following table describes the features on the Device Settings Tab.

Table 2-1. Powerline Utility Device Settings Tab Field or Button Device Names Description This lists the Powerline devices detected on the network after the utility completes a scan for devices. The device name is initially set by the utility, but can be changed to reflect your specific adapter. For example, "Office" or "Master Bedroom". This identifies the model number of the Powerline Adapter. The MAC address for the Powerline device. This is also on the product label, which might not be visible when the device is plugged in. @@ · HD Video. The device can handle high-definition video traffic smoothly. @@ · SD/DVD Video.

@@ · Data. The device cannot handle video data smoothly. @@@@See "Adding Adapters to Your Network" on page 1-6. @@To Add a Device from a Locally Connected Computer 1. @@2. @@3. Start the XAV2001 Powerline Utility. This displays the Device Settings tab. Wait for the utility to detect the new device. 4.

Select the Advanced tab, and click the Security arrow. 5. From the Device Name column select the device. 6. @@7.

Click the Apply Security to Selected Devices button. 8. Select the Device Settings tab to perform a scan. @@@@1. @@The password is printed on the product label.

2. @@@@3. Click Enter Password. 4. Enter the device password, and then click OK. The device password is located on the product label. 5. From the Device Name column, select the device. 6. @@7.

Click the Apply Security to Selected Devices button. 8. Select the Device Settings tab. This will perform a automatic scan. @@@@1. From the Advanced Settings tab, click the Security arrow. @@2. @@Here you have two options: a. @@The default network encryption key is HomePlugAV. b.

Create your own Encryption Key This option lets you set your own network encryption key. Type your network encryption key in the field provide. 3. Apply the changes by clicking the Apply Security to Selected Devices button. When completed, the utility displays a message indicating that the operation was successful.

Click OK. Figure 2-8 2-10 v1.0, November 2009 Using the XAV2001 Powerline Utility XAV2001 Powerline AV Ethernet Adapter User Manual Setting Up a Custom Network Encryption Key @@Follow these steps to set up a custom network encryption key for all the Powerline devices: 1. Select the Device Settings tab to automatically perform a scan to detect the adapter status. Wait for the new device to be listed.

A new device can be identified by its MAC address. 2. From the Advanced Settings tab, click the Security arrow, and check the boxes next to each device in the Device Name column.



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3. Type your network encryption key in the Create a New Encryption Key field. 4. Click Apply Security to Selected Devices. The utility displays a message indicating that the operation was successful. 5. Select the Device Settings tab to perform a scan.

Verify that all devices are detected with your network encryption key. Note: If one or more of your Powerline devices are not listed, see "Quality of Service (QoS)" on page 2-13. For troubleshooting information, see "Problems After Changing Network Encryption Key" in Appendix B Using the XAV2001 Powerline Utility v1.0, November 2009 2-11 XAV2001 Powerline AV Ethernet Adapter User Manual Returning to the Default Network Encryption Key 1. Plug the new device into an AC power outlet. 2. Start the XAV2001 Powerline Utility · · Wait for the utility to detect the devices in your Powerline network. Check that all the devices in the established network are displayed on the Device Settings tab. Note: Before you can reset a remote device, you must enter its password. The password is printed on the product label located on the back of the adapter.

3. From the Advanced Settings tab, click the Security arrow, and from the Device Name column, check the box next to each device you want to set. 4. Click the Use Default Encryption Key button. You will see the default encryption key, HomePlugAV, display in the encryption field.

5. Click Apply Security to Selected Devices. Figure 2-9 2-12 v1.0, November 2009 Using the XAV2001 Powerline Utility XAV2001 Powerline AV Ethernet Adapter User Manual Quality of Service (QoS) From the Advanced Settings tab on the Powerline Utility, click the QoS link to help you prioritize your Powerline network traffic. By default, all types of traffic on the Powerline network are assigned the same priority.

For most applications, this works fine. However, there are situations where performance improves if you assign a higher priority to certain types of traffic, such as multimedia files. Figure 2-10 Prioritizing by General Application Type If your network traffic is a mix of multimedia and document/database traffic you might want to give priority to a particular traffic type. If it is important that your multimedia playback is smooth, even while document files are being transferred over the network, then give priority to multimedia traffic. Conversely, if it is more important for your network to be responsive to database applications, give priority to this type of application over multimedia applications. The Powerline AV Ethernet Adapter supports the following: · MAC address · IP port · VLAN tags · ToS bits (Type of Service routing) Using the XAV2001 Powerline Utility v1.0, November 2009 2-13 XAV2001 Powerline AV Ethernet Adapter User Manual To set the priority of data transfers by the type of protocol: 1. Start the XAV2001 Powerline Utility and wait for the utility to detect the Powerline AV Ethernet Adapters connected to the network. 2. From the Advanced Settings tab, the Advanced Settings tab, click the QoS arrow.

3. To set the traffic prioritization rule into the selected Powerline AV Ethernet Adapter device, specify the priority in the QoS Setup section of the screen.

Figure 2-11 4. Click Apply. Note: QoS settings are applied only to the device that is selected on the QoS tab. These options only apply to QoS-configured business networks. IEEE 802.1p uses prioritization bits in Layer-2 frames. Type of Service routing (ToS) uses prioritization bits in Layer-3 IP packets. The deprecated ToS values range from 0 to 7.

2-14 v1.0, November 2009 Using the XAV2001 Powerline Utility XAV2001 Powerline AV Ethernet Adapter User Manual Diagnostics From the Advanced Settings tab on the Powerline Utility, the Diagnostics link helps you diagnose and troubleshoot performance issues. Using this feature you can delete a device from the device history, save a report, or print a report. Figure 2-12 Using the XAV2001 Powerline Utility v1.0, November 2009 2-15 XAV2001 Powerline AV Ethernet Adapter User Manual Factory Reset From the Advanced Settings tab on the Powerline Utility, the Factory Reset option returns the network encryption key to its factory default value of HomePlugAV.

Only one device at a time can be reset. Resetting to Factory Defaults 1. From the Advanced Settings tab, click the Factory Reset option and select the Powerline device(s) to be reset. Figure 2-13 2. Click the Perform Factory Reset on Selected Devices button.

A confirmation message displays. 3. Click OK to reset the device. A message indicates whether or not the operation succeeded. 4. After you have reset each device, check that the Device Settings tab lists all devices in the network. Note: If you customized your network encryption key, the local Powerline device will be disconnected from the network when you reset it to the factory default. To avoid this problem, reset all remote devices before you reset the local device.

2-16 v1.0, November 2009 Using the XAV2001 Powerline Utility Appendix A Technical Specifications This appendix provides technical specifications for the XAV2001 Powerline AV Ethernet Adapter.

Network Protocol and Standards Compatibility Data and Routing Protocols: AC Input Power Consumption: Dimensions: IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-Tx) 100-240V~, 0.2A (Max) 4W Height: 98 mm Width: 72 mm Depth: 40 mm 0.4 lbs (0.18 kg) Weight: Environmental Specifications Operating temperature: Operating humidity: Storage humidity Security Encryption type: Bridge Performance MAC addresses: Bandwidth Powerline Performance Compatibility: Data Transfer Rate: Frequency band: Modulation type: Electromagnetic Emissions Meets requirements of: Safety Agency Approvals Meets requirements of: 0 to 40 C (32° to 104° F) 10-90% maximum relative humidity, noncondensing 5-95% maximum relative humidity, noncondensing 128-bit AES 64 200 Mbps HomePlug AV Up to 200 Mbps with real throughput greater than 80 Mbps 2-30 Mbps OFDM symbol modulation FCC Part 15 Class B; CE-EMC Class B; 3-home FCC Certificate; HomePlug UL Listed (UL 1950) /cUL IEC950; CE LVD; TUV CB; GS A-1 v1.0, November 2009 XAV2001 Powerline AV Ethernet Adapter User Manual Safety Information: XAV2001 Powerline AV Ethernet Adapter Follow these safety guidelines to ensure your own personal safety and to help protect your system from potential damage. · · · · AC input: 100-240V~, 0.2A (Max) Operating temperature: 0C~40C Maximum Wireless Signal Rate Derived from IEEE Standard 802.11 Specifications 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. Observe and follow service markings. 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 may expose you to electrical shock.



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Only a trained service technician should service components inside these compartments.

If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your trained service provider:
. . . The power cable, extension cable, or plug is damaged. An object has fallen into the product. The product has been exposed to water. The product has been
dropped or damaged. The product does not operate correctly when you follow the operating instructions.

. . . . Keep your system away from radiators and heat sources. Also, do not block cooling vents. Do not spill food or liquids on your system components, and
never operate the product in a wet environment. If the system gets wet, contact your trained service provider. Do not push any objects into the openings of
your system. Doing so can cause fire or electric shock by shorting out interior components. Use the product only with approved equipment. Allow the product
to cool before removing covers or touching internal components. Operate the product only from the type of external power source indicated on the electrical
ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.

Technical Specifications v1.0, November 2009 A-2 XAV2001 Powerline AV Ethernet Adapter User Manual · 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 100 V, 50 Hz in eastern Japan and 100 V, 60 Hz in western
Japan 230 V, 50 Hz in most of Europe, the Middle East, and the Far East . . . Be sure that attached devices are electrically rated to operate with the power
available in your location. To help prevent electric shock, plug the system and peripheral power cables into properly grounded electrical outlets. Use only
approved power cables. If you have not been provided with a power cable for your system or for any AC powered option intended for your system, purchase a
power cable that is approved for use in your country. The power cable must be rated for the product and for the voltage and current marked on the product's
electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product. 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. To help protect your system from sudden, transient increases and decreases in electrical power, use a surge
suppressor, line conditioner, or uninterruptible power supply (UPS). Position system cables and power cables carefully; route cables so that they cannot be
stepped on or tripped over. Be sure that nothing rests on any cables. Do not modify power cables or plugs.

Consult a licensed electrician or your power company for site modifications. Always follow your local and national wiring rules. Move products with care;
ensure that all casters and stabilizers are firmly connected to the system. Avoid sudden stops and uneven surfaces. Technical Specifications v1.
0, November 2009 A-3 Appendix B Troubleshooting This chapter provides information about troubleshooting your XAV2001 Powerline AV Ethernet Adapter.
Product Registration and Support Thank you for selecting NETGEAR products. After installing your device, locate the serial number on the label of your
product and use it to register your product at <http://www.NETGEAR.com/register>. Registration is required before you can use our telephone support service.
Registration via our website is strongly recommended. Product updates and Web support are always available at: <http://www.netgear.com/support>.

For Warranty and Regional Customer Support information, see the Resource CD that came with your product. Basic Functioning After you turn on power to
the XAV2001 devices, the following sequence of events should occur: 1. When power is first applied, verify that the Power light is on. 2. After approximately
10 seconds, verify that: a. The power light is solid green. b. The Powerline LED is lit. c. @@LED and Feature Troubleshooting Problem Power light is off.
Power LED is amber. @@@@It goes back to normal mode when the Ethernet port is linked. Powerline devices cannot find each other. @@· Move the
Powerline device to a location closer to the computer or devices. · If you have set up network security, make sure that all Powerline devices are using the
same encryption key; see the online User Manual for details.

· If the problem occurred after you changed the network encryption key, reset each device to their factory default settings. If this fixes the problem, see the
User Manual for instructions about setting the network encryption key. There is no data traffic. Make sure that: · Your router and modem are switched on. ·
The Ethernet cable that came in the box are working and securely connected to the Powerline adapter port and a router LAN port.

· The PC connected directly to the router can access the Internet. · Press the Reset button on each device for 1 second to return the Powerline adapter to its
factory default settings The Reset and Security buttons are located on the side panel of the Powerline AV Ethernet Adapter. · Pressing the reset button longer
than 2 seconds will not reset the device. · Pressing the Security button longer than 2 seconds will not activate security. · See the User Manual for instructions
on using the Reset and Security buttons. · check the Powerline utility, if see if the LEDs are turned via the software. If so, then use the Powerline utility to turn
them back on. Powerline light is off. Ethernet light is not blinking. Problem using the Reset or Security button.

All LEDs are off when plugged into the AC line. B-2 v1.0, November 2009 Troubleshooting XAV2001 Powerline AV Ethernet Adapter User Manual Problems
After Changing Network Encryption Key. If your Powerline devices stop communicating after you have used the NETGEAR XAV2001 Powerline Utility, you'll
need to change the network encryption key. To change the network encryption key: 1. Open the XAV2001 NETGEAR Powerline Utility and select the Security
option on the Advanced tab. 2. Select the device. For each remote device, enter its password (printed on the product label), and then select it.



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Figure B-1 3.

Click the Use Default Encryption Key button. 4. Click the Apply Security to Selected Devices button. 5. Select the Device Settings tab, and check that the utility detects all the Powerline AV Ethernet Adapters in your Powerline network.

If the utility detects all your Powerline devices, you can specify a new network encryption key as described in "Adding a Device to a Powerline Network" in Chapter 2. If the utility does not detect them all, see the following section, "Changing the Network Encryption Key for One Unit at a Time". Troubleshooting v1.0, November 2009 B-3 XAV2001 Powerline AV Ethernet Adapter User Manual Changing the Network Encryption Key for One Unit at a Time If the Powerline Utility does not detect all the devices in your network, you must connect your computer to each Powerline device and set up the network encryption key one adapter at a time, as follows: 1. From the Advanced Settings tab, click the Security arrow.

2. Select the first Powerline adapter in your network. 3. In the Select an Encryption Key area, type the network encryption key that you want to assign to the adapter in the Create a new Encryption field. 4. Click the Apply Security to Selected Devices button. 5. Repeat for each device in the network. 6. Select the Device Settings tab to automatically scan for Powerline Devices.

Check that the utility detects all the devices that have been individually set to the same network encryption key. B-4 v1.0, November 2009 Troubleshooting Index A AC Input 1 add a device, local 7 add a device, remote 8 add adapters 6 advanced settings 9 encryption key change one at a time 4 changing 10 custom 11 default 12 encryption type 1 ethernet network extension 1 EU Declaration of Conformity iii example, Powerline network 1 B bandwidth 1 basic configuration 1 basic functioning 1 button descriptions 3 F factory reset 16 FCC statement iii features 2 frequency band 1 front panel 2 C change encryption key 3 compatibility 1 customer support 1 H humidity operating, storage 1 D data transfer rate 1 default encryption key 12, 3 device names 6 device settings 5 diagnostics 15 dimensions 1 I install Powerline utility 2 installation 1 E electromagnetic emissions 1 encryption change default 8 L LED 6 descriptions 3 LED troubleshooting 2 Index v1.0, November 2009 i XAV2001 Powerline AV Ethernet Adapter User Manual M MAC address 6 Mbps 6 model 6 modulation type 1 side panel 2 support ii, 1 T technical specifications 1 temperature 1 trademarks ii troubleshooting 1 P PoPowerline utility install 2 Powerline AV Ethernet Adapter features 2 install 4 Powerline utility launch 4 shortcut icon 4 update 3 using 1 product registration 1 U UL listed 1 update Powerline utility 3 W weight 1 Q QoS 13 quality 6 quality of service 13 R rear panel 2 registration 1 reset 16 resource CD 2, 1 router, connect to adapter 5 S safety agency approvals 1 safety information 2 security 9 understanding 7 set data transfer priority 14 shortcut icon 4 Index v1.0, November 2009 ii .



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