



User Manual

PowerLine AV2 1000 Wi-Fi AC1200 Starter Kit

DHP-W611AV (DHP-P610AV & DHP-W610AV)

Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Manual Revisions

Revision	Date	Description
1.00	23 October, 2016	• Initial release

Trademarks

D-Link and the D-Link logo are trademarks or registered trademarks of D-Link Corporation or its subsidiaries in the United States or other countries. All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2016 by D-Link Corporation, Inc. All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from D-Link Corporation, Inc.

Power Usage

This device is an Energy Related Product (ErP) with High Network Availability (HiNA), and automatically switches to a power-saving Network Standby mode within 1 minute of no packets being transmitted. It can also be turned off through a power switch to save energy when it is not needed.

DHP-W610AV:

Network Standby: 6.15 watts

Switched Off: 0.1 watts

This device is an Energy Related Product (ErP) with High Network Availability (HiNA), and automatically switches to a power-saving Network Standby mode within 1 minute of no packets being transmitted. If it is not needed during certain periods of time, it can be unplugged to save energy.

DHP-P610AV:

Network Standby: 2.23 watts

Table of Contents

Preface.....	i	PLC Settings	18
Manual Revisions.....	i	Advanced	19
Trademarks	i	MAC Address Filter.....	19
Power Usage	i	Advanced Wireless.....	20
Product Overview.....	1	User Limit	21
Package Contents	1	Tools.....	22
System Requirements.....	2	Admin.....	22
Introduction	3	System.....	23
Features	4	Firmware.....	24
DHP-W610AV	5	Time	25
Connections	5	System Check	26
LEDs.....	6	Status.....	27
DHP-P610AV.....	7	Device Info.....	27
Connections	7	Logs.....	28
LEDs.....	8	Statistics.....	29
Hardware Installation	9	Wireless.....	30
Wireless Installation Considerations	10	IPv6.....	31
Powerline Installation Considerations.....	11	Help.....	32
Important Safety Notes.....	12		
DHP-W610AV Configuration.....	13	Connecting to a Wireless Network	33
Setup.....	13	Using Mac OS.....	33
Setup Wizard.....	14	Using Windows® 10	35
Wireless Settings	15	Using Windows® 8.....	37
Network Settings.....	16	Using Windows® 7.....	41
LAN Settings - Static IP	17	Using Windows Vista®	43
		Configuring Wireless Security.....	45

Table of Contents

Troubleshooting	47
Wireless Basics	49
What is Wireless?	49
How does wireless work?	49
Wireless Local Area Network (WLAN)	49
Wireless Security	52
What is WPA?.....	52
Configuring WPA/WPA2 Personal.....	53
Technical Specifications	54
(DHP-W610AV)	54
(DHP-P610AV).....	56
Regulatory Information	57
(DHP-W610AV)	57
(DHP-P610AV).....	66

Product Overview

Package Contents



D-Link DHP-W610AV PowerLine AV2 1000 Wi-Fi AC1200 Adapter



D-Link DHP-P610AV PowerLine AV2 1000 Gigabit Passthrough Adapter



CAT5 Ethernet Cable (x2)



Wi-Fi Configuration Card



Quick Installation Guide

System Requirements

Network Requirements	<ul style="list-style-type: none">• An Ethernet broadband connection• 10/100/1000 Ethernet clients OR• 802.11ac/n/g/a wireless clients
Browser Requirements	<ul style="list-style-type: none">• Internet Explorer 7.0 or higher• Firefox 3.5 or higher• Safari 4.0 or higher• Chrome 8.0 or higher

Introduction

The DHP-W610AV allows you to connect both wired and wireless computers, high-definition TVs, networking devices, and gaming consoles using the most pervasive medium in your home - the electrical wiring. Share Internet connections and experience smooth file transfers, streaming multimedia, online gaming, and more. The DHP-W611AV is a complete solution that consists of the DHP-W610AV PowerLine AV2 1000 Wi-Fi AC1200 Adapter and the DHP-P610AV PowerLine AV2 1000 Gigabit Passthrough Adapter, giving you everything you need to create a high-speed Powerline network in your home. Simply plug the devices into your home's electrical outlets and you'll be able to use your existing wiring to expand your Internet access and wireless network.

The PowerLine AV2 1000 Wi-Fi AC1200 Adapter incorporates the latest technology to improve on AV data speeds over a home's existing electrical wiring. This faster transmission speed provides ample bandwidth suitable for streaming HD video while simultaneously providing high-speed Internet access throughout the home. With Quality of Service (QoS) support, you can prioritize and allocate bandwidth based on media type. This feature ensures that applications that require real-time communication (such as VoIP calling and online gaming) stay uninterrupted even while streaming Internet TV and music.

A D-Link exclusive, the Clone My Wi-Fi feature lets you quickly and easily set up your Powerline devices in your existing network if you are using a compatible router. Simply choose the Clone My Wi-Fi option in the setup wizard and the extender will automatically copy your current network settings to your new Powerline devices. Gigabit Ethernet and Wireless AC provide high speed data transfers so you can enjoy speedy performance no matter how you are connected. Plug and Play completes the package, so you can expand your home network and share your Internet connection with other devices at the touch of a button.

Features

Data Transmission Over Electrical Wiring

The D-Link DHP-W610AV PowerLine AV2 1000 Wi-Fi AC1200 Adapter, compliant with the HomePlug AV2 standard, uses your home's existing electrical wiring¹ to create or extend your network. It turns every power outlet into a potential network connection to access digital media devices, game consoles, print servers, computers, and network storage devices throughout your home. Additionally, Wireless AC provides high speed transfers without the need for unsightly network cables.

Faster Wireless Speeds & Wider Operational Range

The Wireless AC technology incorporated into the DHP-W610AV offers increased speed and range beyond standard 802.11n technology. Initial wireless setup can be accomplished quickly, thanks to a convenient setup wizard. WPA/WPA2 encryption keeps your network traffic safe and secure.

Ideal For Bandwidth-Intensive Applications

The DHP-W610AV is capable of delivering Powerline AV data transfer rates even higher than the old AV standard. This rapid transmission speed makes it ideal for bandwidth-intensive applications, guaranteeing smooth HD video streaming, clear VoIP calls, and lag-free online gaming experiences. In addition, it prioritizes Internet traffic, ensuring that multimedia applications do not experience glitches while web surfing and downloads are in progress. This device provides ample network bandwidth, enabling digital home consumers to tap into existing electrical wiring for high-quality multimedia streaming.

Convenient Setup and Secure Operation

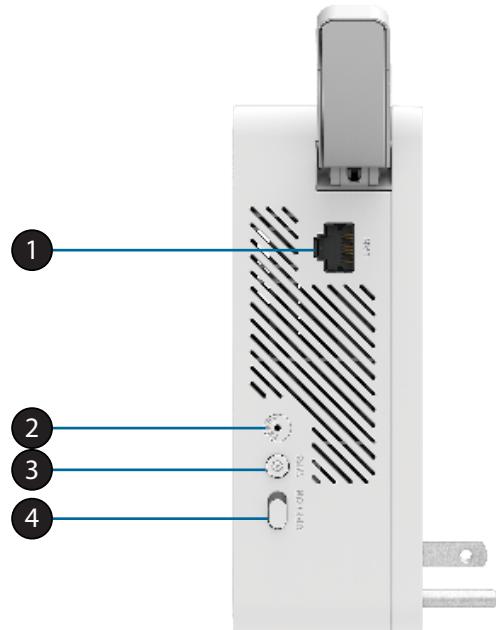
The DHP-W611AV devices plug directly into a power outlet, and do not require any additional power cables. Extend your home network by connecting multiple devices in the farthest corners of your home via Ethernet cable or Wireless AC. For convenient setup, wired or wireless encryption keys can be quickly configured with the push of a button on top of the device. The adapter implements 128-bit AES data encryption to protect the network from unauthorized wiretapping. With hassle-free plug and play installation, the DHP-W611AV is an ideal solution to create a wall-to-wall home network.

¹Power outlets and electrical wiring must all be part of the same electrical circuit. Certain electrical conditions in your home, such as wiring condition and configuration, may affect the performance of this product. Additional D-Link PowerLine AV adapters are required to add new devices to the network. A minimum of two D-Link PowerLine AV Network Adapters are required to create a network. Connecting this product to a power strip with a surge protector may adversely affect the performance of this product. For best results, plug the adapter directly into a wall outlet.

Hardware Overview

DHP-W610AV

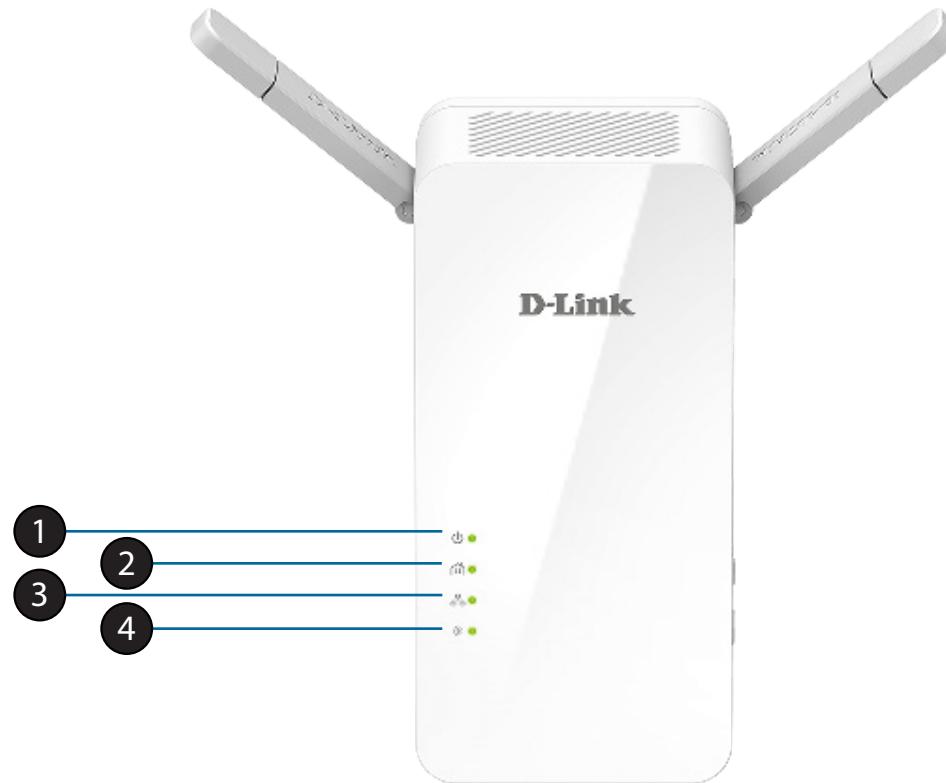
Connections



1	RJ-45 10/100BASE-TX Ethernet Port	Connects to Digital Media Devices, PCs, Game Consoles, Network Storage Devices
2	Reset Button	Press and hold the button for 5 seconds to reset to factory defaults.
3	Simple Connect/WPS Button	Push this button to create a secure Powerline connection with another adapter. More on this connection is available at Hardware Installation on page 9. It can also be used to connect using Wi-Fi Protected Setup (WPS). To connect using WPS, press this button, then press the WPS button on your wireless client.
4	On/Off Switch	Slide this switch to power on or off the device.

Hardware Overview

LEDs



1	Power LED	A solid light indicates a proper connection to the power supply. A blinking light indicates it is in sleep mode or seeking a Powerline connection.
2	Powerline LED	A solid light indicates that a Powerline connection is established.
3	Ethernet LED	A solid light indicates a connection to an Ethernet-enabled device.
4	Wireless LED	A solid light indicates that the wireless network is ready.

Hardware Overview

DHP-P610AV

Connections

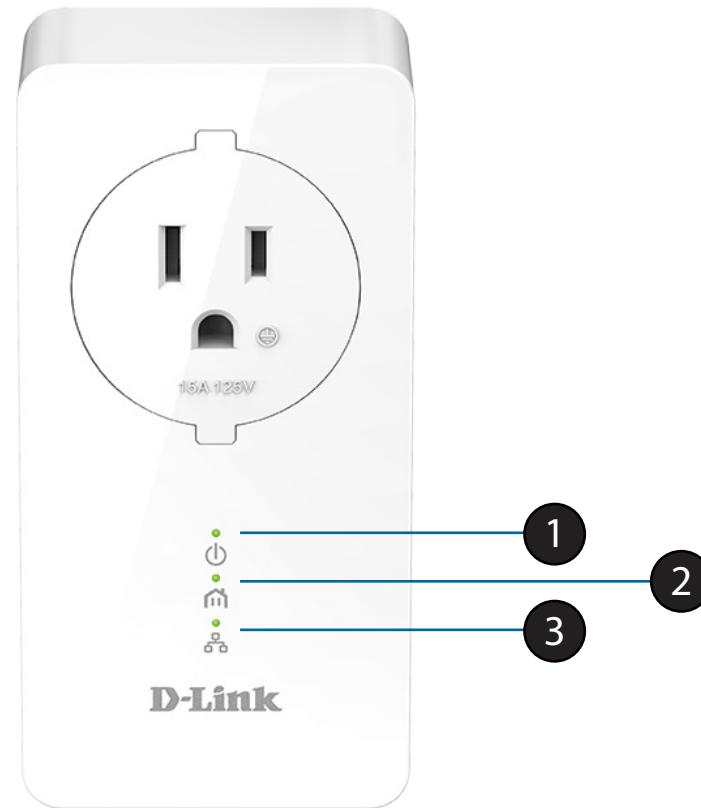


1	RJ-45 10/100BASE-TX Ethernet Port	Connects to digital media devices, PCs, game consoles, network storage devices.
2	Simple Connect Button	Press this button for 3-5 seconds to set up a Powerline network or press it for 10 seconds to perform a factory reset.

Hardware Overview

DHP-P610AV

LEDs



1	Power LED	A solid light indicates a proper connection to the power supply. A blinking light indicates it is in sleep mode (after 5 minutes of inactivity) or seeking a Powerline connection.
2	Powerline LED	A solid light indicates that a Powerline connection is established.
3	Ethernet LED	A solid light indicates a connection to an Ethernet-enabled device.

Hardware Installation

Power

Plug the DHP-P610AV into a wall outlet near your router. Fully extend the antennas and plug the DHP-W610AV into a wall outlet where you want to extend your network. Slide the power switch on the side of the device to the **ON** position. The Power LED will light to indicate the devices are receiving power.

Connect the Devices

Press the Simple Connect Button on the DHP-P610AV for 3 seconds. Then, press the Simple Connect Button on the DHP-W610AV for 3 seconds. This must be done within two minutes after pressing the Simple Connect Button on the DHP-P610AV.

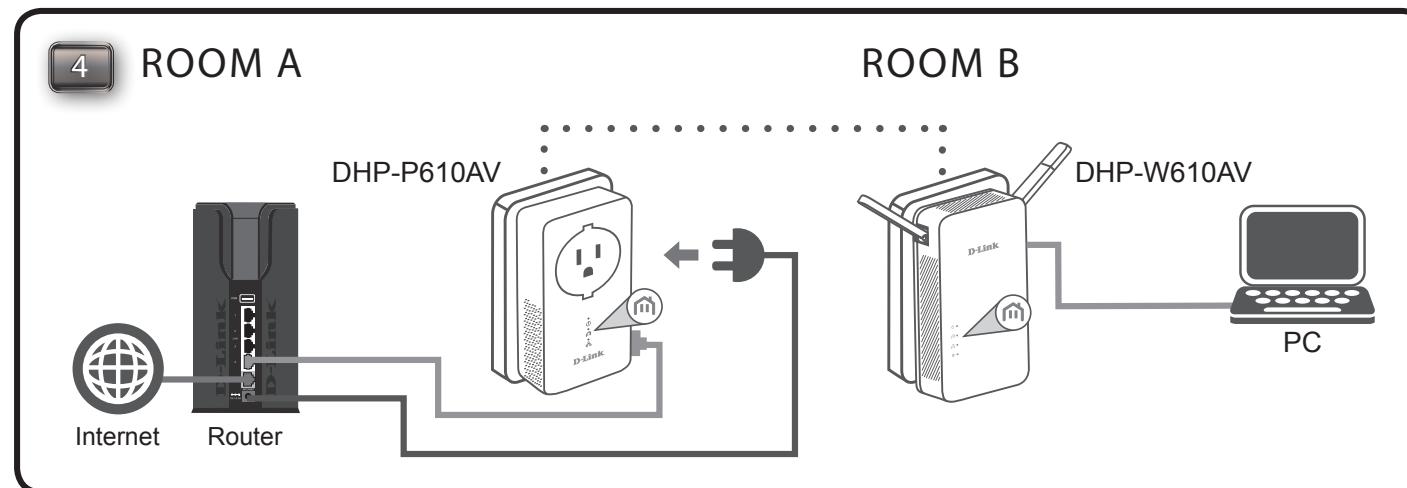
Note: Network connectivity is confirmed when the Powerline LEDs on both Powerline devices are steadily lit. This will indicate that your network is now secure.

Plug in the Ethernet Cable

You should already own a router connected to a modem. Connect one of the supplied Ethernet cables between your router and the DHP-P610AV. Connect the other Ethernet cable between your DHP-W610AV and your computer. Read the guidelines on the following pages, and continue to **DHP-W610AV Configuration** on page 13.

Adding More Devices (optional)

If you have more Powerline devices now or in the future, you may add them to your network in the same way as above. Be sure to press the Simple Connect Button on the new device, then the Simple Connect Button on the existing network.



Wireless Installation Considerations

The DHP-W610AV lets you access your network using a wireless connection from anywhere within the operating range of your wireless network. Keep in mind that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the DHP-W610AV and other network devices to a minimum. Each wall or ceiling can reduce your adapter's range by 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters) at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position the wireless DHP-W610AV and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4 GHz cordless phones or wireless products such as ceiling fans, lights, and home security systems, your wireless connection may degrade dramatically or drop completely. Make sure your 2.4 GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

Powerline Installation Considerations

Plan the location of your Powerline devices:

1. Connect Powerline devices to electrical outlets that are not controlled by a wall switch to avoid accidentally turning off power to the device.
2. Do not connect the Powerline devices to an extension cord, surge protector, or power strip as this might prevent it from working correctly, or negatively impact network performance.
3. Avoid using the Powerline devices in an electrical outlet that is located near an appliance that uses a lot of power, such as a washer or dryer, or a refrigerator. This may prevent the adapter from working correctly, or negatively impact network performance.
4. Verify that your Powerline devices are electrically rated to operate with the power available in your location.
5. To help prevent against electrical shock, be sure to plug the power cables into properly grounded electrical outlets.
6. The Powerline device is designed to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from the device.



Important Safety Notes

Please read all of the safety and operating instructions before using your device:

1. Do not open the device or attempt to repair or service the device.
2. Ensure that the device is plugged into the wall in a vertical position.
3. Use the device in a dry location, and avoid placing it in humid environments.
4. Do not submerge the device in liquid or attempt to clean it with liquids or solvents. To clean the device, disconnect it from the power outlet and use a damp towel.
5. Keep the device out of direct sunlight.
6. Do not cover or block the vents on the device.
7. Make sure that the device has adequate room for ventilation.
8. Avoid placing the device near a heater or radiator.

DHP-W610AV Configuration Setup

This section covers configuration of your DHP-W610AV PowerLine AV2 1000 Wi-Fi AC1200 Adapter. The DHP-P610AV PowerLine AV2 1000 Gigabit Passthrough Adapter does not require configuration other than the initial Powerline connection.

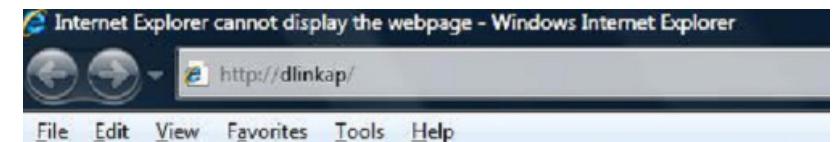
If you wish to change the default settings or optimize the performance of the DHP-W610AV, you may use the web-based configuration utility.

To access the configuration utility, open a web browser such as Internet Explorer and enter either **http://dlinkapWXYZ.local**. (this is on the Wi-Fi Configuration Card) or **http://dlinkapWXYZ** in the address field.

By default, Admin will be the User Name. Leave the password blank to log in.

If you receive a "Page Cannot be Displayed" error, please refer to **Troubleshooting** on page 47 for assistance.

You will automatically proceed to the Setup heading after logging in.

A screenshot of a web-based login interface titled "LOGIN". It says "Log in to the Access Point:". There are two input fields: "User Name : Admin" and "Password :". A "Log In" button is located below the password field. The entire form is enclosed in a light gray box with an orange header bar.

Setup Wizard

Use the wizard's on-screen instructions to conveniently set up your network if you have not done so already. You can also manually configure your network by going to **Settings** from the main page. Wi-Fi settings are covered in **Wireless Settings** on page 15 and Powerline settings are under **PLC Settings** on page 18.



Wireless Settings

The DHP-W610AV lets you customize your wireless settings for your access point. This device allows you to extend your current network so you can roam about the house while staying connected to the Internet. The following settings apply to both 2.4G and 5G modes.

WiFi Security Mode: You can choose to use WPA/WPA2 encryption or copy the settings from your current router if you have a router that supports Clone My Wi-Fi.

Wi-Fi Network Name: The Service Set Identifier (SSID) is the name of your wireless network. Create a name using up to 32 characters. The SSID is case-sensitive.

Enable Auto Channel Scan: The auto channel selection setting can be selected to allow this device to choose the channel with the least amount of interference.

Wireless Channel: By default the channel is set to 1. The channel can be changed to match the channel setting for an existing wireless network or to customize the wireless network. If you enable Auto Channel Scan, this option will be greyed out.

WPA/WPA2 Network Key: Use of TKIP/AES security framework provides the optimum mix of security and compatibility. Choose a password that is strong. A good password uses both letters and numbers in unpredictable places. Example bad passwords could be *password* or *12345678*.

Click **Save Settings** for the changes to take effect.

DHP-W610AV //| SETUP ADVANCED TOOLS STATUS

WIRELESS NETWORK

Use this section to configure the wireless settings for your D-Link Access Point. Please note that changes made in this section may also need to be duplicated on your wireless client. To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2.

Save Settings | Don't Save Settings

WI-FI SECURITY MODE 2.4G

Security Mode : WPA/WPA2

WI-FI NETWORK SETTINGS 2.4G

Enable Wireless : Wi-Fi Network Name (SSID) : dlink-9FBC
Enable Auto Channel Scan : Wireless Channel : 2.412 GHz - CH 1

WPA/WPA2

WPA/WPA2 requires stations to use high grade encryption and authentication.
Network Key : 12345678
(8~63 ASCII or 64 HEX)

WI-FI SECURITY MODE 5G

Security Mode : WPA/WPA2

WI-FI Network Settings 5G

Enable Wireless : Wi-Fi Network Name (SSID) : dlink-9FBC-5GHz
Enable Auto Channel Scan : Wireless Channel : 5.180 GHz - CH 36

WPA/WPA2

WPA/WPA2 requires stations to use high grade encryption and authentication.
Network Key : mawyt54852
(8~63 ASCII or 64 HEX)

Save Settings | Don't Save Settings

WIRELESS

Network Settings

This section will allow you to change the local network settings of the DHP-W610AV and to configure the DHCP settings.

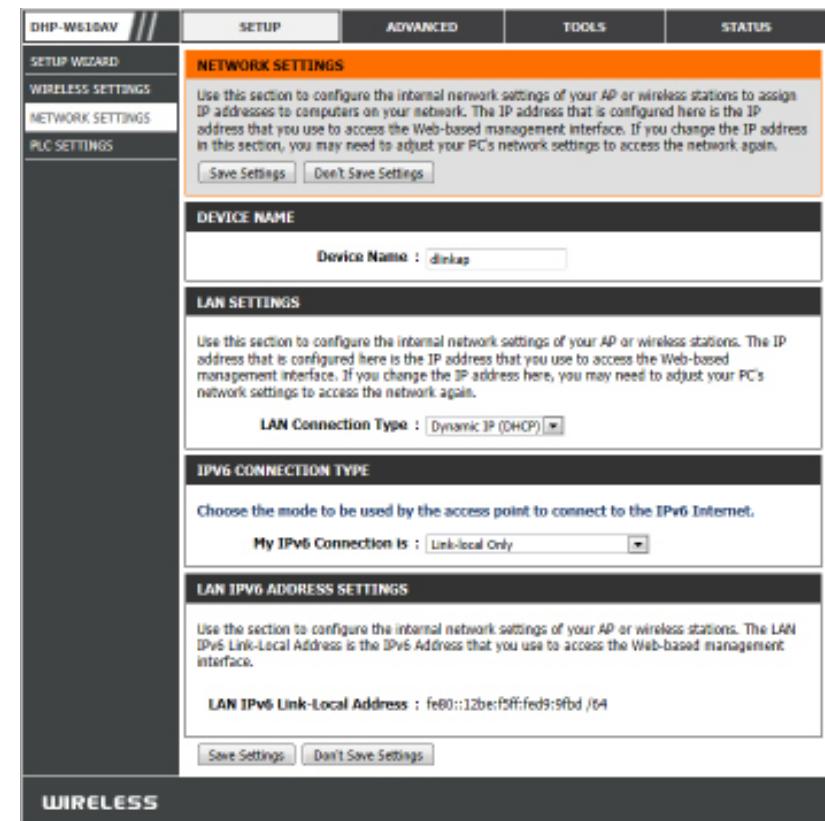
Device Name: You can customize the Device Name of your DHP-W610AV. You will use this name to connect to it through a web browser. The default name is listed on your Wi-Fi Configuration Card.

LAN Connection Use the drop-down menu to select Static IP or Dynamic IP Type: (DHCP) to automatically obtain an IP address on the LAN/ private network. For Static IP setup, please see the next page.

IPv6 Connection Your Internet Service Provider (ISP) may require this to be set Type: a certain way for Internet access. You can choose from **Static IPv6, Autoconfiguration, or Link-local Only**. Contact your ISP for more help on the above requirements.

IPv6 DNS This shows the current IPv6 address of the DHP-W610AV on Settings: your network.

Click **Save Settings** for the changes to take effect.



LAN Settings - Static IP

Select Static IP to manually enter the IP address, subnet mask, and default gateway addresses.

LAN Connection Select Static IP from the drop-down menu.

Type:

IPv4 Address: Enter the IP address of the DHP-W610AV. The default IP address is 192.168.0.50. If you change the IP address, once you click Apply, you will need to enter the new IP address in your browser to return to the configuration utility. You can also connect with the device name. (See previous page.)

Subnet Mask: Enter the Subnet Mask.

Gateway Address: Enter the Gateway. This is usually the LAN or internal IP Address: address of your router.

Primary and Secondary DNS Servers: This is the Domain Name Server that looks up addresses on the Internet, you may choose your preferred DNS provider as well as a backup.

Click **Save Settings** for the changes to take effect.

The screenshot shows two stacked configuration panels. The top panel is titled 'LAN SETTINGS' and contains a descriptive text block: 'Use this section to configure the internal network settings of your AP or wireless stations. The IP address that is configured here is the IP address that you use to access the Web-based management interface. If you change the IP address here, you may need to adjust your PC's network settings to access the network again.' Below this is a dropdown menu labeled 'LAN Connection Type : Static IP'. The bottom panel is titled 'STATIC IP LAN CONNECTION TYPE' and contains five input fields: 'IPv4 Address', 'Subnet Mask', 'Default Gateway', 'Primary DNS Server', and 'Secondary DNS Server', each preceded by a label and a corresponding text input field.

PLC Settings

This section will show you how to configure your new Powerline device using the web-based configuration utility.

Network Name: You can set the name of your network and set it as either public or private. Make sure the network names of all of the devices within your Powerline network is the same.

Public Network Select this option if you would like to make your Powerline **Name:** network public using “HomePlugAV” as the default network name. Since this is a commonly used network name, it is less secure than a private network name.

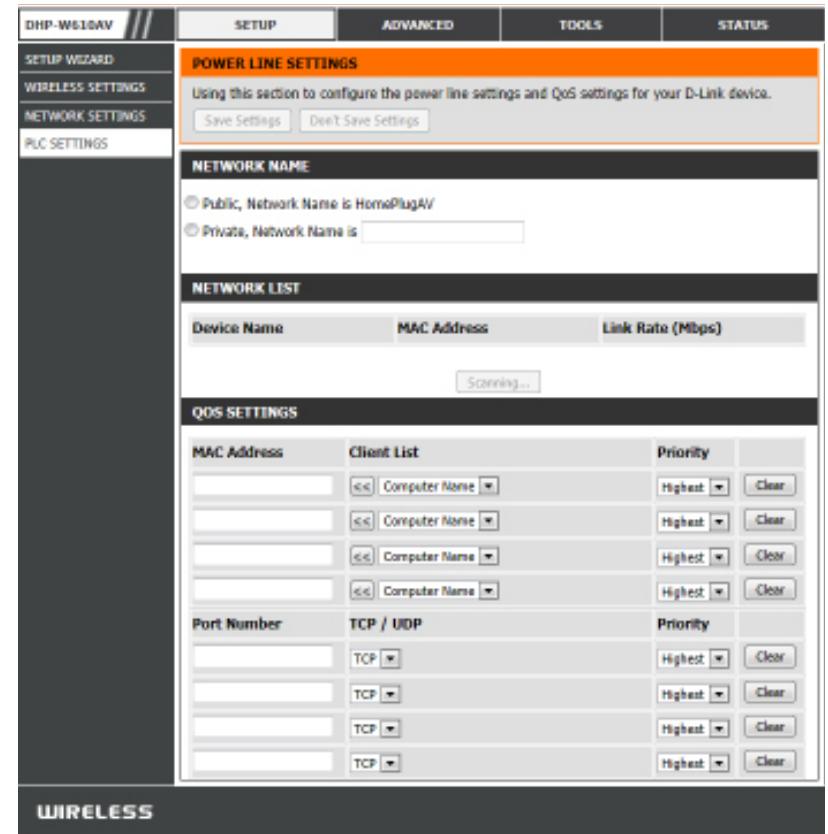
Private Network Select this option if you wish to make your Powerline network **Name:** more secure by using a private network name.

Network List: This section lists devices connected to your Powerline network as well as their MAC address and connection speed. Click the **Scan** button to scan for new Powerline devices. This list is automatically updated and will refresh with this page.

QoS Settings: Here you can set the Quality of Service (QoS) Settings for each network device. QoS helps you prioritize network traffic based on the device or port.

MAC Address/ Priority: Select a device from the Client List dropdown box and then click the << next to Computer Name to automatically fill in the device’s MAC Address. Then set the order of priority for the device under the Priority dropdown box. Clear settings for a rule using the Clear button.

Click **Save Settings** for the changes to take effect.



Advanced MAC Address Filter

Use MAC (Media Access Control) Filters to authorize wireless clients to access your network by their MAC addresses. When enabled, you can choose to block the devices listed, or only allow the devices listed.

MAC Filtering Set MAC Filtering to **ALLOW**, **DENY**, or **OFF**. **ALLOW** means

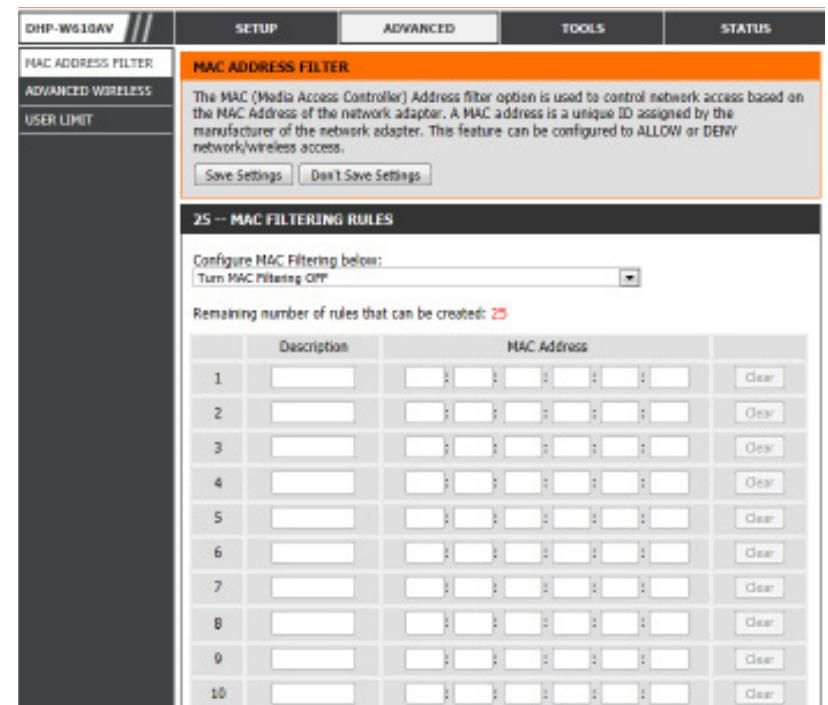
Rules: only the devices listed can access the network. **DENY** means the devices listed cannot access the network. **OFF** means this function is currently disabled.

Description: You enter a custom description for convenience; for example, "My PC" or "My friend's smartphone".

MAC Address: Enter the MAC address you would like to filter.

Note: If you are filtering to **ALLOW** only the listed devices, make sure to add your own computer to the list or you will be denied access to the network and the configuration utility. If you **DENY** the listed addresses be sure not to include your own computer. You can delete the rule by clicking on the **Clear** button next to the rule.

Click **Save Settings** for the changes to take effect.



Advanced Wireless

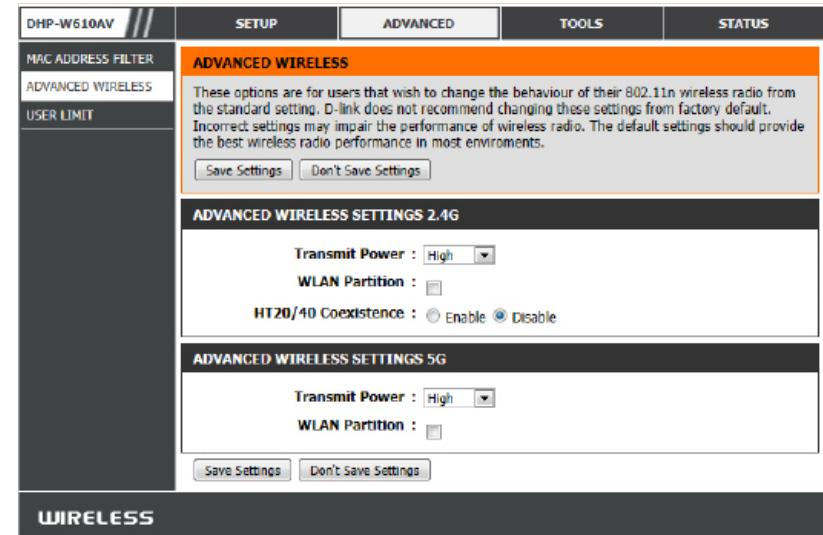
This section allows you to change several advanced settings for both 2.4G and 5G on your DHP-W610AV.

Transmit Power: Sets the power of the antennas.

WLAN Partition: Select this checkbox to enable WLAN partition. If this feature is disabled, then there is no barrier between communication among wireless stations connecting to the DHP-W610AV. If this is enabled, wireless clients are not allowed to exchange data with each other through the DHP-W610AV.

HT20/40 Enabling this function allows compatibility with both Coexistence: 802.11ac/n devices as well as 802.11a/g by using both bands. Disabling this may provide higher speeds by automatically selecting one band but may only allow 802.11ac/n devices to function.

Click **Save Settings** for the changes to take effect.



User Limit

This screen lets you set the maximum number of wireless clients that can connect at one time to your DHP-W610AV.

Enable User Limit: Check this box to enable limiting the number of devices that can connect to the DHP-W610AV.

User Limit: Enter the maximum number of clients, between 1 and 32.

Click **Save Settings** for the changes to take effect.

The screenshot shows the DHP-W610AV configuration interface. The top navigation bar includes links for DHP-W610AV, SETUP, ADVANCED, TOOLS, and STATUS. The left sidebar has links for MAC ADDRESS FILTER, ADVANCED WIRELESS, and USER LIMIT, with USER LIMIT currently selected. The main content area has a header 'USER LIMIT SETTINGS' with a note: 'Please Apply the settings to limit how many wireless stations connecting to AP.' Below this are two buttons: 'Save Settings' and 'Don't Save Settings'. A sub-section titled 'USER LIMIT SETTINGS' contains two fields: 'Enable User Limit : ' and 'User Limit(1 - 32) : '. At the bottom of this section are the same 'Save Settings' and 'Don't Save Settings' buttons. A large dark bar at the bottom is labeled 'WIRELESS'.

Tools

Admin

This page will allow you to change the administrator password, which is used to access the configuration interface and change settings.

Password: Enter a new password for the admin user name. The administrator account can change the configuration of the device.

Verify Password: Enter the same password that you entered in the previous **Password:** textbox in order to confirm its accuracy.

Enable Graphical Authentication: Enables a CAPTCHA verification which will require users to type letters or numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your device's configuration. This feature is disabled by default.

Click **Save Settings** for the changes to take effect.

The screenshot shows the configuration interface for the DHP-W610AV device. The left sidebar has links for DHP-W610AV, ADMIN, SYSTEM, FIRMWARE, TIME, and SYSTEM CHECK. The main content area has tabs for SETUP, ADVANCED, TOOLS (selected), and STATUS. The current page is ADMINISTRATOR SETTINGS, which contains instructions for the 'admin' account and a note about password configuration. It includes 'Save Settings' and 'Don't save Settings' buttons. Below this is the ADMIN PASSWORD section, which asks for the same password to be entered into two fields for confirmation. It also includes 'Save Settings' and 'Don't save Settings' buttons. Further down is the ADMINISTRATION section, which has a checkbox for 'Enable Graphical Authentication'. At the bottom is the WIRELESS section. The entire interface has a dark theme with orange highlights for active tabs and sections.

System

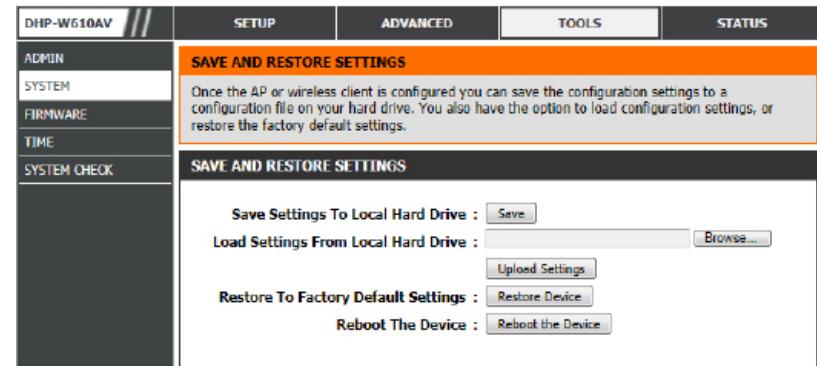
This page lets you both save and update the settings of your DHP-W610AV.

Save Settings To Local Hard Drive: Use this option to save the current DHP-W610AV configuration settings to a file on the computer you are using. Click the **Save** button. You will then see a file dialog where you can select a location and file name for the settings.

Load Settings From Local Hard Drive: Use this option to load previously saved DHP-W610AV configuration settings. Click **Browse** to find a previously saved configuration file. Then, click the **Upload Settings** button to transfer those settings to the DHP-W610AV.

Restore to Factory Default Settings: This option will restore all configuration settings back to the settings that were in effect at the time the DHP-W610AV was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you would like to save the current DHP-W610AV configuration settings, use the **Save** button above.

Reboot the Device: Click to reboot the DHP-W610AV.



Firmware

You can upgrade the firmware of the DHP-W610AV from this page. Make sure the firmware you would like to use is on the local hard drive of your computer. You can check the D-Link support site for firmware updates at <http://support.dlink.com>. and manually download firmware upgrades to your hard drive from the D-Link support site.

Firmware Information: Click the **Check Now** button to check online for the latest information: update to your firmware. If a new version exists, download the new firmware to your hard drive.

Firmware Upgrade: After you have downloaded the new firmware, click **Browse...** to locate the firmware update on your hard drive. Click **Upload** to complete the firmware upgrade.

The screenshot shows the 'FIRMWARE' section of the DHP-W610AV configuration interface. On the left, a vertical menu bar lists 'DHP-W610AV' at the top, followed by 'ADMIN', 'SYSTEM', 'FIRMWARE' (which is highlighted in blue), 'TIME', and 'SYSTEM CHECK'. The main content area has a header 'FIRMWARE UPDATE' with a note: 'There may be new firmware for your AP or wireless client to improve functionality and performance. Click here to check for an upgrade on our support site.' Below this is a 'FIRMWARE INFORMATION' section displaying 'Current Firmware Version : 1.00NA' and 'Current Firmware Time : 07/21/2016 17:36:00'. It also includes a 'Check Online Now for Latest' button with a 'Check Now' link. The 'FIRMWARE UPGRADE' section contains a note: 'Note: Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration.' It features an 'Upload' input field with a 'Browse...' button and an 'Upload' button. At the bottom of the content area is a dark grey footer bar with the word 'WIRELESS' in white capital letters.

Time

The Time page allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in. Daylight Saving can also be configured to automatically adjust the time when needed.

Time Zone: Select your Time Zone from the drop-down menu.

Daylight Saving: To enable Daylight Saving time adjustment, click the **Enable Daylight Saving** check box. Next, use the drop-down menu to select a Daylight Saving Offset and then enter a start date and an end date for daylight saving dates.

Enable NTP Server: NTP (Network Time Protocol) allows the device to automatically set the system clock based on an Internet NTP server. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.

NTP Server Used: Enter the NTP server or select one from the drop-down menu.

Date and Time: To manually input the time, select the values in the drop-down menus for the Year, Month, Day, Hour, Minute, and Second and then click **Save Settings**. You can also click the **Copy Your Computer's Time Settings** button at the bottom of the screen.

Click **Save Settings** for the changes to take effect.

DHP-W61AV //| SETUP ADVANCED TOOLS STATUS

TIME

The Time and Date Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to automatically adjust the time when needed.

TIME CONFIGURATION

Current Time : 2009/01/03 05:10:45
Time Zone : (GMT-08:00) Pacific Time (US & Canada, Tijuana)

Enable Daylight Saving :
Daylight Saving Offset : +01:00
Daylight Saving Dates : Month Week Day of Week Time
DST Start : Jan 1st Sun 12:00 AM
DST End : Jan 1st Sun 12:00 AM

AUTOMATIC TIME AND DATE CONFIGURATION

Enable NTP Server :
NTP Server Used : << Select NTP Server

SET THE TIME AND DATE MANUALLY

Date And Time : Year 2009 Month Jan Day 3
Hour 5 Minute 30 Second 45

WIRELESS

System Check

This page has tools to help you to diagnose connection problems.

Ping Test: A ping test sends a tiny bit of information to a website and waits for a response. Pinging an extremely stable site such as a widely-used search engine or news site can help you determine if your Internet connection is working properly. If you can ping a site or address from here but your computer is not getting connectivity, then the DHP-W610AV is working properly and your computer may be the problem.

IPv6 Ping Test: This is similar to the regular Ping Test but using an IPv6 address.

Ping Result: "No response" means that the site did not respond. This happens if the site is down or does not exist, but also if you do not have Internet connectivity. If you ping several common websites and they all result in a timeout then there is likely an issue with your Internet connection. If the result shows that a site is alive, then your Internet connection is working.

The screenshot shows the DHP-W610AV configuration interface with the 'SYSTEM CHECK' tab selected. The main area displays the 'PING TEST' section, which includes a description of what ping testing does, a text input field for 'Host Name or IP Address', and a 'Ping' button. Below it is the 'IPV6 PING TEST' section with a similar input field and button. At the bottom is the 'PING RESULT' section with a note to enter a host name or IP address and click 'Ping'. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, and STATUS.

Status

Device Info

This page displays the current information for the DHP-W610AV. It will display the LAN and wireless LAN information.

General: Displays the DHP-W610AV's time and firmware version.

LAN: Displays the MAC address and the private (local) IP settings for the DHP-W610AV.

Wireless LAN 2.4G: Displays the wireless 2.4G MAC address and your wireless settings such as SSID and Channel.

Wireless LAN 5G: Displays the wireless 5G MAC address and your wireless settings such as SSID and Channel.

Powerline: Shows the DHP-W610AV's Powerline Connection settings.

DHP-W610AV //	SETUP	ADVANCED	TOOLS	STATUS
DEVICE INFO	DEVICE INFORMATION All of your network connection details are displayed on this page. The firmware version is also displayed here.			
LOGS	GENERAL Time : 2000/01/03 05:10:53 Firmware Version : 1.00NA Thu 21 Jul 2016			
STATISTICS	LAN Connection : DHCP Client MAC Address : 10-be:f5:d9:9f:bd IP Address : 192.168.100.112 Subnet Mask : 255.255.255.0 Gateway Address : 192.168.100.1			
WIRELESS	WIRELESS LAN 2.4 G Wireless Radio : Enabled MAC Address : 10-be:f5:d9:9f:bd 802.11 Mode : Mixed 802.11n and 802.11g Channel Width : 20/40MHz Channel : 5 Network Name (SSID) : dlink-9FBC Wi-Fi Protected Setup : Enabled/Configured Security : WPA/WPA2-PSK			
IPv6	WIRELESS LAN 5 G Wireless Radio : Enabled MAC Address : 10-be:f5:d9:9f:be 802.11 Mode : Mixed 802.11ac, 802.11n and 802.11a Channel Width : 20/40/80MHz Channel : 48 Network Name (SSID) : dlink-9FBC-5GHz Wi-Fi Protected Setup : Enabled/Configured Security : WPA/WPA2-PSK			
	POWER LINE MAC Address : 10-be:f5:d9:9f:bc Password : LKWS-OKDY-DUOA-AKIZ			

Logs

The DHP-W610AV keeps a running log of events and activities occurring on the DHP-W610AV. If the device is rebooted, the logs are automatically cleared. You can save the log files prior to clearing them.

Log Options: You can select the types of messages that you would like to display from the log. Check the boxes next to the types you want to view and click Save Settings.

First Page: Go to the first page of the log.

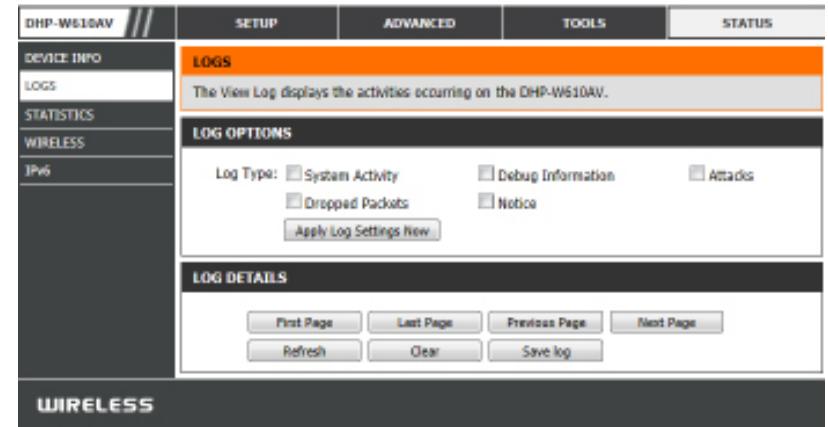
Last Page: Go to the last page of the log.

Previous: Go to the previous page of the log.

Next: Go to the next page of the log.

Clear: This button clears all current log content.

Save Log File: Save the log to your hard drive.



Statistics

The DHP-W610AV keeps statistics on the traffic that passes through it. You can view the amount of packets that pass through the LAN and wireless portions of the network. The traffic counter will reset if the DHP-W610AV is rebooted.

The screenshot shows the 'STATISTICS' section of the DHP-W610AV configuration interface. The left sidebar lists navigation options: DEVICE INFO, LOGS, STATISTICS (which is selected and highlighted in blue), WIRELESS, and IPv6. The top menu bar includes links for SETUP, ADVANCED, TOOLS, and STATUS. The main content area is titled 'STATISTICS' and contains a brief description: 'Traffic Statistics displays Receive and Transmit packets passing through the device.' Below this are two buttons: 'Refresh' (gray) and 'Reset' (blue). The page is divided into several sections: 'LAN STATISTICS', 'WIRELESS STATISTICS : 2.4GHZ', 'WIRELESS STATISTICS : 5GHz', and 'PLC STATISTICS'. Each section displays TX and RX packet counts and byte totals for both 2.4GHz and 5GHz bands, as well as PLC traffic information.

LAN STATISTICS	
TX Packet Numbers:	105202
TX Packets Dropped:	0
TX Packets Bytes:	11089889
RX Packet Numbers:	315902
RX Packets Dropped:	0
RX Packets Bytes:	67818911

WIRELESS STATISTICS : 2.4GHZ	
TX Packet Numbers:	97931
TX Packets Dropped:	0
TX Packets Bytes:	38170194
RX Packet Numbers:	9301889
RX Packets Dropped:	0
RX Packets Bytes:	2161014061

WIRELESS STATISTICS : 5GHz	
TX Packet Numbers:	37872
TX Packets Dropped:	0
TX Packets Bytes:	10533231
RX Packet Numbers:	3908019
RX Packets Dropped:	0
RX Packets Bytes:	1040664192

PLC STATISTICS	
TX Packet Numbers:	19729
TX Packets Dropped:	1
TX Packets Bytes:	17301995
RX Packet Numbers:	310656
RX Packets Dropped:	0
RX Packets Bytes:	81292797

Wireless

This section allows you to view the wireless devices that are connected to your DHP-W610AV on 2.4G and 5G bands.

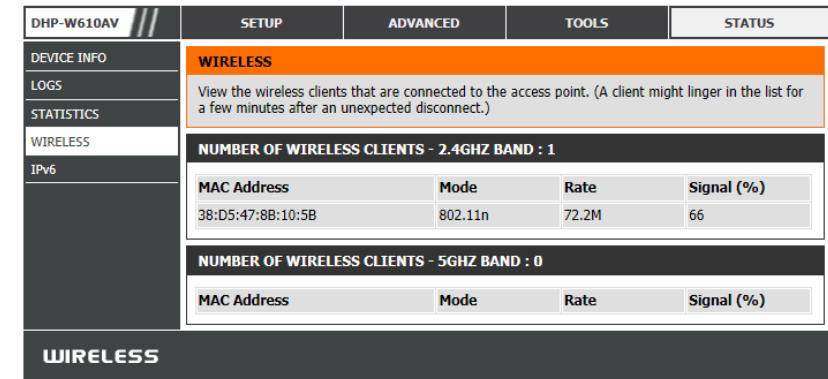
Number of Wireless Clients: Displays the number of devices that are connected to the DHP-W610AV via wireless.

MAC Address: Displays the Ethernet ID (MAC address) of the wireless client.

Mode: Shows the mode the device is using to connect to your DHP-W610AV. This should be 11a, 11g, 11n, or 11ac.

Rate: This shows the data transfer rate of your wireless clients.

Signal (%): This shows the strength of your device's connection.



IPv6

This section will display all of your IPv6 Internet and network connection details.

DHP-W610AV //	SETUP	ADVANCED	TOOLS	STATUS
DEVICE INFO	IPV6 NETWORK INFORMATION			
LOGS	All of your network connection details are displayed on this page.			
STATISTICS	IPV6 CONNECTION INFORMATION			
WIRELESS	<p>IPv6 Connection Type : Link-local Only LAN IPv6 Address : None IPv6 Default Gateway : None LAN IPv6 Link-Local Address : fe80::12be:f5ff:fed9:9fb9/64 Primary DNS Server : None Secondary DNS Server : None</p>			
IPv6				

Help

Click on a link in the Help heading for more information on each section of the firmware.

The screenshot shows the 'HELP' tab selected in the top navigation bar of a web-based configuration interface. The left sidebar is labeled 'MENU' and contains a single item: 'DHP-W610AV //'. The main content area is divided into several sections:

- SUPPORT MENU**: Contains links to Setup, Advanced, Maintenance, and Status.
- SETUP HELP**: Contains links to Setup Wizard, Wireless Setup, Network Settings, and PLC Settings.
- ADVANCED HELP**: Contains links to MAC Address Filter, Advanced Wireless, and User Limit.
- MAINTENANCE HELP**: Contains links to Admin, System, Firmware, Time, and System Check.
- STATUS HELP**: Contains links to Device Info, Logs, Statistics, Wireless, and IPv6.

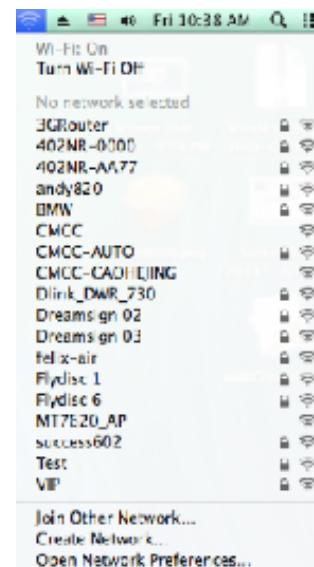
Connecting to a Wireless Network Using Mac OS

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key (Wi-Fi password) being used.

To quickly access your Wi-Fi information and settings, click the Wi-Fi icon on the menu bar.



Clicking on this icon will display a list of all wireless networks within range of your computer. Select the desired network by clicking on the network name.



You will then be prompted to enter the network security key (Wi-Fi password) for the wireless network. Enter the password into the box and click **Join**.

Note: To avoid having to enter your network security key each time you connect, check **Remember this network**.



Once the connection is successfully established, you will see a check by the name of your wireless network.



Connecting to a Wireless Network Using Windows® 10

When connecting to the DHP-W610AV wirelessly for the first time, you will need to input the wireless network name (SSID) and Wi-Fi password (security key) of the device you are connecting to. If your product has a Wi-Fi Configuration Card, you can find the default network name and Wi-Fi password here. Otherwise refer to the product label for the default Wi-Fi network SSID and password, or enter the Wi-Fi credentials set during the product configuration.

To join an existing network, locate the wireless network icon in the taskbar, next to the time display and click on it.



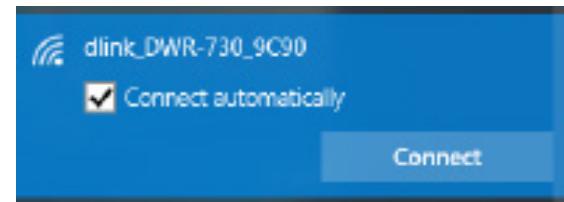
Wireless Icon

Clicking on this icon will display a list of wireless networks which are within range of your computer. Select the desired network by clicking on the SSID.

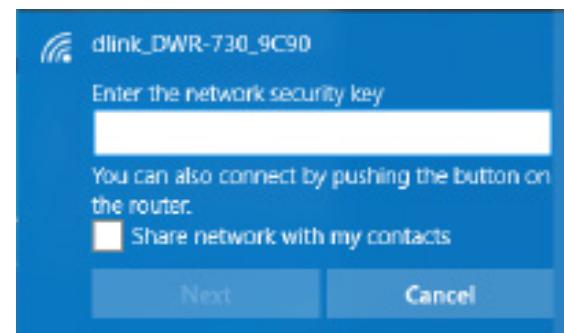


To connect to the SSID, click **Connect**.

To automatically connect with the router when your device next detects the SSID, click the **Connect Automatically** check box.



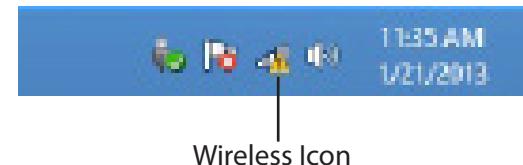
You will then be prompted to enter the Wi-Fi password (network security key) for the wireless network. Enter the password into the box and click **Next** to connect to the network. Your computer will now automatically connect to this wireless network when it is detected.



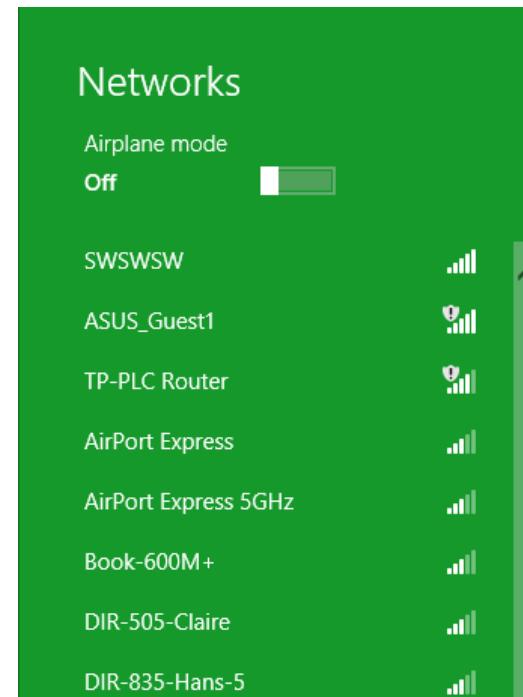
Using Windows® 8

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key (Wi-Fi password) being used.

To join an existing network, locate the wireless network icon in the taskbar, next to the time display.

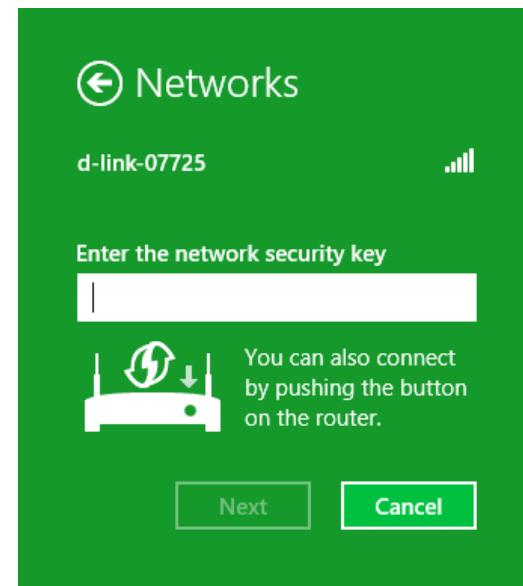


Clicking on this icon will display a list of wireless networks which are within connecting proximity of your computer. Select the desired network by clicking on the network name.

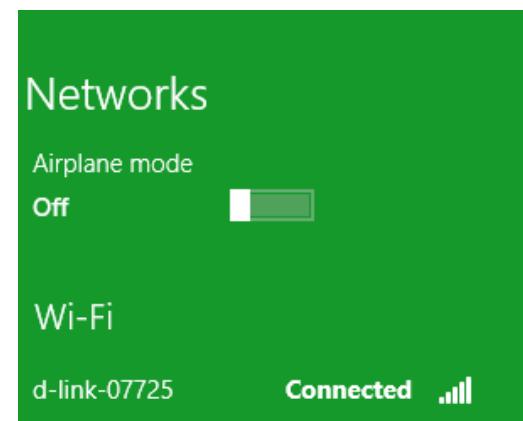


You will then be prompted to enter the network security key (Wi-Fi password) for the wireless network. Enter the password into the box and click **Next**.

If you wish to use Wi-Fi Protected Setup (WPS) to connect to the router, you can also press the WPS button on your router at this point to enable the WPS function.



When you have established a successful connection to a wireless network, the word **Connected** will appear next to the name of the network to which you are connected.

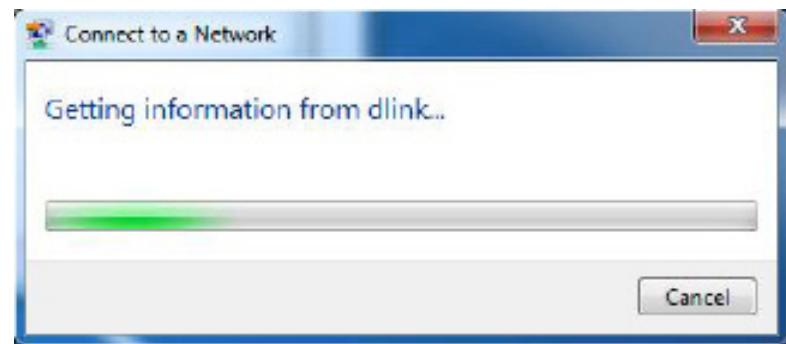


Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button. The Wi-Fi Configuration Card will list your device's specific network, it will not be simply dlink.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.



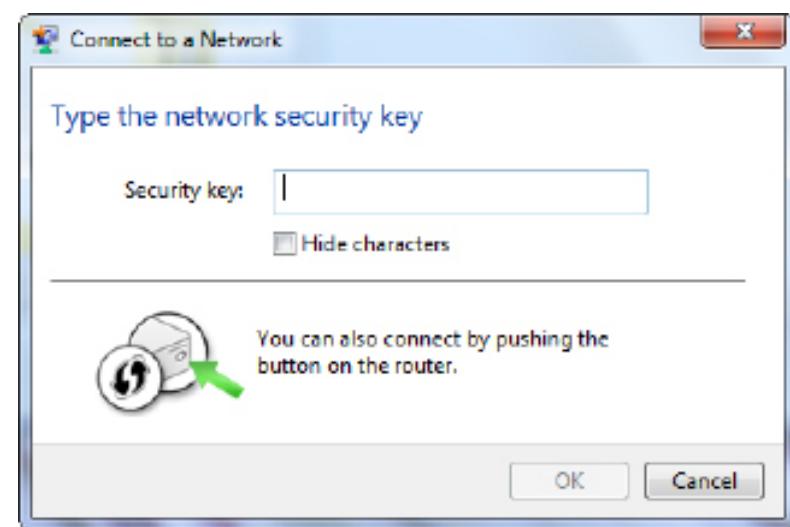
The following window appears while your computer tries to connect to the router.



Enter the same security key or passphrase that is on your DHP-W610AV and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.

Additionally, you may connect using Wi-Fi Protected Setup (WPS) and Push Button Configuration (PBC). When the window to the right is displayed, press the Simple Connect Button on the DHP-W610AV.



Using Windows® 7

It is recommended to enable wireless security (WPA/WPA2) on your DHP-W610AV before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

Click on the wireless icon in your system tray (lower-right corner).



The utility will display any available wireless networks in your area.

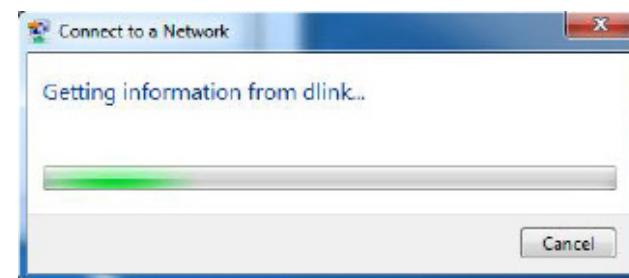


Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button. The Wi-Fi Configuration Card will list your device's specific network.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter.



The following window appears while your computer tries to connect to the router.



Enter the same security key or passphrase that is on your DHP-W610AV and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.

Additionally, you may connect using Wi-Fi Protected Setup (WPS) and Push Button Configuration (PBC). When the window to the right is displayed, press the Simple Connect Button on the DHP-W610AV.

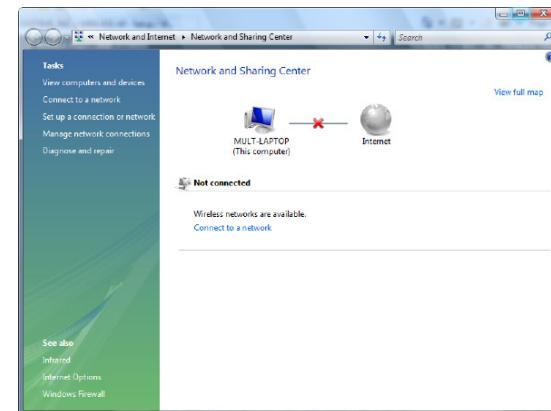


Using Windows Vista®

Windows Vista® users may use the convenient, built-in wireless utility. Follow these instructions:

From the **Start menu**, go to **Control Panel**, and then click on **Network and Sharing Center**.

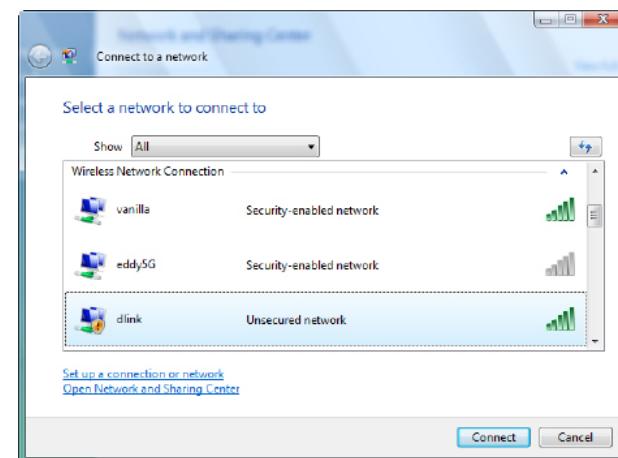
Select **Connect to a network**.



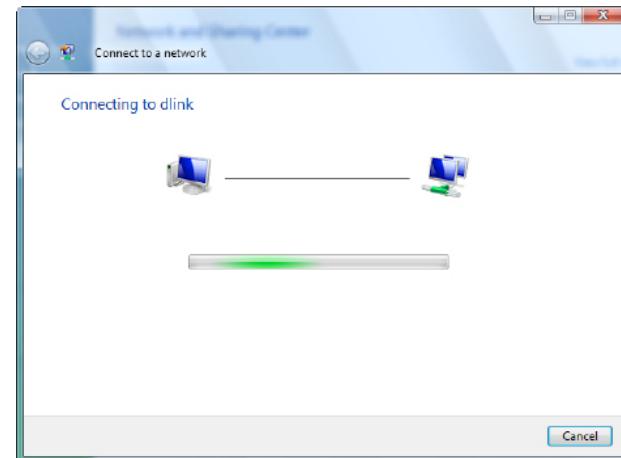
The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button. The Wi-Fi Configuration Card will list your device's specific network.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.

Click **Connect** to continue.



The utility will display the following window to indicate a connection is being made.



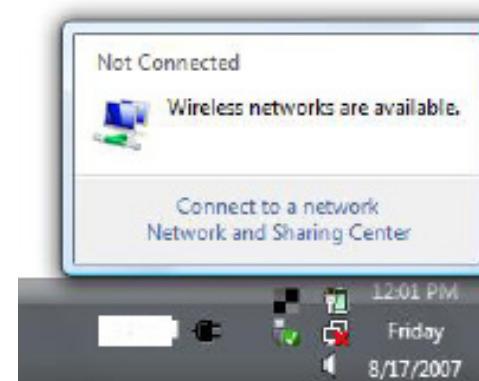
The final window indicates a successful connection has been established.

The next two pages display the windows used to connect to a WPA-PSK wireless network.

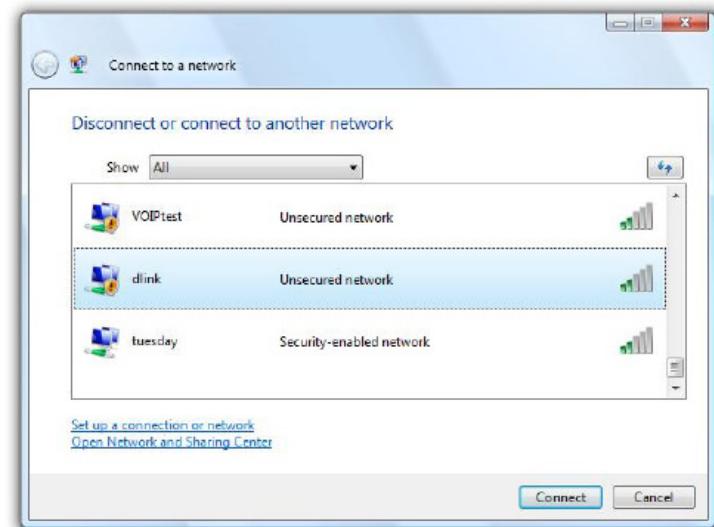
Configuring Wireless Security

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or DHP-W610AV before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.



2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. Enter the same security key or passphrase that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of your Powerline devices. Verify connectivity by checking the LEDs for solid link lights on the device. Read the following descriptions if you are having problems.

1. The Power LED is off even when plugged in:

Please make sure that power to the electrical outlet is on, and you have not plugged the DHP-W610AV into an extension cord, power strip, or surge protector. Lastly, make sure that the power switch on your DHP-W610AV is set to the on position.

2. My DHP-W610AV can't find my DHP-P610AV:

Be sure both devices are plugged directly into a wall outlet. Plugging into a power strip or another device may disrupt the connection. The electrical wiring must be on the same electrical circuit.

3. My Powerline device doesn't detect my other Powerline devices?

This may due to the accidental change of the device password. Use the web-based configuration utility and select **Setup > PLC SETTINGS**. Input your password in the textbox. Then repeat the same procedure for other Powerline devices via their web-based configuration utility.

4. I can't connect to my network via the Powerline device (Powerline LED is off):

Check that all of your Powerline devices are using the same encryption key. To be sure, press the Reset button on each device briefly to return the adapter to its factory default settings.

5. The network connection is slow (Powerline LED is amber or red):

You can move the Powerline devices closer together and remove nearby devices and power adapters to reduce interference.

6. I can't get an Ethernet connection working through the DHP-W610AV (Ethernet LED is off):

Check your Ethernet cables and make sure they are plugged in securely and make sure the client device is powered on.

7. Why am I unable to access the web-based configuration utility?

When entering the IP address of the D-Link DHP-W610AV, you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in from the factory. Your computer must be on the same IP subnet to connect to the web-based utility. You may also enter <http://dlinkapWXYZ.local>. (on the Wi-Fi Configuration Card) instead of the IP address.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
 - Microsoft Internet Explorer® 7.0 and higher
 - Mozilla Firefox 3.5 and higher
 - Google™ Chrome 8.0 and higher
 - Apple Safari 4.0 and higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.

- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

Configure your Internet settings:

- Go to Start > Settings > Control Panel. Double-click the Internet Options Icon. From the Security tab, click the button to restore the settings to their defaults.
- Click the Connection tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click OK.
- Go to the Advanced tab and click the Reset... button to restore these settings to their defaults. Click OK three times.
- Close your web browser (if open) and open it.
- Access the web management by opening your web browser and entering the IP address of your D-Link DHP-W610AV in the address bar. This should open the login page for your the web management.
- If you still cannot access the configuration, unplug the power to the DHP-W610AV for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

8. What can I do if I forgot my password?

If you forgot your password, you must reset your device. Unfortunately this process will revert all your settings back to the factory defaults.

To reset the DHP-W610AV, locate the reset button (hole) on the side of the unit. With the DHP-W610AV powered on, use a paperclip to hold the button down for 5 seconds. Release the button and the DHP-W610AV will go through its reboot process. Wait about 30 seconds to access the DHP-W610AV. The default IP address is 192.168.0.50. When logging in, the username is Admin and leave the password box empty to log in.

To reset the DHP-P610AV, locate the simple connect button on the bottom of the unit. With the DHP-W610AV powered on, hold the button down for 10 seconds. Release the button and the DHP-P610AV will go through its reboot process.

Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards. Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN.

What is Wireless?

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office.

How does wireless work?

Wireless works similar to how cordless phone work, through radio signals to transmit data from point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

Wireless Local Area Network (WLAN)

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The DHP-W610AV has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor Access Point as seen in the picture, the signal can travel up to 300 feet. With an outdoor Access Point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

Who uses wireless?

Wireless technology has become so popular in recent years that almost everyone is using it. Whether it's for home, or office D-Link has a wireless solution for it.

Home

- Gives everyone at home broadband access
- Surf the web, check email, instant message, etc.
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

Where is wireless used?

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

A wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

Tips

Here are a few things to keep in mind, when you install a wireless network.

Eliminate Interference

Place home appliances such as cordless telephones, microwaves, wireless speakers, and televisions as far away as possible from the DHP-W610AV. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

Security

Don't let your next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WPA2 security feature on the DHP-W610AV (security is on by default).

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DHP-W610AV offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy). The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. This key must be the exact same key entered on your wireless bridge or DHP-W610AV.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

Configuring WPA/WPA2 Personal

For improved security, it is highly recommended that you enable encryption for both 2.4G and 5G networks on your DHP-W610AV. Please establish wireless connectivity before enabling encryption.

1. Log into the web-based configuration by opening a web browser and entering **http://dlinkapWXYZ.local** to get access to the DHP-W610AV web UI. Click on **Setup** and then click **Wireless Settings** on the left side.
2. For Security Mode, select **WPA/WPA2**.
3. For Wi-Fi Password, enter a key. The password must be between 8-63 characters and use numbers, letters, and/or special characters.
4. Click **Save Settings** at the top of the window to save your settings. If you are configuring the DHP-W610AV with a wireless adapter, you will lose connectivity until you enable WPA on your adapter and enter the same passphrase as you did on the DHP-W610AV.

The screenshot displays the 'Wireless Settings' configuration page of the DHP-W610AV. It is divided into two main sections: 'WI-FI SECURITY MODE 2.4G' and 'WI-FI SECURITY MODE 5G'.
WI-FI SECURITY MODE 2.4G:
- Security Mode: WPA/WPA2
- Wi-Fi Network Name (SSID): dlink-9FBC
- Enable Auto Channel Scan: checked
- Wireless Channel: 2.412 GHz - CH 1
- WPA/WPA2: Network Key: 12345678 (8~63 ASCII or 64 HEX)
WI-FI SECURITY MODE 5G:
- Security Mode: WPA/WPA2
- Wi-Fi Network Name (SSID): dlink-9FBC-5GHz
- Enable Auto Channel Scan: checked
- Wireless Channel: 5.180 GHz - CH 36
- WPA/WPA2: Network Key: navyt94852 (8~63 ASCII or 64 HEX)

Technical Specifications

(DHP-W610AV)

Standards

- IEEE 802.11ac
- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.11a
- IEEE 802.3x
- IEEE 802.3u
- IEEE 1901
- HomePlug AV2

Network Interfaces

- One 10/100/1000 Ethernet port
- Wireless AC
- Powerline

Power Input

- 100 - 240V AC 50/60 Hz

Security

- WPA
- WPA2

Wireless Signal Rates*

- | | |
|------------|------------|
| • 300 Mbps | • 12 Mbps |
| • 108 Mbps | • 11 Mbps |
| • 54 Mbps | • 9 Mbps |
| • 48 Mbps | • 6 Mbps |
| • 36 Mbps | • 5.5 Mbps |
| • 18 Mbps | • 2 Mbps |
| • 24 Mbps | • 1 Mbps |

MSC (0-15)

- 130 Mbps (270)
- 117 Mbps (243)
- 104 Mbps (216)
- 78 Mbps (162)
- 66 Mbps (135)
- 58.5 Mbps (121.5)
- 52 Mbps (108)
- 39 Mbps (81)
- 26 Mbps (54)
- 19.5 Mbps (40.5)
- 12 Mbps (27)
- 6.5 Mbps (13.5)

Frequency Range

- 2.4G: 2.4 GHz to 2.483 GHz
- 5G: 5.150 GHz to 5.850 GHz

Encryption

- 128-bit AES
- WPA/WPA2

Operating Temperature

- 32 to 104 °F (0 to 40 °C)

Storage Temperature

- -4 to 149 °F (-20 to 65 °C)

Humidity

- Operation: 10% to 90% RH
- Storage: 5% to 95% RH

LEDs

- | | |
|---------|-------------|
| • Power | • Ethernet |
| • WLAN | • Powerline |

Safety & Emissions

- FCC

* Maximum wireless signal rate derived from IEEE Standard 802.11ac 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. Environmental factors may adversely affect wireless signal range.

- CE
- RoHS
- UL, CE LVD

Dimensions

- 140 x 68 x 50 mm (5.51 x 2.68 x 1.97 inches)

Weight

- United Kingdom: 323.0 g (11.4 ounces)
- United States: 313.6 g (11.1 ounces)
- Europe: 315.2 g (11.1 ounces)

Technical Specifications

(DHP-P610AV)

Standards

- Compatible with IEEE 1901
- HomePlug AV2

Network Interfaces

- One 10/100/1000 Ethernet port

Power Input

- 100 - 240V AC, 50/60 Hz

Encryption

- 128-bit AES

Operation Temperature

- 32 to 104 °F (0 to 40 °C)

Storage Temperature

- -4 to 149 °F (-20 to 65 °C)

Humidity

- Operation: 10% to 90% RH
- Storage: 5% to 95% RH

EMC

- CE

Safety & Emissions

- CE LVD

Dimensions

- 114 x 59 x 38 mm (4.49 x 2.32 x 1.50 inches)

Weight

- United Kingdom: 184 g (6.50 ounces)
- United States: 156 g (5.50 ounces)

- Europe: 188 g (6.63 ounces)
- France: 189 g (6.67 ounces)

Regulatory Information (DHP-W610AV)

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. 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 in accordance with 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 can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Non-modifications Statement:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Caution:

This device complies with 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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures. For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Note

The country code selection is for non-USA models only and is not available to all USA models. Per FCC regulations, all WiFi product marketed in the USA must be fixed to USA operational channels only.

RF Frequency Requirements

This device is restricted for indoor use.

IMPORTANT NOTICE:

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Innovation, Science and Economic Development Canada (ISED) Statement:

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.

Innovation, Science and Economic Development Canada (ISED) Statement:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
 - (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
- (i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (ii) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

Radiation Exposure Statement

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.



	Frequency Band(s) Frequenzband Fréquence bande(s) Bandas de Frecuencia Frequenza/e Frequentie(s)	Max. Output Power (EIRP) Max. Output Power Consommation d'énergie max. Potencia máxima de Salida Potenza max. Output Max. Output Power
5 G	5.15 – 5.25 GHz	200 mW
	5.25 – 5.35 GHz	200 mW
	5.47 – 5.725 GHz	1 W
2.4 G	2.4 – 2.4835 GHz	100 mW

European Community Declaration of Conformity:

Česky [Czech]	Tímto D-Link Corporation prohlašuje, že tento produkt, jeho příslušenství a software jsou v souladu se směrnicí 2014/53/EU. Celý text ES prohlášení o shodě vydaného EU a o firmwaru produktu lze stáhnout na stránkách k produktu www.dlink.com .
Dansk [Danish]	D-Link Corporation erklærer herved, at dette produkt, tilbehør og software er i overensstemmelse med direktiv 2014/53/EU. Den fulde tekst i EU-overensstemmelseserklæringen og produktfirmware kan wnloades fra produktsiden hos www.dlink.com .
Deutsch [German]	Hiermit erklärt die D-Link Corporation, dass dieses Produkt, das Zubehör und die Software der Richtlinie 2014/53/EU entsprechen. Der vollständige Text der Konformitätserklärung der Europäischen Gemeinschaft sowie die Firmware zum Produkt stehen Ihnen zum Herunterladen von der Produktseite im Internet auf www.dlink.com zur Verfügung.
Eesti [Estonian]	Käesolevaga kinnitab D-Link Corporation, et see toode, tarvikud ja tarkvara on kooskõlas direktiiviga 2014/53/EL. Euroopa Liidu vastavusdeklaratsiooni täistekst ja toote püsivara on allalaadimiseks saadaval tootelehel www.dlink.com .
English	Hereby, D-Link Corporation, declares that this product, accessories, and software are in compliance with directive 2014/53/EU. The full text of the EU Declaration of Conformity and product firmware are available for download from the product page at www.dlink.com
Español [Spanish]	Por la presente, D-Link Corporation declara que este producto, accesorios y software cumplen con las directivas 2014/53/UE. El texto completo de la declaración de conformidad de la UE y el firmware del producto están disponibles y se pueden descargar desde la página del producto en www.dlink.com .
Ελληνική [Greek]	Με την παρούσα, η D-Link Corporation δηλώνει ότι αυτό το προϊόν, τα αξεσουάρ και το λογισμικό συμμορφώνονται με την Οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης της ΕΕ και το υλικολογισμικό του προϊόντος είναι διαθέσιμα για λήψη από τη σελίδα του προϊόντος στην τοποθεσία www.dlink.com .
Français [French]	Par les présentes, D-Link Corporation déclare que ce produit, ces accessoires et ce logiciel sont conformes aux directives 2014/53/UE. Le texte complet de la déclaration de conformité de l'UE et le programme du produit sont disponibles au téléchargement sur la page des produits à www.dlink.com .
Italiano [Italian]	Con la presente, D-Link Corporation dichiara che questo prodotto, i relativi accessori e il software sono conformi alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE e il firmware del prodotto sono disponibili per il download dalla pagina del prodotto su www.dlink.com .

Latviski [Latvian]	Ar šo uzņēmums D-Link Corporation apliecina, ka šis produkts, piederumi un programmatūra atbilst direktīvai 2014/53/ES. ES atbilstības deklarācijas pilno tekstu un produkta aparātprogrammatūru var lejupielādēt attiecīgā produkta lapā vietnē www.dlink.com .
Lietuvių [Lithuanian]	Šiuo dokumentu „D-Link Corporation“ pareiškia, kad šis gaminys, priedai ir programinė įranga atitinka direktyvą 2014/53/ES. Visą ES atitikties deklaracijos tekstą ir gaminio programinę aparatinę įrangą galima atsiisiusti iš gaminio puslapio adresu www.dlink.com .
Nederlands [Dutch]	Hierbij verklaart D-Link Corporation dat dit product, accessoires en software voldoen aan de richtlijnen 2014/53/EU. De volledige tekst van de EU conformiteitsverklaring en productfirmware is beschikbaar voor download van de productpagina op www.dlink.com .
Malti [Maltese]	Bil-preżenti, D-Link Corporation tiddikkjara li dan il-prodott, l-accessorji, u s-software huma konformi mad-Direttiva 2014/53/UE. Tista' tniżżeż it-test shiħ tad-dikjarazzjoni ta' konformità tal-UE u l-firmware tal-prodott mill-paġna tal-prodott fuq www.dlink.com .
Magyar [Hungarian]	Ezennel a D-Link Corporation kijelenti, hogy a jelen termék, annak tartozékaí és szoftvere megfelelnek a 2014/53/EU sz. rendeletek rendelkezéseinek. Az EU Megfelelőségi nyilatkozat teljes szövege és a termék firmware a termék oldaláról töltethető le a www.dlink.com címen.
Polski [Polish]	D-Link Corporation niniejszym oświadcza, że ten produkt, akcesoria oraz oprogramowanie są zgodne z dyrektywami 2014/53/EU. Pełen tekst deklaracji zgodności UE oraz oprogramowanie sprzętowe do produktu można pobrać na stronie produktu w witrynie www.dlink.com .
Português [Portuguese]	Desta forma, a D-Link Corporation declara que este produto, os acessórios e o software estão em conformidade com a diretiva 2014/53/UE. O texto completo da declaração de conformidade da UE e do firmware
Slovensko[Slovenian]	Podjetje D-Link Corporation s tem izjavlja, da so ta izdelek, dodatna oprema in programska oprema skladni z direktivami 2014/53/EU. Celotno besedilo izjave o skladnosti EU in vdelana programska oprema sta na voljo za prenos na strani izdelka na www.dlink.com .
Slovensky [Slovak]	Spoločnosť D-Link týmto vyhlasuje, že tento produkt, príslušenstvo a softvér sú v súlade so smernicou 214/53/EÚ. Úplné znenie vyhlásenia EÚ o zhode a firmvéri produktu sú k dispozícii na prevzatie zo stránky produktu www.dlink.com .
Suomi [Finnish]	D-Link Corporation täten vakuuttaa, että tämä tuote, lisävarusteet ja ohjelmisto ovat direktiivin 2014/53/EU vaatimusten mukaisia. Täydellinen EU-vaatimustenmukaisuusvakuutus samoin kuin tuotteen laiteohjelmisto ovat ladattavissa osoitteesta www.dlink.com .

Svenska [Swedish]	D-Link Corporation försäkrar härmed att denna produkt, tillbehör och programvara överensstämmer med direktiv 2014/53/EU. Hela texten med EU-försäkran om överensstämmelse och produkt-firmware kan hämtas från produktsidan på www.dlink.com .
Íslenska [Icelandic]	Hér með lýsir D-Link Corporation því yfir að þessi vara, fylgihlutir og hugbúnaður eru í samræmi við tilskipun 2014/53/EB. Sækja má ESB-samræmisfirlýsinguna í heild sinni og fastbúnað vörunnar af vefsíðu vörunnar á www.dlink.com .
Norsk [Norwegian]	Herved erklærer D-Link Corporation at dette produktet, tilbehøret og programvaren er i samsvar med direktivet 2014/53/EU. Den fullstendige teksten i EU-erklæring om samsvar og produktets fastvare er tilgjengelig for nedlasting fra produktsiden på www.dlink.com .

Warning Statement:

The power outlet should be near the device and easily accessible.

NOTICE OF WIRELESS RADIO LAN USAGE IN THE EUROPEAN COMMUNITY (FOR WIRELESS PRODUCT ONLY):

- This device is restricted to indoor use when operated in the European Community using channels in the 5.15-5.35 GHz band to reduce the potential for interference.
- This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries. This equipment may be operated in AL, AD, BE, BG, DK, DE, FI, FR, GR, GW, IS, IT, HR, LI, LU, MT, MK, MD, MC, NL, NO, AT, PL, PT, RO, SM, SE, RS, SK, ES, CI, HU, and CY.

Usage Notes:

- To remain in conformance with European National spectrum usage regulations, frequency and channel limitations will be applied on the products according to the country where the equipment will be deployed.
- This device is restricted from functioning in Ad-hoc mode while operating in 5 GHz. Ad-hoc mode is direct peer-to-peer communication between two client devices without an Access Point.
- Access points will support DFS (Dynamic Frequency Selection) and TPC (Transmit Power Control) functionality as required when operating in 5 GHz band within the EU.
- Please refer to the product manual or datasheet to check whether your product uses 2.4 GHz and/or 5 GHz wireless.

HINWEIS ZUR VERWENDUNG VON DRAHTLOS-NETZWERK (WLAN) IN DER EUROPÄISCHEN GEMEINSCHAFT (NUR FÜR EIN DRAHTLOSES PRODUKT)

- Der Betrieb dieses Geräts in der Europäischen Gemeinschaft bei Nutzung von Kanälen im 5,15-5,35 GHz Frequenzband ist ausschließlich auf Innenräume beschränkt, um das Interferenzpotential zu reduzieren.
- Bei diesem Gerät handelt es sich um einen Einsatz in allen EU-Mitgliedsstaaten und in EFTA-Ländern - ausgenommen Frankreich. Der Betrieb dieses Geräts ist in den folgenden Ländern erlaubt: AL, AD, BE, BG, DK, DE, FI, FR, GR, GW, IS, IT, HR, LI, LU, MT, MK, MD, MC, NL, NO, AT, PL, PT, RO, SM, SE, RS, SK, ES, CI, HU, CY

Gebrauchshinweise:

- Um den in Europa geltenden nationalen Vorschriften zum Nutzen des Funkspektrums weiterhin zu entsprechen, werden Frequenz und Kanalbeschränkungen, dem jeweiligen Land, in dem das Gerät zum Einsatz kommt, entsprechend, auf die Produkte angewandt.
- Die Funktionalität im Ad-hoc-Modus bei Betrieb auf 5 GHz ist für dieses Gerät eingeschränkt. Bei dem Ad-hoc-Modus handelt es sich um eine Peer-to-Peer-Kommunikation zwischen zwei Client-Geräten ohne einen Access Point.
- Access Points unterstützen die Funktionen DFS (Dynamic Frequency Selection) und TPC (Transmit Power Control) wie erforderlich bei Betrieb auf 5 GHz innerhalb der EU.
- Bitte schlagen Sie im Handbuch oder Datenblatt nach, ob Ihr Gerät eine 2,4 GHz und / oder 5 GHz Verbindung nutzt.

AVIS CONCERNANT L'UTILISATION DE LA RADIO SANS FIL LAN DANS LA COMMUNAUTÉ EUROPÉENNE (UNIQUEMENT POUR LES PRODUITS SANS FIL)

- Cet appareil est limité à un usage intérieur lorsqu'il est utilisé dans la Communauté européenne sur les canaux de la bande de 5,15 à 5,35 GHz afin de réduire les risques d'interférences.
- Cet appareil est un système de transmission à large bande (émetteur-récepteur) de 2,4 GHz, destiné à être utilisé dans tous les États-membres de l'UE et les pays de l'AELE. Cet équipement peut être utilisé dans les pays suivants : AL, AD, BE, BG, DK, DE, FI, FR, GR, GW, IS, IT, HR, LI, LU, MT, MK, MD, MC, NL, NO, AT, PL, PT, RO, SM, SE, RS, SK, ES, CI, HU, CY

Notes d'utilisation:

- Pour rester en conformité avec la réglementation nationale européenne en matière d'utilisation du spectre, des limites de fréquence et de canal seront appliquées aux produits selon le pays où l'équipement sera déployé.
- Cet appareil ne peut pas utiliser le mode Ad-hoc lorsqu'il fonctionne dans la bande de 5 GHz. Le mode Adhoc fournit une communication directe pair à pair entre deux périphériques clients sans point d'accès.
- Les points d'accès prendront en charge les fonctionnalités DFS (Dynamic Frequency Selection) et TPC (Transmit Power Control) au besoin lors du fonctionnement dans la bande de 5 GHz au sein de l'UE.
- Merci de vous référer au guide d'utilisation ou de la fiche technique afin de vérifier si votre produit utilise 2.4 GHz et/ou 5 GHz sans fil.

AVISO DE USO DE LA LAN DE RADIO INALÁMBRICA EN LA COMUNIDAD EUROPEA (SOLO PARA EL PRODUCTO INALÁMBRICO)

- El uso de este dispositivo está restringido a interiores cuando funciona en la Comunidad Europea utilizando canales en la banda de 5,15-5,35 GHz, para reducir la posibilidad de interferencias.
- Este dispositivo es un sistema de transmisión (transceptor) de banda ancha de 2,4 GHz, pensado para su uso en todos los estados miembros de la UE y en los países de la AELC. Este equipo se puede utilizar en AL, AD, BE, BG, DK, DE, FI, FR, GR, GW, IS, IT, HR, LI, LU, MT, MK, MD, MC, NL, NO, AT, PL, PT, RO, SM, SE, RS, SK, ES, CI, HU, CY

Notas de uso:

- Para seguir cumpliendo las normas europeas de uso del espectro nacional, se aplicarán limitaciones de frecuencia y canal en los productos en función del país en el que se pondrá en funcionamiento el equipo.
- Este dispositivo tiene restringido el funcionamiento en modo Ad-hoc mientras funcione a 5 Ghz. El modo Ad-hoc es la comunicación directa de igual a igual entre dos dispositivos cliente sin un punto de acceso.
- Los puntos de acceso admitirán la funcionalidad DFS (Selección de frecuencia dinámica) y TPC (Control de la potencia de transmisión) si es necesario cuando funcionan a 5 Ghz dentro de la UE.
- Por favor compruebe el manual o la ficha de producto para comprobar si el producto utiliza las bandas inalámbricas de 2.4 GHz y/o la de 5 GHz.

AVVISO PER L'USO DI LAN RADIO WIRELESS NELLA COMUNITÀ EUROPEA (SOLO PER PRODOTTI WIRELESS)

- Nella Comunità europea, l'uso di questo dispositivo è limitato esclusivamente agli ambienti interni sui canali compresi nella banda da 5,15 a 5,35 GHz al fine di ridurre potenziali interferenze. Questo dispositivo è un sistema di trasmissione a banda larga a 2,4 GHz (ricetrasmettente), destinato all'uso in tutti gli stati membri dell'Unione europea e nei paesi EFTA.
- Questo dispositivo può essere utilizzato in AL, AD, BE, BG, DK, DE, FI, FR, GR, GW, IS, IT, HR, LI, LU, MT, MK, MD, MC, NL, NO, AT, PL, PT, RO, SM, SE, RS, SK, ES, CI, HU, CY

Note per l'uso

- Al fine di mantenere la conformità alle normative nazionali europee per l'uso dello spettro di frequenze, saranno applicate limitazioni sulle frequenze e sui canali per il prodotto in conformità alle normative del paese in cui il dispositivo viene utilizzato.
- Questo dispositivo non può essere attivato in modalità Ad-hoc durante il funzionamento a 5 Ghz. La modalità Ad-hoc è una comunicazione diretta peer-to-peer fra due dispositivi client senza un punto di accesso.
- I punti di accesso supportano le funzionalità DFS (Dynamic Frequency Selection) e TPC (Transmit Power Control) richieste per operare a 5 Ghz nell'Unione europea.
- Ti invitiamo a fare riferimento al manuale del prodotto o alla scheda tecnica per verificare se il tuo prodotto utilizza le frequenze 2,4 GHz e/o 5 GHz.

KENNISGEVING VAN DRAADLOOS RADIO LAN-GEBRUIK IN DE EUROPESE GEMEENSCHAP (ALLEEN VOOR DRAADLOOS PRODUCT)

- Dit toestel is beperkt tot gebruik binnenshuis wanneer het wordt gebruikt in de Europese Gemeenschap gebruik makend van kanalen in de 5.15-5.35 GHz band om de kans op interferentie te beperken.
- Dit toestel is een 2.4 GHz breedband transmissiesysteem (transceiver) dat bedoeld is voor gebruik in alle EU lidstaten en EFTA landen. Deze uitrusting mag gebruikt worden in AL, AD, BE, BG, DK, DE, FI, FR, GR, GW, IS, IT, HR, LI, LU, MT, MK, MD, MC, NL, NO, AT, PL, PT, RO, SM, SE, RS, SK, ES, CI, HU, CY

Gebruiksaanwijzingen:

- Om de gebruiksvoorschriften van het Europese Nationale spectrum na te leven, zullen frequentie- en kanaalbeperkingen worden toegepast op de producten volgens het land waar de uitrusting gebruikt zal worden.
- Dit toestel kan niet functioneren in Ad-hoc mode wanneer het gebruikt wordt in 5 GHz. Ad-hoc mode is directe peer-to-peer communicatie tussen twee klantenapparaten zonder een toegangspunt.
- Toegangspunten ondersteunen DFS (Dynamic Frequency Selection) en TPC (Transmit Power Control) functionaliteit zoals vereist bij gebruik in 5 GHz binnen de EU.
- Raadpleeg de handleiding of de datasheet om te controleren of uw product gebruik maakt van 2.4 GHz en/of 5 GHz.

Regulatory Information (DHP-P610AV)

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. 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 in accordance with 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 can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Non-modifications Statement:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Caution:

This device complies with 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.

Innovation, Science and Economic Development Canada (ISED) Statement:

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.

SAFETY INSTRUCTIONS

The following general safety guidelines are provided to help ensure your own personal safety and protect your product from potential damage. Remember to consult the product user instructions for more details.

- Static electricity can be harmful to electronic components. Discharge static electricity from your body (i.e. touching grounded bare metal) before touching the product.
- Do not attempt to service the product and never disassemble the product. For some products with a user replaceable battery, please read and follow the instructions in the user manual.
- Do not spill food or liquid on your product and never push any objects into the openings of your product.
- Do not use this product near water, areas with high humidity, or condensation unless the product is specifically rated for outdoor application.
- Keep the product away from radiators and other heat sources.
- Always unplug the product from mains power before cleaning and use a dry lint free cloth only.

SICHERHEITSVORSCHRIFTEN

Die folgenden allgemeinen Sicherheitsvorschriften dienen als Hilfe zur Gewährleistung Ihrer eigenen Sicherheit und zum Schutz Ihres Produkts. Weitere Details finden Sie in den Benutzeranleitungen zum Produkt.

- Statische Elektrizität kann elektronischen Komponenten schaden. Um Schäden durch statische Aufladung zu vermeiden, leiten Sie elektrostatische Ladungen von Ihrem Körper ab, (z. B. durch Berühren eines geerdeten blanken Metallteils), bevor Sie das Produkt berühren.
- Unterlassen Sie jeden Versuch, das Produkt zu warten, und versuchen Sie nicht, es in seine Bestandteile zu zerlegen. Für einige Produkte mit austauschbaren Akkus lesen Sie bitte das Benutzerhandbuch und befolgen Sie die dort beschriebenen Anleitungen.
- Vermeiden Sie, dass Speisen oder Flüssigkeiten auf Ihr Produkt gelangen, und stecken Sie keine Gegenstände in die Gehäuseschlitzte oder -öffnungen Ihres Produkts.
- Verwenden Sie dieses Produkt nicht in unmittelbarer Nähe von Wasser und nicht in Bereichen mit hoher Luftfeuchtigkeit oder Kondensation, es sei denn, es ist speziell zur Nutzung in Außenbereichen vorgesehen und eingestuft.
- Halten Sie das Produkt von Heizkörpern und anderen Quellen fern, die Wärme erzeugen.
- Trennen Sie das Produkt immer von der Stromzufuhr, bevor Sie es reinigen und verwenden Sie dazu ausschließlich ein trockenes fusselfreies Tuch.

Disposing of and Recycling Your Product

ENGLISH



This symbol on the product or packaging means that according to local laws and regulations this product should be not be disposed of in household waste but sent for recycling. Please take it to a collection point designated by your local authorities once it has reached the end of its life, some will accept products for free. By recycling the product and its packaging in this manner you help to conserve the environment and protect human health.

D-Link and the Environment

At D-Link, we understand and are committed to reducing any impact our operations and products may have on the environment. To minimise this impact D-Link designs and builds its products to be as environmentally friendly as possible, by using recyclable, low toxic materials in both products and packaging.

D-Link recommends that you always switch off or unplug your D-Link products when they are not in use. By doing so you will help to save energy and reduce CO₂ emissions.

To learn more about our environmentally responsible products and packaging please visit www.dlinkgreen.com.

DEUTSCH



Dieses Symbol auf dem Produkt oder der Verpackung weist darauf hin, dass dieses Produkt gemäß bestehender örtlicher Gesetze und Vorschriften nicht über den normalen Hausmüll entsorgt werden sollte, sondern einer Wiederverwertung zuzuführen ist. Bringen Sie es bitte zu einer von Ihrer Kommunalbehörde entsprechend amtlich ausgewiesenen Sammelstelle, sobald das Produkt das Ende seiner Nutzungsdauer erreicht hat. Für die Annahme solcher Produkte erheben einige dieser Stellen keine Gebühren. Durch ein auf diese Weise durchgeführtes Recycling des Produkts und seiner Verpackung helfen Sie, die Umwelt zu schonen und die menschliche Gesundheit zu schützen.

D-Link und die Umwelt

D-Link ist sich den möglichen Auswirkungen seiner Geschäftstätigkeiten und seiner Produkte auf die Umwelt bewusst und fühlt sich verpflichtet, diese entsprechend zu mindern. Zu diesem Zweck entwickelt und stellt D-Link seine Produkte mit dem Ziel größtmöglicher Umweltfreundlichkeit her und verwendet wiederverwertbare, schadstoffarme Materialien bei Produktherstellung und Verpackung.

D-Link empfiehlt, Ihre Produkte von D-Link, wenn nicht in Gebrauch, immer auszuschalten oder vom Netz zu nehmen. Auf diese Weise helfen Sie, Energie zu sparen und CO₂-Emissionen zu reduzieren.

Wenn Sie mehr über unsere umweltgerechten Produkte und Verpackungen wissen möchten, finden Sie entsprechende Informationen im Internet unter www.dlinkgreen.com.

EN

FRANÇAIS**FR**

Ce symbole apposé sur le produit ou son emballage signifie que, conformément aux lois et réglementations locales, ce produit ne doit pas être éliminé avec les déchets domestiques mais recyclé. Veuillez le rapporter à un point de collecte prévu à cet effet par les autorités locales; certains accepteront vos produits gratuitement. En recyclant le produit et son emballage de cette manière, vous aidez à préserver l'environnement et à protéger la santé de l'homme.

D-Link et l'environnement

Chez D-Link, nous sommes conscients de l'impact de nos opérations et produits sur l'environnement et nous engageons à le réduire. Pour limiter cet impact, D-Link conçoit et fabrique ses produits de manière aussi écologique que possible, en utilisant des matériaux recyclables et faiblement toxiques, tant dans ses produits que ses emballages.

D-Link recommande de toujours éteindre ou débrancher vos produits D-Link lorsque vous ne les utilisez pas. Vous réaliserez ainsi des économies d'énergie et réduirez vos émissions de CO₂.

Pour en savoir plus sur les produits et emballages respectueux de l'environnement, veuillez consulter le www.dlinkgreen.com.

ESPAÑOL**ES**

Este símbolo en el producto o el embalaje significa que, de acuerdo con la legislación y la normativa local, este producto no se debe desechar en la basura doméstica sino que se debe reciclar. Llévelo a un punto de recogida designado por las autoridades locales una vez que ha llegado al fin de su vida útil; algunos de ellos aceptan recogerlos de forma gratuita. Al reciclar el producto y su embalaje de esta forma, contribuye a preservar el medio ambiente y a proteger la salud de los seres humanos.

D-Link y el medio ambiente

En D-Link, comprendemos y estamos comprometidos con la reducción del impacto que puedan tener nuestras actividades y nuestros productos en el medio ambiente. Para reducir este impacto, D-Link diseña y fabrica sus productos para que sean lo más ecológicos posible, utilizando materiales reciclables y de baja toxicidad tanto en los productos como en el embalaje.

D-Link recomienda apagar o desenchufar los productos D-Link cuando no se estén utilizando. Al hacerlo, contribuirá a ahorrar energía y a reducir las emisiones de CO₂.

Para obtener más información acerca de nuestros productos y embalajes ecológicos, visite el sitio www.dlinkgreen.com.

ITALIANO

La presenza di questo simbolo sul prodotto o sulla confezione del prodotto indica che, in conformità alle leggi e alle normative locali, questo prodotto non deve essere smaltito nei rifiuti domestici, ma avviato al riciclo. Una volta terminato il ciclo di vita utile, portare il prodotto presso un punto di raccolta indicato dalle autorità locali. Alcuni questi punti di raccolta accettano gratuitamente i prodotti da riciclare. Scegliendo di riciclare il prodotto e il relativo imballaggio, si contribuirà a preservare l'ambiente e a salvaguardare la salute umana.

D-Link e l'ambiente

D-Link cerca da sempre di ridurre l'impatto ambientale dei propri stabilimenti e dei propri prodotti. Allo scopo di ridurre al minimo tale impatto, D-Link progetta e realizza i propri prodotti in modo che rispettino il più possibile l'ambiente, utilizzando materiali riciclabili a basso tasso di tossicità sia per i prodotti che per gli imballaggi.

D-Link raccomanda di spegnere sempre i prodotti D-Link o di scollarne la spina quando non vengono utilizzati. In questo modo si contribuirà a risparmiare energia e a ridurre le emissioni di anidride carbonica.

Per ulteriori informazioni sui prodotti e sugli imballaggi D-Link a ridotto impatto ambientale, visitate il sito all'indirizzo www.dlinkgreen.com.

NEDERLANDS

Dit symbool op het product of de verpakking betekent dat dit product volgens de plaatselijke wetgeving niet mag worden weggegooid met het huishoudelijk afval, maar voor recyclage moeten worden ingeleverd. Zodra het product het einde van de levensduur heeft bereikt, dient u het naar een inzamelpunt te brengen dat hiertoe werd aangeduid door uw plaatselijke autoriteiten, sommige autoriteiten accepteren producten zonder dat u hiervoor dient te betalen. Door het product en de verpakking op deze manier te recycelen helpt u het milieu en de gezondheid van de mens te beschermen.

D-Link en het milieu

Bij D-Link spannen we ons in om de impact van onze handelingen en producten op het milieu te beperken. Om deze impact te beperken, ontwerpt en bouwt D-Link zijn producten zo milieuvriendelijk mogelijk, door het gebruik van recycleerbare producten met lage toxiciteit in product en verpakking.

D-Link raadt aan om steeds uw D-Link producten uit te schakelen of uit de stekker te halen wanneer u ze niet gebruikt. Door dit te doen bespaart u energie en beperkt u de CO₂-emissies.

Breng een bezoek aan www.dlinkgreen.com voor meer informatie over onze milieuverantwoorde producten en verpakkingen.

IT**NL**

POLSKI

Ten symbol umieszczony na produkcie lub opakowaniu oznacza, że zgodnie z miejscowym prawem i lokalnymi przepisami niniejszego produktu nie wolno wyrzucać jak odpady czy śmieci z gospodarstwa domowego, lecz należy go poddać procesowi recyklingu. Po zakończeniu użytkowania produktu, niektóre odpowiednie do tego celu podmioty przyjmą takie produkty nieodpłatnie, dlatego prosimy dostarczyć go do punktu zbiórki wskazanego przez lokalne władze. Poprzez proces recyklingu i dzięki takiemu postępowaniu z produktem oraz jego opakowaniem, pomogą Państwo chronić środowisko naturalne i dbać o ludzkie zdrowie.

D-Link i środowisko

D-Link podchodzimy w sposób świadomy do ochrony otoczenia oraz jesteśmy zaangażowani w zmniejszanie wpływu naszych działań i produktów na środowisko naturalne. W celu zminimalizowania takiego wpływu firma D-Link konstruuje i wytwarza swoje produkty w taki sposób, aby były one jak najbardziej przyjazne środowisku, stosując do tych celów materiały nadające się do powtórnego wykorzystania, charakteryzujące się małą toksycznością zarówno w przypadku samych produktów jak i opakowań.

Firma D-Link zaleca, aby Państwo zawsze prawidłowo wyłączali z użytku swoje produkty D-Link, gdy nie są one wykorzystywane. Postępując w ten sposób pozwalają Państwo oszczędzać energię i zmniejszać emisje CO₂.

Aby dowiedzieć się więcej na temat produktów i opakowań mających wpływ na środowisko prosimy zapoznać się ze stroną Internetową www.dlinkgreen.com.

ČESKY

Tento symbol na výrobku nebo jeho obalu znamená, že podle místně platných předpisů se výrobek nesmí vyhazovat do komunálního odpadu, ale odeslat k recyklaci. Až výrobek doslouží, odneste jej prosím na sběrné místo určené místními úřady k tomuto účelu. Některá sběrná místa přijímají výrobky zdarma. Recyklací výrobku i obalu pomáháte chránit životní prostředí i lidské zdraví.

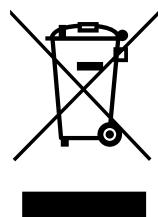
D-Link a životní prostředí

Ve společnosti D-Link jsme si vědomi vlivu našich provozů a výrobků na životní prostředí a snažíme se o minimalizaci těchto vlivů. Proto své výrobky navrhujeme a vyrábíme tak, aby byly co nejekologičtější, a ve výrobcích i obalech používáme recyklovatelné a nízkotoxické materiály.

Společnost D-Link doporučuje, abyste své výrobky značky D-Link vypnuli nebo vytáhli ze zásuvky vždy, když je nepoužíváte. Pomůžete tak šetřit energii a snížit emise CO₂.

Více informací o našich ekologických výrobcích a obalech najdete na adrese www.dlinkgreen.com.

PL

MAGYAR

Ez a szimbólum a terméken vagy a csomagoláson azt jelenti, hogy a helyi törvényeknek és szabályoknak megfelelően ez a termék nem semmisíthető meg a háztartási hulladékkal együtt, hanem újrahasznosításra kell küldeni. Kérjük, hogy a termék élettartamának elteltét követően vigye azt a helyi hatóság által kijelölt gyűjtőhelyre. A termékek egyes helyeken ingyen elhelyezhetők. A termék és a csomagolás újrahasznosításával segíti védeni a környezetet és az emberek egészségét.

A D-Link és a környezet

A D-Linknél megértjük és elkötelezettek vagyunk a műveleteink és termékeink környezetre gyakorolt hatásainak csökkentésére. Az ezen hatás csökkentése érdekében a D-Link a lehető leginkább környezetbarát termékeket tervez és gyárt azáltal, hogy újrahasznosítható, alacsony károsanyagtartalmú termékeket gyárt és csomagolásokat alkalmaz.

A D-Link azt javasolja, hogy minden kapcsolja ki vagy húzza ki a D-Link termékeket a tápforrásból, ha nem használja azokat. Ezzel segít az energia megtakarításában és a széndioxid kibocsátásának csökkentésében.

Környezetbarát termékeinkről és csomagolásainkról további információkat a www.dlinkgreen.com weboldalon tudhat meg.

NORSK

Dette symbolet på produktet eller forpakningen betyr at dette produktet ifølge lokale lover og forskrifter ikke skal kastes sammen med husholdningsavfall, men leveres inn til gjenvinning. Vennligst ta det til et innsamlingssted anvist av lokale myndigheter når det er kommet til slutten av levetiden. Noen steder aksepteres produkter uten avgift. Ved på denne måten å gjenvinne produktet og forpakningen hjelper du å verne miljøet og beskytte folks helse.

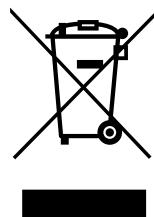
D-Link og miljøet

Hos D-Link forstår vi oss på og er forpliktet til å minske innvirkningen som vår drift og våre produkter kan ha på miljøet. For å minimalisere denne innvirkningen designet og lager D-Link produkter som er så miljøvennlig som mulig, ved å bruke resirkulerbare, lav-toksiske materialer både i produktene og forpakningen.

D-Link anbefaler at du alltid slår av eller frakobler D-Link-produkter når de ikke er i bruk. Ved å gjøre dette hjelper du å spare energi og å redusere CO₂-utslip.

For mer informasjon angående våre miljøansvarlige produkter og forpakninger kan du gå til www.dlinkgreen.com.

HU

DANSK**DK**

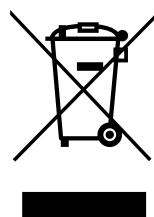
Dette symbol på produktet eller emballagen betyder, at dette produkt i henhold til lokale love og regler ikke må bortslettes som husholdningsaffald, mens skal sendes til genbrug. Indlever produktet til et indsamlingssted som angivet af de lokale myndigheder, når det er nået til slutningen af dets levetid. I nogle tilfælde vil produktet blive modtaget gratis. Ved at indlevere produktet og dets emballage til genbrug på denne måde bidrager du til at beskytte miljøet og den menneskelige sundhed.

D-Link og miljøet

Hos D-Link forstår vi og bestræber os på at reducere enhver indvirkning, som vores aktiviteter og produkter kan have på miljøet. For at minimere denne indvirkning designer og producerer D-Link sine produkter, så de er så miljøvenlige som muligt, ved at bruge genanvendelige materialer med lavt giftighedsniveau i både produkter og emballage.

D-Link anbefaler, at du altid slukker eller frakobler dine D-Link-produkter, når de ikke er i brug. Ved at gøre det bidrager du til at spare energi og reducere CO₂-udledningerne.

Du kan finde flere oplysninger om vores miljømæssigt ansvarlige produkter og emballage på www.dlinkgreen.com.

SUOMI**FI**

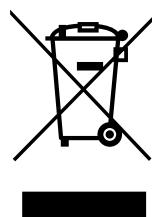
Tämä symboli tuotteen pakkauksessa tarkoittaa, että paikallisten lakiens ja säännösten mukaisesti tästä tuotetta ei pidä hävittää yleisen kotitalousjätteen seassa vaan se tulee toimittaa kierrätettäväksi. Kun tuote on elinkaarensa päässä, toimita se lähipään viranomaisten hyväksymään kierrätyspisteesseen. Kierrättämällä käytetyn tuotteen ja sen pakkauksen autat tukemaan sekä ympäristön että ihmisten terveyttä ja hyvinvointia.

D-Link ja ympäristö

D-Link ymmärtää ympäristönsuojelun tärkeyden ja on sitoutunut vähentämään tuotteistaan ja niiden valmistuksesta ympäristölle mahdollisesti aiheutuvia haittavaikutuksia. Nämä negatiiviset vaikutukset minimoidakseen D-Link suunnittelee ja valmistaa tuotteensa mahdollisimman ympäristöystävällisiksi käyttämällä kierrätettäviä, alhaisia pitoisuksia haitallisia aineita sisältäviä materiaaleja sekä tuotteissaan että niiden pakauksissa.

Suosittelemme, että irrotat D-Link-tuotteesi virtualähteestä tai sammutat ne aina, kun ne eivät ole käytössä. Toimimalla näin autat säastämään energiaa ja vähentämään hiilidioksiidipäästöjä.

Lue lisää ympäristöystävällisistä D-Link-tuotteista ja pakauksistamme osoitteesta www.dlinkgreen.com.

SVENSKA

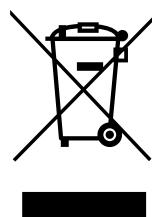
Den här symbolen på produkten eller förpackningen betyder att produkten enligt lokala lagar och föreskrifter inte skall kastas i hushållssoporna utan i stället återvinnas. Ta den vid slutet av dess livslängd till en av din lokala myndighet utsedd uppsamlingsplats, vissa accepterar produkter utan kostnad. Genom att på detta sätt återvinna produkten och förpackningen hjälper du till att bevara miljön och skydda mänskors hälsa.

D-Link och miljön

På D-Link förstår vi och är fast beslutna att minska den påverkan våra verksamheter och produkter kan ha på miljön. För att minska denna påverkan utformar och bygger D-Link sina produkter för att de ska vara så miljövänliga som möjligt, genom att använda återvinningsbara material med låg gifthalt i både produkter och förpackningar.

D-Link rekommenderar att du alltid stänger av eller kopplar ur dina D-Link produkter när du inte använder dem. Genom att göra detta hjälper du till att spara energi och minska utsläpp av koldioxid.

För mer information om våra miljöansvariga produkter och förpackningar www.dlinkgreen.com.

SE**PORTUGUÊS**

Este símbolo no produto ou embalagem significa que, de acordo com as leis e regulamentações locais, este produto não deverá ser eliminado juntamente com o lixo doméstico mas enviado para a reciclagem. Transporte-o para um ponto de recolha designado pelas suas autoridades locais quando este tiver atingido o fim da sua vida útil, alguns destes pontos aceitam produtos gratuitamente. Ao reciclar o produto e respectiva embalagem desta forma, ajuda a preservar o ambiente e protege a saúde humana.

A D-Link e o ambiente

Na D-Link compreendemos e comprometemo-nos com a redução do impacto que as nossas operações e produtos possam ter no ambiente. Para minimizar este impacto a D-Link concebe e constrói os seus produtos para que estes sejam o mais inofensivos para o ambiente possível, utilizando materiais recicláveis e não tóxicos tanto nos produtos como nas embalagens.

A D-Link recomenda que desligue os seus produtos D-Link quando estes não se encontrarem em utilização. Com esta acção ajudará a poupar energia e reduzir as emissões de CO₂.

Para saber mais sobre os nossos produtos e embalagens responsáveis a nível ambiental visite www.dlinkgreen.com.

PT

NCC Statement:

- (1)「經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能」。
- (2)「低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾」。
- (3)「電磁波曝露量MPE標準值 1mW/cm^2 ，送測產品實測值為： 0.12964 mW/cm^2 」。
- (4)無線資訊傳輸設備必須具備安全功能，以保護未經授權之一方任意更改軟體進而避免發射機操作於非經認證之頻率、輸出功率、調變形式或其他射頻參數設定。