



# User Manual

## AC1200 Wi-Fi Router

DIR-1210

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# 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	November 22, 2018	Initial release.

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# Package Contents



DIR-1210



Ethernet Cable



Power Adapter



Wi-Fi Configuration Card



Quick Installation Guide

If any of the above items are missing or damaged, please contact your local reseller.

**Note:** Using a power supply with a different voltage rating than the one included with the DIR-1210 will cause damage and void the warranty for this product.

# System Requirements

<b>Network Requirements</b>	<ul style="list-style-type: none"><li>• An Ethernet-based cable or DSL modem</li><li>• IEEE 802.11 ac/n/g/b/a wireless clients</li><li>• 10/100 Ethernet</li></ul>
<b>Web-based Configuration Utility Requirements</b>	<p><b>Computer with the following:</b></p> <ul style="list-style-type: none"><li>• Windows®, Macintosh, or Linux-based operating system</li><li>• An installed Ethernet adapter</li></ul> <p><b>Browser Requirements:</b></p> <ul style="list-style-type: none"><li>• Internet Explorer 10 or higher</li><li>• Firefox 44 or higher</li><li>• Safari 8 or higher</li><li>• Chrome 48 or higher</li><li>• Edge 20.10240 or higher</li></ul> <p><b>Windows® Users:</b> Make sure you have the latest version of Java installed. Visit <a href="http://www.java.com">www.java.com</a> to download the latest version.</p>

# Introduction

The D-Link DIR-1210 is a wireless IEEE 802.11ac compliant device that delivers up to 3x faster speeds than 802.11n while staying backward compatible with 802.11n/g/b/a devices. This means you can connect the DIR-1210 to a cable or DSL modem and provide high-speed Internet access to multiple computers, game consoles, and media players. You can create a protected wireless network to share photos, files, music, videos, printers, and network storage. Powered by 802.11ac technology and equipped with four external antennas, this router provides superior wireless coverage for larger homes and offices, or for users running bandwidth-intensive applications. The DIR-1210 also includes a 4-port 10/100 Fast Ethernet switch that connects to wired devices for uninterrupted video calling and faster file transfers.

The DIR-1210 supports the latest wireless protection features to help prevent unauthorized access, be it from over a wireless network or the Internet. Support for WPA™ and WPA2™ standards ensure that you will be able to use the best possible encryption regardless of your client devices. In addition, this router is equipped with a dual-active firewall (SPI and NAT) to prevent potential attacks over the Internet.

# Features

- **Superior Wireless Networking** - The DIR-1210 provides up to 300 Mbps wireless connection in 2.4 GHz band, and up to 867 Mbps<sup>1</sup> wireless connection in 5 GHz with other 802.11ac and 802.11n wireless clients. This capability rivals wired connections, allowing users to participate in real-time activities online, such as HD video communication, online gaming, and use mobile devices from anywhere in your home while still offering full 802.11n/g/b backward compatibility.
- **IPv6 Support** - The DIR-1210 fully supports IPv6 and includes support for a variety of IPv6 connection types including: SLAAC/DHCPv6, Static IPv6, IPv6 PPPoE, IPv6 Dual Stack, and IPv6 LAN.
- **Advanced Firewall Features** - The web-based user interface displays a number of advanced network management features. Easily apply content filtering based on domain names and MAC addresses.
- **Encrypted Multiple/Concurrent Sessions** - The DIR-1210 can pass through VPN sessions. It supports multiple and concurrent IPsec and PPTP sessions, so users behind the DIR-1210 can access corporate networks through encrypted channels.
- **User-friendly Setup Wizard** - Through its easy-to-use wizard, the DIR-1210 lets you quickly switch itself to one of the following modes: router (for connection to a wired or wireless ISP), access point, repeater, or client, and then configure all needed setting for operation in the selected mode in several simple steps.

<sup>1</sup> Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g, 802.11n and 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 conditions will adversely affect wireless signal range.

# Hardware Overview

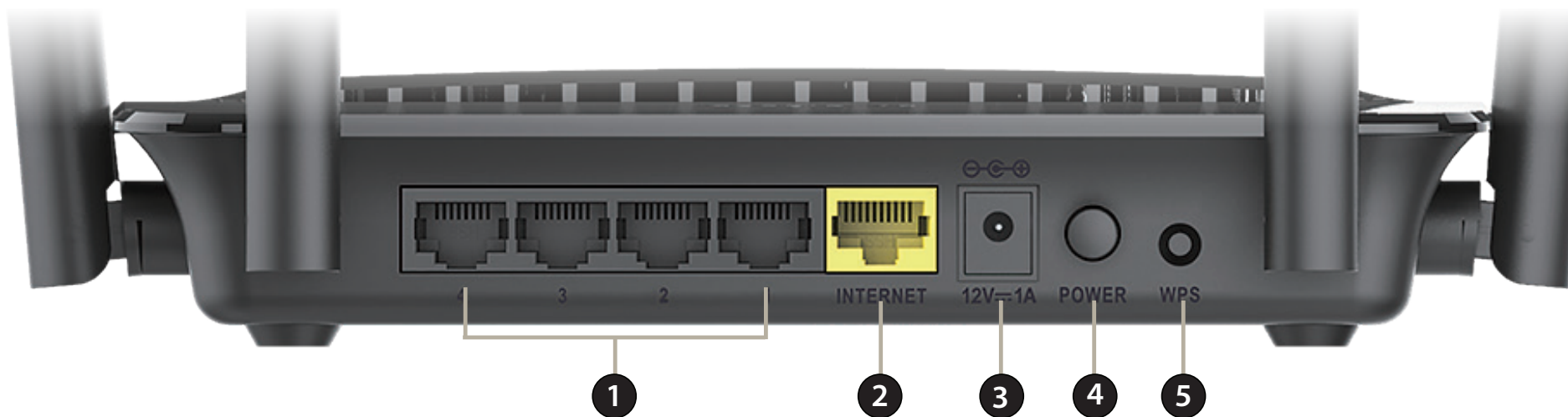
## LED Indicators



1	<b>Power LED</b>	A solid light indicates a proper connection to the power supply.
2	<b>Internet LED</b>	A solid light indicates a cable is connected on the Internet port. If the light is blinking green, data transmission is in progress. If the LED is off, the cable is not connected.
3	<b>WPS LED</b>	A blinking green light indicates WPS handshake phase is in progress.
4	<b>Wireless LED</b>	A solid green light indicates that wireless is enabled. If the light is blinking green, data transmission is in progress.
5 - 8	<b>LAN ports</b>	A solid green light indicates a cable is connected on the LAN port. If the light is blinking green, data transmission is in progress. If the LAN ports LED is blinking one at a time, the router is booting up. If the LAN ports LED are blinking two at a time, the router's firmware is being upgraded.

# Hardware Overview

## Back Panel



1	<b>LAN Ports (1- 4)</b>	Connect Ethernet devices such as computers, switches, storage (NAS) devices, and game consoles.
2	<b>Internet Port</b>	Using an Ethernet cable, connect your broadband modem to this port.
3	<b>Power Connector</b>	Connector for the supplied power adapter.
4	<b>Power Button</b>	Press the power button to power the device on or off.
5	<b>WPS Button</b>	Press to start the WPS process and automatically create an encrypted connection to a WPS client.

# Installation

This section will walk you through the installation of the DIR-1210.

## Before you Begin

- Placement of the router is very important. Do not place the router in an enclosed area such as a closet, cabinet, attic, or garage.
- Configure the router with the computer that was last connected directly to your Internet connection. Verify that it is connected to the Internet before connecting additional devices.
- If your ISP provided you with a modem/router combo, you will need to set it to “bridge” mode so the router can work properly. Please contact your ISP or refer to the user manual for your modem/router device.
- You can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet port on the router, and then turn the modem back on. In some cases, you may need to call your Internet Service Provider (ISP) to change connection types (USB to Ethernet).
- If connecting to a DSL modem, make sure to have your DSL service information provided by your Internet Service Provider handy. This information is likely to include your DSL account's Username and Password. Your ISP may also supply you with additional WAN configuration settings which might be necessary to establish a connection.
- If you are connecting a considerable amount of networking equipment, it may be a good idea to take the time to label each cable or take a picture of your existing setup before making any changes.
- If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoET, BroadJump, or EnterNet 300 from your computer or you will not be able to connect to the Internet.

# Wireless Installation Considerations

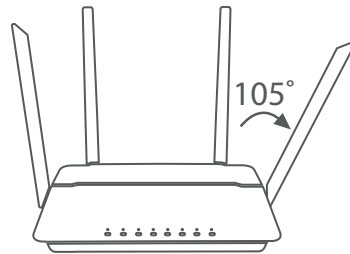
The D-Link wireless router lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through may limit 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 D-Link router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 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 (0.5 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 access points, wireless routers, 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 X-10 (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.

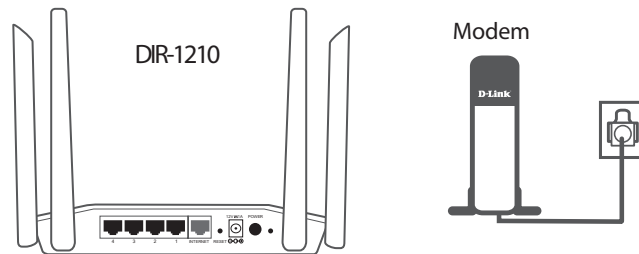


# Hardware Setup

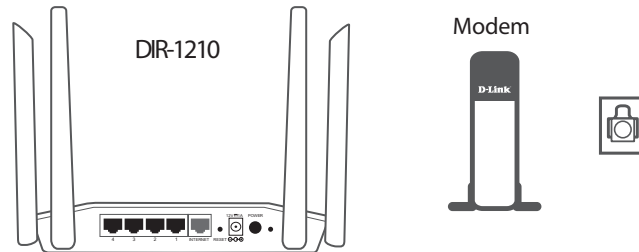
1. The DIR-1210 is designed to give you the fastest, most stable network connection possible. In order to maximize performance, fully extend the antennas into a 105 degree angle to provide optimal wireless coverage. Keep the router in an open area for better wireless coverage.



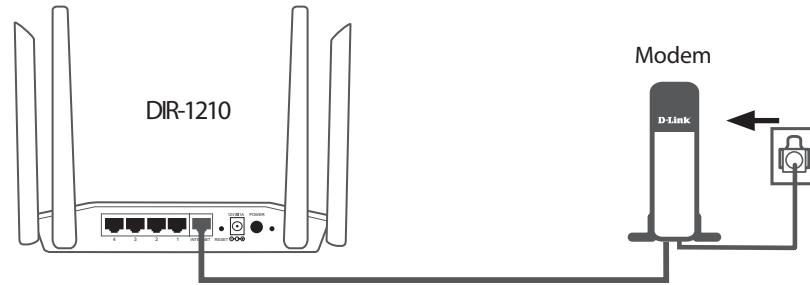
2. Position your DIR-1210 near your Internet-connected modem. Place it in an open area for better wireless coverage.



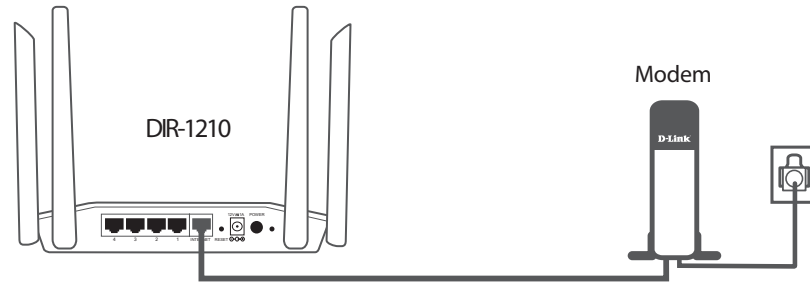
3. Turn off and unplug the power and Ethernet cable to your cable or DSL broadband modem. This is required. In some cases, you may need to turn it off for up to five minutes.



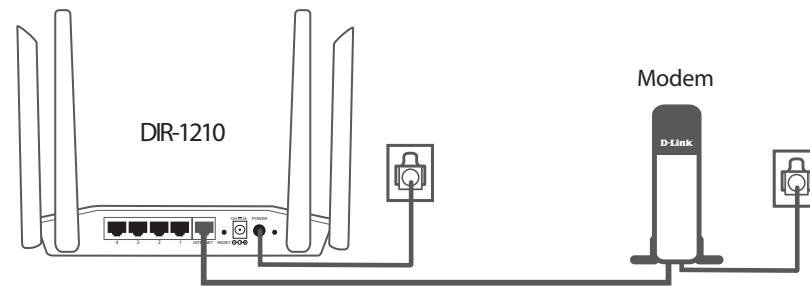
4. Use the included Ethernet cable to connect your modem to the yellow port labeled **INTERNET** on the router.



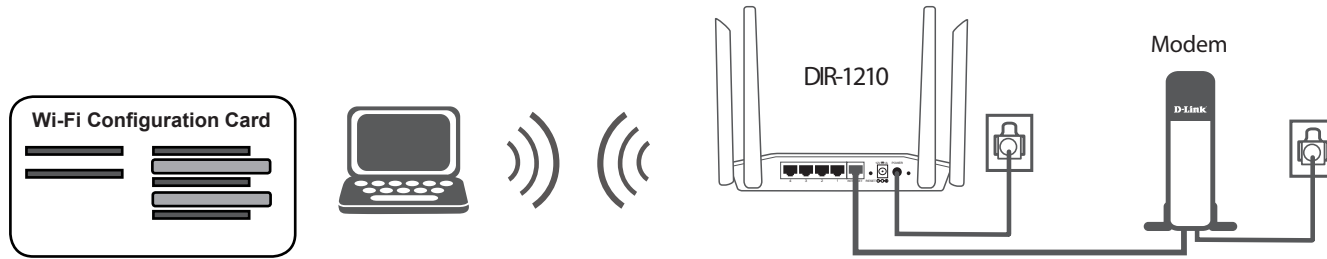
5. Turn on or plug your modem back in and wait approximately one minute before proceeding onward.



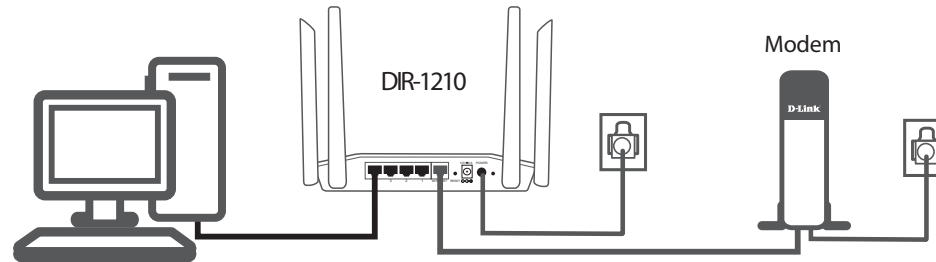
6. Connect the supplied power adapter to the router and a power outlet, press the power button, and wait approximately one minute until the Power LED indicator on the front of the device changes to solid green.



7. **If you are configuring the DIR-1210 wirelessly from a PC**, connect to a Wi-Fi network printed on the included Wi-Fi Configuration Card. You can also find the Wi-Fi network names and passwords printed on the label attached to the bottom your router.



- If you are configuring the DIR-1210 from a PC with a wired Ethernet connection**, plug one end of an Ethernet cable into the port labeled 1 on the back of the router, and the other end into the Ethernet port on your computer.



8. Proceed to **Completing Setup** on page **12** in order to complete setup to connect to the Internet.

# Completing Setup

There are several different ways you can configure your router to connect to the Internet and connect to your clients:

- **D-Link Setup Wizard** - This wizard will launch when you log into the router for the first time.  
Refer to **Setup Wizard** on page **13**.
- **Manual Setup** - Log in to the router and manually configure your router.  
Refer to **Configuration** on page **18**.

# Setup Wizard

If this is your first time installing the router, open your web browser and enter **http://dlinkrouter.local/** in the address bar. Alternatively, enter the IP address of the router (default: **http://192.168.0.1**).

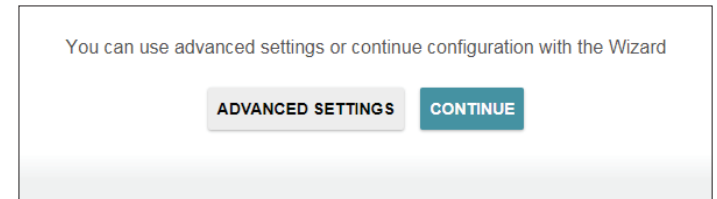
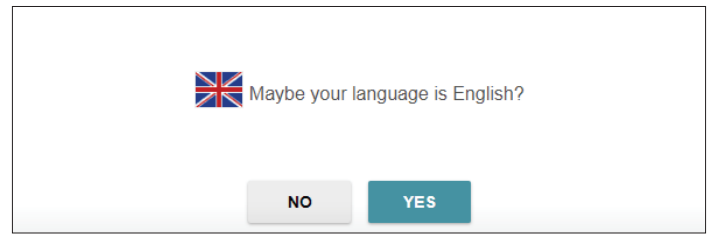
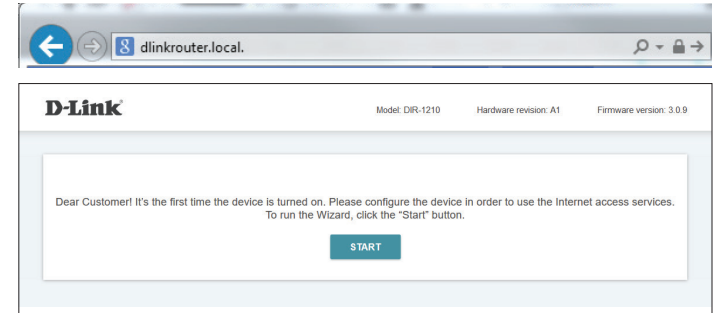
The wizard is designed to guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

Click **Start** to continue.

If your preferred language is English, click **Yes** to confirm. To select a different language for the interface, click **No** and select your language from the list.

To start the full setup wizard, click **Continue** and see page **14**.

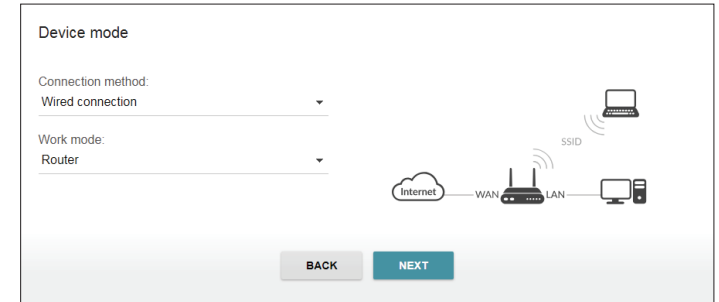
To skip the wizard and directly configure the router from default DHCP WAN configuration, click **Advanced Settings**.



## Setup Wizard (cont)

The DIR-1210 can operate in five different modes:

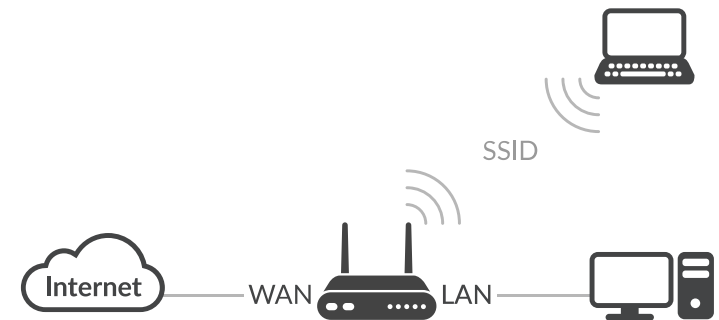
- Router Mode
- Access Point Mode
- Client Mode
- Repeater Mode
- WISP Repeater Mode



### Router Mode

In Router Mode, the DIR-1210 connects to your cable modem, DSL modem, or other Internet source and shares your Internet connection with your devices both wirelessly and over a wired LAN connection, providing Internet access for an entire home or office. Router Mode is suitable for most wired home Internet connections.

Follow the on-screen instructions to complete router mode setup.

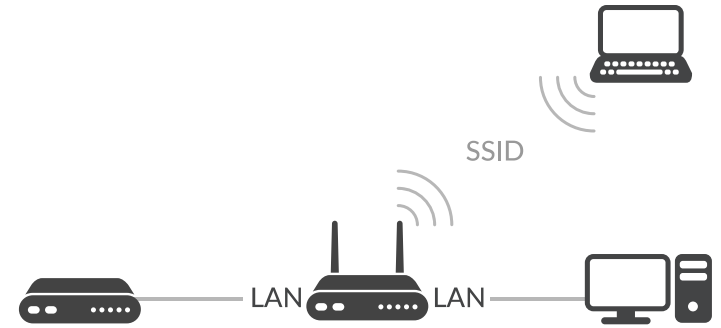


## Setup Wizard (cont)

### AP Mode

In Access Point Mode, the DIR-1210 connects your wireless devices together, but does not provide routing functionality. This can be useful if you already have an existing Internet router that does not have built-in wireless capabilities. You can also use this to create a private wireless network without Internet access so that your devices can connect to one another without being exposed to the Internet or other computers.

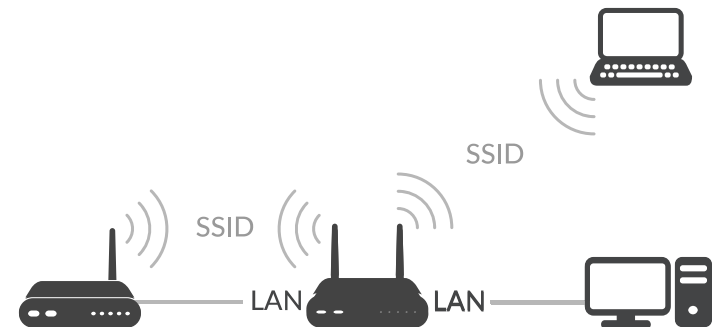
Follow the on-screen instructions to complete setup.



### Repeater Mode

In Repeater Mode, the DIR-1210 extends the range of an existing wireless network. You can use this to extend the coverage of an existing wireless router to provide better signal for parts of your home or office that may have poor reception. Additionally, you can use this mode to connect a wired device to a wireless network, which can be useful for devices that do not have a built-in wireless card, such as some smart TVs, game consoles, or DVRs.

Follow the on-screen instructions to complete setup.



## Setup Wizard (cont)

### Client Mode

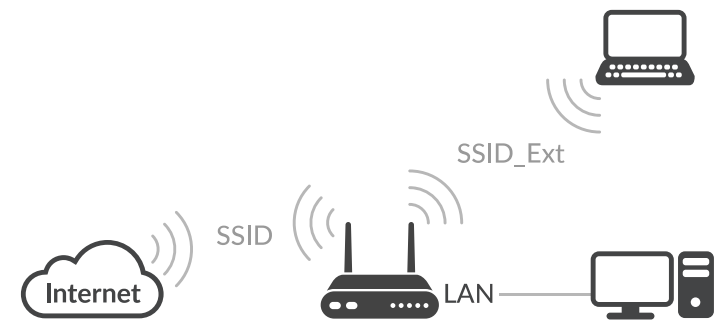
In client mode, the DIR-1210 connects to a wireless hotspot or existing wireless network and lets you share access to that network with your devices, much like a wireless bridge. This mode is similar to Router mode, but instead of connecting to a cable or DSL modem as your Internet source, the DIR-1210 connects to a Wi-Fi hotspot and shares that connection with your devices. You can use this mode to connect one or several wired devices to a wireless network, which can be useful for devices that do not have a built-in wireless card, such as some smart TVs, game consoles, or DVRs. Additionally, it can provide an added layer of isolation when connecting to public hotspots by hiding your computers and devices from other devices on the network, and keeping them in your own private network.



Follow the on-screen instructions to complete setup.

### WISP Repeater Mode

In WISP mode, the DIR-1210 can be used as a gateway for a Wireless Internet Service Provider's (WISP) Wi-Fi-compatible network. This allows you to extend your provider's Internet access to every corner of your home. Alternatively, this mode can be used to extend an existing wireless network while keeping your LAN behind a NAT firewall. This mode is similar to the Router mode, but instead of connecting to a cable or DSL modem as your Internet source, the DIR-1210 connects to the ISP's Wi-Fi network and shares that connection with your devices. Additionally, it can provide an added layer of isolation when connecting to a public network by hiding your computers and devices from other devices on the network, and keeping them in your own private network.



Follow the on-screen instructions to complete setup.



# Advanced Settings

## Default Settings

These settings allow advanced users to quickly setup the router with a default IPv4 DHCP WAN and a simple SSID. Once configured, the user is taken directly to the full UI and can configure the router according to **Configuration** on page **18**

### Defaults

**Admin Password:** Enter a new password for the administrator account. You will need to enter this password whenever you configure the router using a web browser.

**Network name 2.4GHz (SSID):** Create a name for your 2.4 GHz wireless network using up to 32 characters.

**Network name 5GHz (SSID):** Create a name for your 5 GHz wireless network using up to 32 characters.

Click **Apply** to proceed to the router according to **Configuration** on page **18**

### Defaults

*In order to start up, please change several default settings.*

Admin password.\*

ⓘ Password should be between 1 and 31 ASCII characters

Network name 2.4GHz (SSID):\*  
DIR-1210-0102

Network name 5GHz (SSID):\*  
DIR-1210-5G-0102

# Configuration

To access the configuration utility, open a web-browser such as Internet Explorer and enter **http://dlinkrouter.local/** or you may also connect by typing the IP address of the router (by default this is **http://192.168.0.1**) in the address bar.

If you have already followed the setup wizard or changed the default settings, the login page opens. Enter the username (default username is: **admin**) and the admin password you entered during the wizard. Click **Login** to proceed.

**Note:** *If you cannot remember your password and cannot log in, press the reset button on the bottom of the device for longer than 10 seconds to restore the router to its default settings.*

The router's home page will open displaying its current connection status.

The navigation bar at the top of the page has quick access to Settings and Management functions. You may quickly jump back to the Home page at any time.

**Note:** *The system will automatically log out after a period of inactivity.*



 A screenshot of the D-Link router login page. It features two input fields: 'Username' and 'Password'. Below the fields, a message reads 'Wrong username/password or the session is expired'. At the bottom, there are two buttons: 'LOGIN' and 'CLEAR'.


 A screenshot of the D-Link DIR-1210 Home page. The page shows the router's status as 'Internet connected'. Below this, there are three circular icons representing 'Internet', 'DIR-1210', and 'Wi-Fi clients: 1'. The 'Internet' section is expanded, showing a table of network details for IPv4.
 

Internet			
	IPv4	IPv6	
Connection type	Dynamic IPv4	MAC address	9c:d6:43:00:11:22
Status	Connected	IP address	172.17.6.114
Uptime	17:53:48	Subnet mask	255.255.255.0
		Default gateway	172.17.6.254
		Primary DNS	192.168.168.249
		Secondary DNS	192.168.168.201

 At the bottom of the table, there is a 'Go to settings' link with a right-pointing arrow icon.

# Home

The Home page displays the current status of the router in the form of an interactive diagram. You can click each icon at the bottom of the screen to display information about each part of the network. The menu bar at the top of the page will allow you to quickly navigate to other pages.

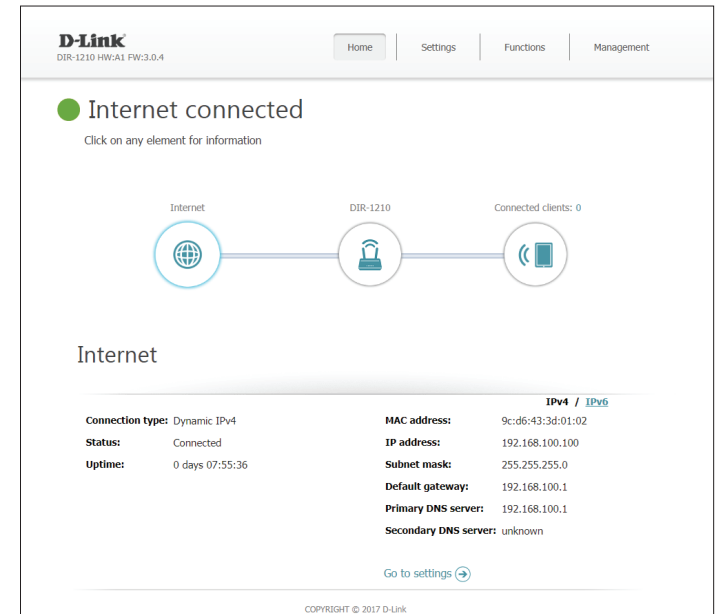
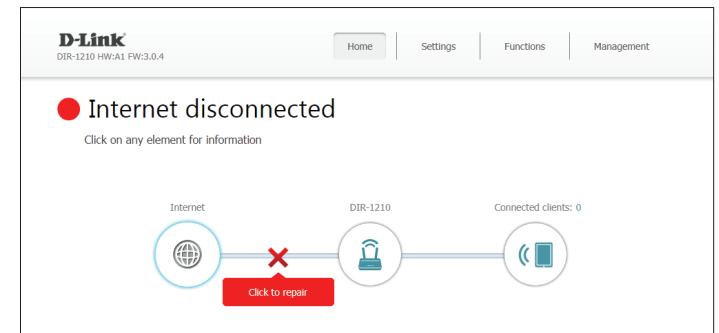
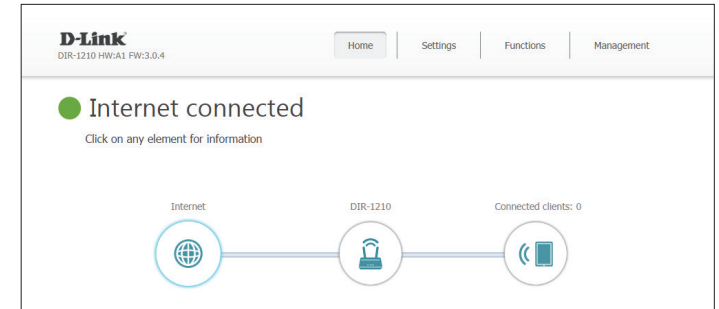
The Home page displays whether or not the router is currently connected to the Internet. If it is disconnected, click on repair to go to the Internet - WAN Configuration page to change your Internet configuration and reconnect to the Internet.

To reconfigure the Internet settings, click on **Edit** or **Change Configuration**. For more information refer to **Internet** on page 22.

## Internet

To bring up more details about your Internet connection, click on the **Internet** icon. Click **IPv4** or **IPv6** to see details of the IPv4 connection and IPv6 connection respectively.

To reconfigure the Internet settings, refer to **Internet** on page 22.



# DIR-1210

Click on the **DIR-1210** icon to view details about the router and its wireless settings.

Here you can see the router's current Wi-Fi network name and password, as well as the router's MAC address, IPv4 address, and IPv6 address.

To reconfigure the network settings, either click **Go to settings** on the lower left, or click on **Settings** in the navigation bar and then **Network** on the menu that appears. Refer to **Network** on page **68** for more information.

To reconfigure the wireless settings, either click **Go to settings**, on the lower right, or click **Settings** in the navigation bar and then **Wireless** on the menu that appears. Refer to **Wireless network on page 65** for more information.

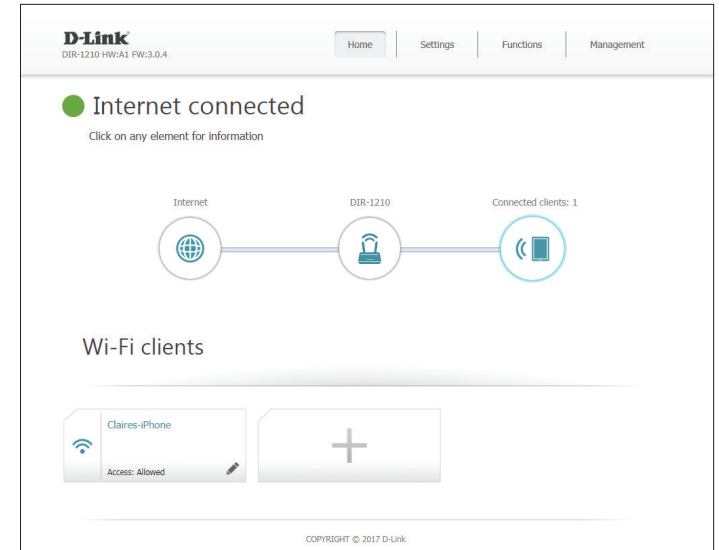
The screenshot displays the D-Link DIR-1210 web interface. At the top, the navigation bar includes 'Home', 'Settings', 'Functions', and 'Management'. The main content area shows 'Internet connected' with a green status indicator and a link to 'Click on any element for information'. Below this is a network diagram with three nodes: 'Internet' (globe icon), 'DIR-1210' (router icon), and 'Connected clients: 0' (phone icon). The 'DIR-1210' node is highlighted. Underneath the diagram, the router's name 'DIR-1210' is displayed. The interface is divided into two columns of network settings. The left column shows 'IPv4 Network' with MAC address 9C:D6:43:3D:01:03, IP address 192.168.0.1, and Subnet mask 255.255.255.0. Below it is 'IPv6 Network' with IPv6 Address fd01::1, DHCPv6 PD unknown, and Prefix 64. A 'Go to settings' link is provided. The right column shows 'Wi-Fi Network 2.4 GHz' with Status Enabled, Network name (SSID) DIR-1210-0102, and Password \*\*\*\*\*. Below it is 'Wi-Fi Network 5 GHz' with Status Enabled, Network name (SSID) DIR-1210-5G-0102, and Password \*\*\*\*\*. A 'Go to settings' link is also provided. The footer contains the copyright notice 'COPYRIGHT © 2017 D-Link'.

## Connected Clients

Click on the **Connected Clients** icon to view details about wireless clients connected to the router.

On this page you can see all the clients currently connected to the router. Such devices are marked by the colored Wi-Fi logo.

To create or edit connection access rules for each client click the pencil icon on the client you want to edit.



**Frequency band:** Connection will be denied for this device on this wireless frequency band

**SSID:** Connection will be denied for this device on this specific SSID

**MAC Address:** Connection will be denied for the device with this specific MAC address

**Hostname:** Enter a custom name for this client.

Click **Deny** when you are done.

# Settings

## Wizard

In the Settings menu on the bar on the top of the page, click **Wizard** to open the setup wizard. This is the same wizard that appears when you start the router for the first time. Refer to **Setup Wizard** on page **13** for details. Note that activating the wizard will reset the router to factory defaults.

## Internet

In the Settings menu on the bar on the top of the page, click **Internet** to see the Internet configuration options.

## WAN

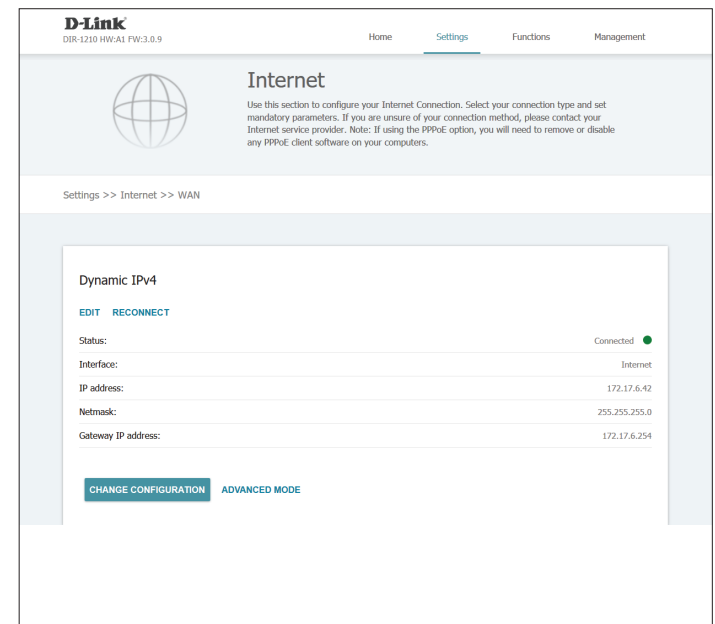
The **WAN** contains information about your current Internet connection settings.

**Edit:** Click here to be taken to **WAN/Editing and WAN/Creating** on page **23**. Note that edit does not allow you to change the connection type, only edit connection specific settings. Edit allows you to change settings without losing your current active connection.

**Reconnect:** Click here to re-initialize the active WAN connection.

**Change Configuration:** Click here to be taken to **WAN/Editing and WAN/Creating** on page **23**. Note that **Change Configuration** will allow you to change your connection type and may disrupt active connections.

**Advanced Mode:** Click here to see a list of Internet WAN connections and their status. You can add, delete or re-initialize a connection



## WAN/Editing and WAN/Creating

This section allows you to configure your WAN interface in detail.

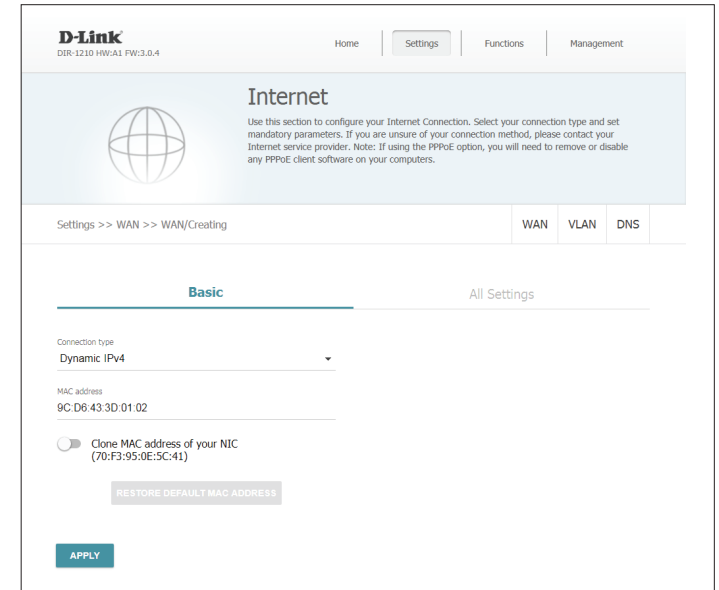
Under **Basic**, you will see the following:

- Connection Type:** Select your connection type from drop-down menu:  
For **Dynamic IPv4** refer to page **24**.  
For **Static IPv4** refer to page **27**  
For **Dynamic IPv6** refer to page **31**  
For **Static IPv6** refer to page **35**  
For **PPPoE** refer to page **38**  
For **PPPoE IPv6** refer to page **42**  
For **PPPoE Dual Stack** refer to page **47**  
For **PPTP** refer to page **52**  
For **L2TP** refer to page **56**

**Note:** this option can only be edited in the **WAN/Creating** mode.

Toggle this switch to clone the MAC address of your NIC.

Click **Apply** when you are done.



## Dynamic IPv4

Select **Dynamic IPv4** to obtain IPv4 address information automatically from your Internet Service Provider (ISP). Choose **Basic** configuration or **All Settings**.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

Click **Apply** when you are done.

### All Settings

**Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note: this option can only be edited in the WAN/Creating mode.**

The screenshot shows the D-Link web interface for the Internet configuration page. The page title is "Internet" and it includes a navigation menu with "Home", "Settings", "Functions", and "Management". The breadcrumb trail is "Settings >> WAN >> WAN/Creating". The "Basic" tab is selected, and the "Connection type" is set to "Dynamic IPv4". The "MAC address" is displayed as "9C:D6:43:3D:01:02". There is a toggle switch for "Clone MAC address of your NIC (70:F3:95:0E:5C:41)" which is currently turned off. A "RESTORE DEFAULT MAC ADDRESS" button is visible. At the bottom, there is an "APPLY" button.

The screenshot shows the D-Link web interface for the Internet configuration page. The page title is "Internet" and it includes a navigation menu with "Home", "Settings", "Functions", and "Management". The breadcrumb trail is "Settings >> WAN >> WAN/Creating". The "All Settings" tab is selected. The "Connection type" is set to "Dynamic IPv4". The "Enable connection" toggle switch is turned on. The "MAC address" is displayed as "9C:D6:43:3D:01:02". There is a toggle switch for "Clone MAC address of your NIC (70:F3:95:0E:5C:41)" which is currently turned off. A "RESTORE DEFAULT MAC ADDRESS" button is visible. At the bottom, the "MTU" is set to "1500".



## Dynamic IPv4 (cont)

**Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### Authorization via 802.1x Protocol

**Enable authorization via 802.1x protocol:** Toggle this switch to enable 802.1x authentication over WAN. This setting is disabled by default.

**Authentication method:** If you have enabled 802.1x above, choose from **EAP-MD5**, **EAP-TTLS/CHAP**, **EAP-TTLS/MS-CHAP**, or **EAP-TTLS/MS-CHAPv2**.

**Login:** Specify a username for 802.1x authentication.

**Password:** Specify a password for 802.1x authentication.

### Miscellaneous

**NAT:** Toggle this switch to enable Network Address Translation (NAT). This setting is enabled by default.

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

## Dynamic IPv4 (cont)

### Ethernet

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

### IPv4

**Obtain DNS server addresses automatically:** Toggle this switch to enable DNS information to be acquired automatically through DHCP. This setting is enabled by default.

**Primary DNS server:** Specify the primary DNS server IP address assigned by your ISP. This address is usually obtained automatically from your ISP.

**Secondary DNS server:** Specify the secondary DNS server IP address assigned by your ISP. This address is usually obtained automatically from your ISP.

**Vendor ID:** Specify a custom vendor ID. (Optional)

**Hostname:** Specify a hostname here. This will be the name of your router when viewed from networking tools.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:A1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
Dynamic IPv4

Enable connection

The number of characters should not exceed 32

Ethernet

MAC address  
9C:D6:43:3D:01:02

Clone MAC address of your NIC  
(70:F3:95:0E:5C:41)

RESTORE DEFAULT MAC ADDRESS

MTU  
1500

Authorization via 802.1x Protocol

Enable authorization via 802.1x protocol

Authentication method  
EAP-MD5

Login

Password

IPv4

Obtain DNS server addresses automatically

Primary DNS server  
192.168.23.1

Secondary DNS server

Vendor ID  
dslforum.org

Hostname

Miscellaneous

NAT

Firewall

RIP

Ping

Isolate connection

APPLY

## Static IPv4

Select **Static IP** if your IP information is provided by your Internet Service Provider (ISP). Choose Basic configuration or All Settings.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**IP address:** Specify the IP address provided by your ISP.

**Netmask:** Specify the subnet mask provided by your ISP.

**Gateway IP address:** Specify the default gateway address provided by your ISP.

**Primary DNS server:** Specify the primary DNS server IP address assigned by your ISP.

**Secondary DNS server:** Specify the secondary DNS server IP address assigned by your ISP.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

**Basic** All Settings

Connection type  
Static IPv4

MAC address  
9C:D6:43:3D:01:02

Clone MAC address of your NIC  
(70:F3:95:0E:5C:41)

RESTORE DEFAULT MAC ADDRESS

IP address\*  
192.168.23.100

Netmask\*  
255.255.255.0

Gateway IP address\*  
192.168.23.1

Primary DNS server\*  
192.168.23.1

Secondary DNS server

ⓘ If the connection is created for the IPTV service only and no data on IP addressing is given by your ISP, then you can set the following values: IP address = 1.0.0.1, Netmask = 255.255.255.252, Gateway IP address = 1.0.0.2, Primary DNS server = 1.0.0.2

APPLY

## Static IPv4 (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note:** this option can only be edited in the WAN/Creating mode.

- Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### Authorization via 802.1x Protocol

- Enable authorization via 802.1x protocol:** Toggle this switch to enable 802.1x authentication over WAN. This setting is disabled by default.

- Authentication method:** If you have enabled 802.1x above, choose from **EAP-MD5**, **EAP-TTLS/CHAP**, **EAP-TTLS/MS-CHAP**, or **EAP-TTLS/MS-CHAPv2**.

- Login:** Specify a username for 802.1x authentication.

- Password:** Specify a password for 802.1x authentication.

### Miscellaneous

The screenshot shows the D-Link DIR-1210 Web UI. The page title is "Internet" and it includes a globe icon. Below the title, there is a note: "Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers." The breadcrumb trail is "Settings >> WAN >> WAN/Creating". There are tabs for "WAN", "VLAN", and "DNS". The "Basic" tab is selected, and the "All Settings" link is visible. The "Connection type" is set to "Static IPv4". The "MAC address" is "9C:D6:43:3D:01:02". There is a toggle for "Clone MAC address of your NIC (70:F3:95:0E:5C:41)" which is currently disabled. A "RESTORE DEFAULT MAC ADDRESS" button is present. The "IP address\*" is "192.168.23.100", "Netmask\*" is "255.255.255.0", "Gateway IP address\*" is "192.168.23.1", and "Primary DNS server\*" is "192.168.23.1". The "Secondary DNS server" field is empty. A note at the bottom states: "If the connection is created for the IPTV service only and no data on IP addressing is given by your ISP, then you can set the following values: IP address = 1.0.0.1, Netmask = 255.255.255.252, Gateway IP address = 1.0.0.2, Primary DNS server = 1.0.0.2". An "APPLY" button is at the bottom.

## Static IPv4 (cont)

**NAT:** Toggle this switch to enable Network Address Translation (NAT). This setting is enabled by default.

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

### Ethernet

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

The screenshot shows the D-Link web interface for the DIR-1210 router. The page is titled "Internet" and is part of the "WAN/Creating" configuration section. The "Basic" tab is selected, showing the following configuration details:

- Connection type:** Static IPv4
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC:** Disabled (70:F3:95:0E:5C:41)
- RESTORE DEFAULT MAC ADDRESS:** Button
- IP address\*:** 192.168.23.100
- Netmask\*:** 255.255.255.0
- Gateway IP address\*:** 192.168.23.1
- Primary DNS server\*:** 192.168.23.1
- Secondary DNS server:** (empty)

At the bottom, there is an "APPLY" button and a note: "If the connection is created for the IPTV service only and no data on IP addressing is given by your ISP, then you can set the following values: IP address = 1.0.0.1, Netmask = 255.255.255.252, Gateway IP address = 1.0.0.2, Primary DNS server = 1.0.0.2"

## Static IPv4 (cont)

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

### IPv4

**IP address:** Specify the IP address provided by your ISP.

**Netmask:** Specify the subnet mask provided by your ISP.

**Gateway IP address:** Specify the default gateway address provided by your ISP.

**Primary DNS server:** Specify the primary DNS server IP address assigned by your ISP.

**Secondary DNS server:** Specify the secondary DNS server IP address assigned by your ISP.

Click **Apply** when you are done.

The screenshot shows the D-Link DIR-1210 web interface. The top navigation bar includes 'Home', 'Settings', 'Functions', and 'Management'. The main heading is 'Internet', with a sub-heading 'Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.' Below this is a breadcrumb trail: 'Settings >> WAN >> WAN/Creating'. There are tabs for 'WAN', 'VLAN', and 'DNS'. The 'Basic' tab is selected, showing the following configuration fields:

- Connection type: Static IPv4
- MAC address: 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):
- RESTORE DEFAULT MAC ADDRESS button
- IP address\*: 192.168.23.100
- Netmask\*: 255.255.255.0
- Gateway IP address\*: 192.168.23.1
- Primary DNS server\*: 192.168.23.1
- Secondary DNS server: (empty)

At the bottom, there is a note: 'If the connection is created for the IPTV service only and no data on IP addressing is given by your ISP, then you can set the following values: IP address = 1.0.0.1, Netmask = 255.255.255.252, Gateway IP address = 1.0.0.2, Primary DNS server = 1.0.0.2'. An 'APPLY' button is located at the bottom left.

## Dynamic IPv6

Select **Dynamic IPv6** to obtain IPv6 address information automatically from your Internet Service Provider (ISP). Choose **Basic** configuration or **All Settings**.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**Get IPv6:** Choose **Automatically, IPv6 by DHCPv6, by SLAAC,** or **DHCPv6 PD** according to the type of IPv6 is used by your ISP. The default setting is **Automatically**.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for configuring Dynamic IPv6. The page title is "Internet" and it includes a navigation menu with "Home", "Settings", "Functions", and "Management". The breadcrumb trail is "Settings >> WAN >> WAN/Creating". There are tabs for "WAN", "VLAN", and "DNS". The "Basic" tab is selected, showing the "Connection type" set to "Dynamic IPv6" and the "MAC address" as "9C:D6:43:3D:01:02". A toggle switch for "Clone MAC address of your NIC (70:F3:95:0E:5C:41)" is currently off, with a "RESTORE DEFAULT MAC ADDRESS" button below it. The "Get IPv6" dropdown is set to "Automatically". An "APPLY" button is at the bottom.

## Dynamic IPv6 (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note:** this option can only be edited in the WAN/Creating mode.

- Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### IPv6

- Get IPv6:** Choose **Automatically**, **IPv6 by DHCPv6**, **by SLAAC**, or **DHCPv6 PD** according to the type of IPv6 is used by your ISP. The default setting is **Automatically**.

- Gateway by SLAAC:** Toggle this switch to obtain gateway information through SLAAC.

- Gateway IPv6 address:** If **Gateway by SLAAC** is disabled, specify the Gateway IPv6 address here.

The screenshot shows the 'Internet' configuration page for a D-Link DIR-1210 router. The page is titled 'Internet' and includes a navigation menu with 'Home', 'Settings', 'Functions', and 'Management'. The breadcrumb trail is 'Settings >> WAN >> WAN/Creating'. The page is divided into 'Basic' and 'All Settings' tabs, with 'All Settings' currently selected.

**Basic Settings:**

- Connection type: Dynamic IPv6 (dropdown menu)
- Enable connection:  (toggle switch)
- Note: The number of characters should not exceed 32.
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):  (toggle switch)
- RESTORE DEFAULT MAC ADDRESS (button)
- MTU: 1500

**IPv6 Settings:**

- Get IPv6: Automatically (dropdown menu)
- Gateway by SLAAC:  (toggle switch)
- Gateway IPv6 address: (text field with lock icon)
- Obtain DNS server addresses automatically:  (toggle switch)
- Primary IPv6 DNS server: (text field with lock icon)
- Secondary IPv6 DNS server: (text field with lock icon)

**Miscellaneous Settings:**

- Firewall:  (toggle switch)
- RIP:  (toggle switch)
- Ping:  (toggle switch)
- Isolate connection:  (toggle switch)

An 'APPLY' button is located at the bottom left of the configuration area.



## Dynamic IPv6 (cont)

**Obtain DNS server addresses automatically:** Toggle this switch to obtain DNS information automatically.

**Primary IPv6 DNS server:** If **Obtain DNS server addresses automatically** is disabled, specify the primary DNS server IP address assigned by your ISP.

**Secondary IPv6 DNS Server:** If **Obtain DNS server addresses automatically** is disabled, specify the secondary DNS server IP address assigned by your ISP.

### Ethernet

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

The screenshot shows the D-Link DIR-1210 web interface. At the top, there's a navigation bar with 'Home', 'Settings', 'Functions', and 'Management'. The main heading is 'Internet'. Below it, there's a globe icon and a brief instruction: 'Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.' The breadcrumb trail is 'Settings >> WAN >> WAN/Creating'. There are tabs for 'WAN', 'VLAN', and 'DNS'. The 'All Settings' tab is active. Under 'Basic', 'Connection type' is set to 'Dynamic IPv6'. There's a toggle for 'Enable connection' which is turned on. A note says 'The number of characters should not exceed 32'. Under 'All Settings', 'Clone MAC address of your NIC' is turned off, with a 'RESTORE DEFAULT MAC ADDRESS' button. 'MTU' is set to 1500. In the 'IPv6' section, 'Get IPv6' is 'Automatically', 'Gateway by SLAAC' is checked, and 'Obtain DNS server addresses automatically' is checked. There are fields for 'Primary IPv6 DNS server' and 'Secondary IPv6 DNS server', both with lock icons. In the 'Miscellaneous' section, 'Firewall' is checked, while 'RIP', 'Ping', and 'Isolate connection' are unchecked. An 'APPLY' button is at the bottom left.

## Dynamic IPv6 (cont)

### Miscellaneous

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:A1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
Dynamic IPv6

Enable connection

The number of characters should not exceed 32

MAC address  
9C:D6:43:3D:01:02

Clone MAC address of your NIC  
(70:F3:95:0E:5C:41)

RESTORE DEFAULT MAC ADDRESS

MTU  
1500

IPv6

Get IPv6  
Automatically

Gateway by SLAAC

Gateway IPv6 address

Obtain DNS server addresses automatically

Primary IPv6 DNS server

Secondary IPv6 DNS server

Miscellaneous

Firewall

RIP

Ping

Isolate connection

APPLY

## Static IPv6

Select **Static IP** if your IPv6 information is provided by your Internet Service Provider (ISP). Choose Basic configuration or All Settings.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**IPv6 address:** Specify the IPv6 address provided by your ISP.

**Prefix:** Specify the prefix provided by your ISP.

**Gateway IPv6 address:** Specify the default gateway address provided by your ISP.

**Primary IPv6 DNS server:** Specify the primary DNS server IP address assigned by your ISP.

**Secondary IPv6 DNS server:** Specify the secondary DNS server IP address assigned by your ISP.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for the DIR-1210 router. The page is titled "Internet" and is part of the "Settings >> WAN >> WAN/Creating" configuration path. The "Basic" tab is selected, showing the following configuration options:

- Connection type:** Static IPv6
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):** A toggle switch is currently turned off.
- RESTORE DEFAULT MAC ADDRESS:** A button to restore the default MAC address.
- IPv6 Address\*:** A text input field.
- Prefix\*:** A text input field.
- Gateway IPv6 address\*:** A text input field.
- Primary IPv6 DNS server\*:** A text input field.
- Secondary IPv6 DNS server:** A text input field.
- APPLY:** A button to save the configuration.

## Static IPv6 (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note: this option can only be edited in the WAN/Creating mode.**

- Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### IPv6

**IPv6 address:** Specify the IPv6 address provided by your ISP.

**Prefix:** Specify the prefix provided by your ISP.

**Gateway IPv6 address:** Specify the default gateway address provided by your ISP.

**Primary IPv6 DNS server:** Specify the primary DNS server IP address assigned by your ISP.

**Secondary IPv6 DNS server:** Specify the secondary DNS server IP address assigned by your ISP.

The screenshot shows the D-Link DIR-1210 Internet settings page. The page is titled "Internet" and includes a navigation menu with "Home", "Settings", "Functions", and "Management". The "Settings" menu is active, and the page is in "WAN/Creating" mode. The "Basic" tab is selected, and the "All Settings" sub-tab is active. The "Connection type" is set to "Static IPv6". The "Enable connection" switch is turned on. The "MAC address" is 9C:D6:43:3D:01:02, and the "Clone MAC address of your NIC" switch is turned off. The "MTU" is set to 1500. The "IPv6" section includes fields for "IPv6 Address\*", "Prefix\*", "Gateway IPv6 address\*", and "Primary IPv6 DNS server\*". The "Miscellaneous" section includes switches for "Firewall", "RIP", "Ping", and "Isolate connection". An "APPLY" button is located at the bottom left of the form.

## Static IPv6 (cont)

### Ethernet

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

### Miscellaneous

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for the DIR-1210 router. The page is titled "Internet" and is part of the "WAN/Creating" configuration section. The "Connection type" is set to "Static IPv6". The "Enable connection" toggle is turned on. The "MAC address" is displayed as "9C:D6:43:3D:01:02". There is a "Clone MAC address of your NIC (70:F3:95:0E:5C:41)" toggle which is currently off, and a "RESTORE DEFAULT MAC ADDRESS" button. The "MTU" is set to "1500". Under the "IPv6" section, there are fields for "IPv6 Address\*", "Prefix\*", "Gateway IPv6 address\*", and "Primary IPv6 DNS server\*". In the "Miscellaneous" section, the "Firewall" toggle is on, while "RIP", "Ping", and "Isolate connection" are all off. An "APPLY" button is located at the bottom left of the configuration area.

## PPPoE

Select **PPPoE** if your ISP provides and requires you to enter a PPPoE username and password in order to connect to the Internet. Choose Basic configuration or All Settings.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**Service name:** Specify the ISP service name (optional).

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for configuring the Internet connection. The page title is "Internet" and it includes a navigation menu with "Home", "Settings", "Functions", and "Management". The breadcrumb trail is "Settings >> WAN >> WAN/Creating". The page is divided into "Basic" and "All Settings" tabs. The "Basic" tab is active and shows the following configuration options:

- Connection type:** A dropdown menu set to "PPPoE".
- MAC address:** A text field containing "9C:D6:43:3D:01:02".
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):** A toggle switch that is currently disabled.
- Without authorization:** A toggle switch that is currently disabled.
- Username\*:** An empty text field.
- Service name:** An empty text field.

An "APPLY" button is located at the bottom of the form.

## PPPoE (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note:** this option can only be edited in the WAN/Creating mode.

- Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### PPP

- Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

- Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

- Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
PPPoE

Enable connection

The number of characters should not exceed 32

Ethernet

MAC address  
9C:D6:43:3D:01:02

Clone MAC address of your NIC  
(70:F3:95:0E:5C:41)

RESTORE DEFAULT MAC ADDRESS

MTU  
1500

PPP

Without authorization

Username\*

Password\*

Service name

MTU\*  
1492

Authentication protocol  
AUTO

Keep Alive

LCP interval\*  
30

LCP fails\*  
3

Dial on demand

Maximum idle time (in seconds)  
0

Static IP address

PPP IP extension

PPP debug

APPLY

Miscellaneous

NAT

Firewall

RIP

Ping

Isolate connection

## PPPoE (cont)

- Service name:** Specify the ISP service name (optional).
- Authentication protocol:** Choose from **AUTO**, **PAP**, **CHAP**, **MS-CHAP**, or **MS-CHAPv2**. **AUTO** is selected by default.
- Keep alive:** Toggle this switch to maintain your connection when no activity is detected.
- LCP interval:** If you have enabled **Keep alive**, specify the LCP Echo frequency in seconds. The default setting is 30.
- LCP fails:** If you have enabled **Keep alive**, specify the maximum number of LCP fails before the connection is dropped.
- Dial on demand:** Enable this option to automatically dial a PPPoE connection when data flow is detected.
- Maximum idle time:** If you have enabled **Dial on demand**, specify a maximum idle time in seconds before the connection will be dropped.
- Static IP address:** Specify the IP address provided by your ISP.
- PPP IP extension:** Toggle this switch to enable the PPP server to directly assign IP addresses to PCs behind your router. This is disabled by default.
- PPP debug:** Toggle this switch to enable PPP debug. This feature is disabled by default.

### Ethernet

- MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

The screenshot shows the D-Link web interface for configuring the Internet connection. The breadcrumb trail is 'Settings >> WAN >> WAN/Creating'. The page is divided into two tabs: 'Basic' and 'All Settings'. The 'All Settings' tab is selected and shows the following configuration options:

- Connection type:** PPPoE
- Enable connection:**
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):**
- RESTORE DEFAULT MAC ADDRESS:** Button
- MTU:** 1500
- PPP:**
  - Without authorization:**
  - Username\*:** [Empty field]
  - Password\*:** [Empty field]
  - Service name:** [Empty field]
  - MTU\*:** 1492
  - Authentication protocol:** AUTO
  - Keep Alive:**
  - LCP interval\*:** 30
  - LCP fails\*:** 3
  - Dial on demand:**
  - Maximum idle time (in seconds):** 0
  - Static IP address:** [Empty field]
  - PPP IP extension:**
  - PPP debug:**
- Miscellaneous:**
  - NAT:**
  - Firewall:**
  - RIP:**
  - Ping:**
  - Isolate connection:**

An 'APPLY' button is located at the bottom of the configuration page.



## PPPoE (cont)

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

### Miscellaneous

**NAT:** Toggle this switch to enable Network Address Translation (NAT). This setting is enabled by default.

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
PPPoE

Enable connection

The number of characters should not exceed 32

MAC address  
9C:D6:43:3D:01:02

Clone MAC address of your NIC  
(70:F3:95:0E:5C:41)

RESTORE DEFAULT MAC ADDRESS

MTU  
1500

PPP

Without authorization

Username\*

Password\*

Service name

MTU\*  
1492

Authentication protocol  
AUTO

Keep Alive

LCP interval\*  
30

LCP fails\*  
3

Dial on demand

Maximum idle time (in seconds)  
0

Static IP address

PPP IP extension

PPP debug

APPLY

Miscellaneous

NAT

Firewall

RIP

Ping

Isolate connection

## PPPoE IPv6

Select **PPPoE IPv6** if your ISP provides and requires you to enter a PPPoE username and password in order to connect to the Internet. Choose Basic configuration or All Settings.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**Service name:** Specify the ISP service name (optional).

**Get IPv6:** Choose **Automatically**, **IPv6 by DHCPv6**, **by SLAAC**, or **DHCPv6 PD** according to the type of IPv6 is used by your ISP. The default setting is **Automatically**.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for configuring the Internet connection. The page title is "Internet" and it includes a navigation menu with "Home", "Settings", "Functions", and "Management". The "Settings" menu is active, and the breadcrumb trail is "Settings >> WAN >> WAN/Creating". There are tabs for "WAN", "VLAN", and "DNS". The "Basic" tab is selected, and the "All Settings" tab is also visible. The configuration form includes the following fields and options:

- Connection type:** A dropdown menu set to "PPPoE IPv6".
- MAC address:** A text field containing "9C:D6:43:3D:01:02".
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):** A radio button that is currently disabled.
- RESTORE DEFAULT MAC ADDRESS:** A button to restore the default MAC address.
- Without authorization:** A radio button that is currently disabled.
- Username\*:** A text input field.
- Service name:** A text input field.
- Get IPv6:** A dropdown menu set to "Automatically".
- APPLY:** A button to save the configuration.

## PPPoE IPv6 (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**.  
 For **Dynamic IPv6** refer to page **31**.  
 For **Static IPv6** refer to page **35**.  
 For **PPPoE** refer to page **38**.  
 For **PPPoE IPv6** refer to page **42**.  
 For **PPPoE Dual Stack** refer to page **47**.  
 For **PPTP** refer to page **52**.  
 For **L2TP** refer to page **56**.

**Note:** this option can only be edited in the WAN/Creating mode.

**Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### PPP

**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**Service name:** Specify the ISP service name (optional).

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
PPPoE IPv6

Enable connection

ⓘ The number of characters should not exceed 32

MAC address  
9C:D6:43:3D:01:02

Clone MAC address of your NIC (70:F3:95:0E:5C:41)

[RESTORE DEFAULT MAC ADDRESS](#)

MTU  
1500

PPP

Without authorization

Username\*

Password\*

Service name

MTU\*  
1492

Authentication protocol  
AUTO

Keep Alive

LCP interval\*  
30

LCP fails\*  
3

Dial on demand

Maximum idle time (in seconds)  
0

PPP IP extension

PPP debug

Ethernet

Get IPv6  
Automatically

Gateway by SLAAC

Gateway IPv6 address

Obtain DNS server addresses automatically

Primary IPv6 DNS server

Secondary IPv6 DNS server

Miscellaneous

Firewall

RIP

Ping

Isolate connection

[APPLY](#)

## PPPoE IPv6 (cont)

- MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1492.
- Authentication protocol:** Choose from **AUTO**, **PAP**, **CHAP**, **MS-CHAP**, or **MS-CHAPv2**. **AUTO** is selected by default.
- Keep alive:** Toggle this switch to maintain your connection when no activity is detected.
- LCP interval:** If you have enabled **Keep alive**, specify the LCP Echo frequency in seconds. The default setting is 30.
- LCP fails:** If you have enabled **Keep alive**, specify the maximum number of LCP fails before the connection is dropped.
- Dial on demand:** Enable this option to automatically dial a PPPoE connection when data flow is detected.
- Maximum idle time:** If you have enabled **Dial on demand**, specify a maximum idle time in seconds before the connection will be dropped.
- Static IP address:** Specify the IP address provided by your ISP.
- PPP IP extension:** Toggle this switch to enable the PPP server to directly assign IP addresses to PCs behind your router. This is disabled by default.
- PPP debug:** Toggle this switch to enable PPP debug. This feature is disabled by default.

The screenshot shows the D-Link web interface for configuring the Internet connection. The page is titled "Internet" and includes a navigation menu with "Home", "Settings", "Functions", and "Management". The "Settings" menu is expanded to show "WAN", "VLAN", and "DNS". The "WAN" menu is further expanded to show "WAN/Creating".

The "All Settings" section is active and shows the following configuration options:

- Connection type:** PPPoE IPv6
- Enable connection:**
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):**
- RESTORE DEFAULT MAC ADDRESS:** Button
- MTU:** 1500
- PPP:** Without authorization
- Username\*:** [Empty field]
- Password\*:** [Empty field]
- Service name:** [Empty field]
- MTU\*:** 1492
- Authentication protocol:** AUTO
- Keep Alive:**
- LCP interval\*:** 30
- LCP fails\*:** 3
- Dial on demand:**
- Maximum idle time (in seconds):** 0
- PPP IP extension:**
- PPP debug:**
- IP:** Get IPv6: Automatically
- Gateway by SLAAC:**
- Gateway IPv6 address:** [Empty field]
- Obtain DNS server addresses automatically:**
- Primary IPv6 DNS server:** [Empty field]
- Secondary IPv6 DNS server:** [Empty field]
- Miscellaneous:**
  - Firewall:**
  - RIP:**
  - Ping:**
  - Isolate connection:**

An "APPLY" button is located at the bottom of the page.

## PPPoE IPv6 (cont)

### Ethernet

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

### IP

**Get IPv6:** Choose **Automatically, IPv6 by DHCPv6, by SLAAC, or DHCPv6 PD** according to the type of IPv6 is used by your ISP. The default setting is **Automatically**.

**Gateway by SLAAC:** Toggle this switch to obtain gateway information through SLAAC.

**IPv6 address:** Specify the IPv6 address provided by your ISP.

**Prefix:** Specify the prefix provided by your ISP.

**Gateway IPv6 address:** Specify the default gateway address provided by your ISP.

The screenshot shows the D-Link DIR-1210 web interface. The top navigation bar includes 'Home', 'Settings', 'Functions', and 'Management'. The main heading is 'Internet', with a sub-heading 'Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.'

The breadcrumb trail is 'Settings >> WAN >> WAN/Creating'. There are tabs for 'WAN', 'VLAN', and 'DNS'. The 'All Settings' section is active, showing the following configuration options:

- Connection type:** PPPoE IPv6
- Enable connection:**
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):**  (with a 'RESTORE DEFAULT MAC ADDRESS' button)
- MTU:** 1500
- PPP:**  Without authorization
- Username\*:** (empty field)
- Password\*:** (empty field with eye icon)
- Service name:** (empty field)
- MTU\*:** 1492
- Authentication protocol:** AUTO
- Keep Alive:**
- LCP interval\*:** 30
- LCP fails\*:** 3
- Dial on demand:**
- Maximum idle time (in seconds):** 0
- PPP IP extension:**
- PPP debug:**
- IP:** Get IPv6: Automatically
- Gateway by SLAAC:**
- Gateway IPv6 address:** (empty field with lock icon)
- Obtain DNS server addresses automatically:**
- Primary IPv6 DNS server:** (empty field with lock icon)
- Secondary IPv6 DNS server:** (empty field with lock icon)
- Miscellaneous:**
  - Firewall:**
  - RIP:**
  - Ping:**
  - Isolate connection:**

An 'APPLY' button is located at the bottom of the configuration area.

## PPPoE IPv6 (cont)

**Primary IPv6 DNS server:** Specify the primary DNS server IP address assigned by your ISP.

**Secondary IPv6 DNS server:** Specify the secondary DNS server IP address assigned by your ISP.

### Miscellaneous

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

The screenshot shows the D-Link DIR-1210 web interface for configuring the Internet connection. The page is titled "Internet" and includes a navigation menu with "Home", "Settings", "Functions", and "Management". The current page is "Settings >> WAN >> WAN/Creating".

The configuration is divided into two tabs: "Basic" and "All Settings". The "All Settings" tab is active, showing the following options:

- Connection type:** PPPoE IPv6
- Enable connection:**
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):**
- RESTORE DEFAULT MAC ADDRESS:** Button
- MTU:** 1500
- PPP:**
  - Without authorization:**
  - Username\*:** [Empty field]
  - Password\*:** [Empty field]
  - Service name:** [Empty field]
  - MTU\*:** 1492
  - Authentication protocol:** AUTO
  - Keep Alive:**
  - LCP interval\*:** 30
  - LCP fails\*:** 3
  - Dial on demand:**
  - Maximum idle time (in seconds):** 0
  - PPP IP extension:**
  - PPP debug:**
- IP:**
  - Get IPv6:** Automatically
  - Gateway by SLAAC:**
  - Gateway IPv6 address:** [Empty field]
  - Obtain DNS server addresses automatically:**
  - Primary IPv6 DNS server:** [Empty field]
  - Secondary IPv6 DNS server:** [Empty field]
- Miscellaneous:**
  - Firewall:**
  - RIP:**
  - Ping:**
  - Isolate connection:**

An **APPLY** button is located at the bottom left of the configuration area.

## PPPoE Dual Stack

Select **PPPoE Dual Stack** if your ISP provides and requires you to enter a PPPoE username and password in order to connect to the Internet and supports adding IPv6 access to PPP for IPv4. Choose Basic configuration or All Settings.

### Basic

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**Service name:** Specify the ISP service name (optional).

**Get IPv6:** Choose **Automatically**, **IPv6 by DHCPv6**, **by SLAAC**, or **DHCPv6 PD** according to the type of IPv6 is used by your ISP. The default setting is **Automatically**.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for the DIR-1210 router. The page is titled "Internet" and contains the following configuration options:

- Connection type:** PPPoE IPv6
- MAC address:** 9C:D6:43:3D:01:02
- Clone MAC address of your NIC (70:F3:95:0E:5C:41):** Disabled (radio button)
- Without authorization:** Disabled (radio button)
- Username\*:** (empty text field)
- Service name:** (empty text field)
- Get IPv6:** Automatically
- APPLY** button

## PPPoE Dual Stack (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**.  
 For **Dynamic IPv6** refer to page **31**.  
 For **Static IPv6** refer to page **35**.  
 For **PPPoE** refer to page **38**.  
 For **PPPoE IPv6** refer to page **42**.  
 For **PPPoE Dual Stack** refer to page **47**.  
 For **PPTP** refer to page **52**.  
 For **L2TP** refer to page **56**.

**Note:** this option can only be edited in the WAN/Creating mode.

**Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### PPP

**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

The screenshot shows the 'Internet' configuration page for a D-Link DIR-1210 router. The page is titled 'Internet' and includes a navigation menu with 'Home', 'Settings', 'Functions', and 'Management'. The current page is 'Settings >> WAN >> WAN/Creating'. The 'Basic' tab is selected, and the 'All Settings' sub-tab is active. The 'Connection type' is set to 'PPPoE Dual Stack'. The 'Enable connection' toggle is turned on. The 'PPP' section has 'Without authorization' selected. The 'IP' section has 'Get IPv6' set to 'Automatically' and 'Gateway by SLAAC' selected. The 'Miscellaneous' section has 'NAT', 'Firewall', and 'RIP' selected. The 'APPLY' button is at the bottom.



## PPPoE Dual Stack (cont)

**Service name:** Specify the ISP service name (optional).

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1492.

**Authentication protocol:** Choose from **AUTO**, **PAP**, **CHAP**, **MS-CHAP**, or **MS-CHAPv2**. **AUTO** is selected by default.

**Keep alive:** Toggle this switch to maintain your connection when no activity is detected.

**LCP interval:** If you have enabled **Keep alive**, specify the LCP Echo frequency in seconds. The default setting is 30.

**LCP fails:** If you have enabled **Keep alive**, specify the maximum number of LCP fails before the connection is dropped.

**Dial on demand:** Enable this option to automatically dial a PPPoE connection when data flow is detected.

**Maximum idle time:** If you have enabled **Dial on demand**, specify a maximum idle time in seconds before the connection will be dropped.

**Static IP address:** Specify the IP address provided by your ISP.

**PPP IP extension:** Toggle this switch to enable the PPP server to directly assign IP addresses to PCs behind your router. This is disabled by default.

**PPP debug:** Toggle this switch to enable PPP debug. This feature is disabled by default.

The screenshot displays the D-Link Web UI configuration page for PPPoE Dual Stack. The interface is split into two main sections: 'Basic' and 'All Settings'.  
**Basic Section:**  
 - Connection type: PPPoE Dual Stack (dropdown menu)  
 - Enable connection:   
 - Note: The number of characters should not exceed 32.  
 - MTU: 1492  
 - Authentication protocol: AUTO (dropdown menu)  
 - Keep Alive:   
 - LCP interval: 30  
 - LCP fails: 3  
 - Dial on demand:   
 - Maximum idle time (in seconds): 0  
 - Static IP address: (empty field)  
 - PPP IP extension:   
 - PPP debug:   
**All Settings Section:**  
 - Ethernet MAC address: 9C:D6:43:3D:01:02  
 - Clone MAC address of your NIC (70:F3:95:0E:5C:41):   
 - RESTORE DEFAULT MAC ADDRESS (button)  
 - Get IPv6 Automatically: (dropdown menu)  
 - Gateway by SLAAC:   
 - Gateway IPv6 address: (empty field)  
 - Obtain DNS server addresses automatically:   
 - Primary IPv6 DNS server: (empty field)  
 - Secondary IPv6 DNS server: (empty field)  
**Miscellaneous Section:**  
 - NAT:   
 - Firewall:   
 - RIP:   
 - Ping:   
 - Isolate connection:   
 - APPLY (button)

## PPPoE Dual Stack (cont)

### Ethernet

**MAC address:** The default MAC address is set to the Internet port's physical interface MAC address on the router. You can edit that address manually here.

**Clone MAC address of your NIC:** Toggle this switch to clone the MAC address of the device you are using to access the web UI. Note that no two MAC address within the same subnet can be the same.

**Restore Default MAC Address:** Click here to restore your router's default MAC address.

**MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1500.

### IP

**Get IPv6:** Choose **Automatically, IPv6 by DHCPv6, by SLAAC, or DHCPv6 PD** according to the type of IPv6 is used by your ISP. The default setting is **Automatically**.

**Gateway by SLAAC:** Toggle this switch to obtain gateway information through SLAAC.

**IPv6 address:** Specify the IPv6 address provided by your ISP.

**Prefix:** Specify the prefix provided by your ISP.

**Gateway IPv6 address:** Specify the default gateway address provided by your ISP.

The screenshot shows the D-Link web interface for configuring the PPPoE Dual Stack connection. The 'Basic' section is active, showing the connection type as 'PPPoE Dual Stack' and the 'Enable connection' toggle checked. The MTU is set to 1500. Under the 'PPP' section, 'Without authorization' is selected, and the 'Keep Alive' and 'LCP interval' options are checked and set to 30. The 'All Settings' section shows the Ethernet MAC address as 9C:D6:43:3D:01:02, with the 'Clone MAC address of your NIC' option unchecked. The 'IP' section shows 'Automatically' selected for 'Get IPv6', and 'Gateway by SLAAC' is checked. The 'Miscellaneous' section has all options (NAT, Firewall, RIP, Ping, Isolate connection) unchecked. An 'APPLY' button is located at the bottom of the page.

## PPPoE Dual Stack (cont)

**Primary IPv6 DNS server:** Specify the primary DNS server IP address assigned by your ISP.

**Secondary IPv6 DNS server:** Specify the secondary DNS server IP address assigned by your ISP.

### Miscellaneous

**NAT:** Toggle this switch to enable Network Address Translation (NAT). This setting is enabled by default.

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

The screenshot shows the D-Link DIR-1210 web interface for configuring the Internet connection. The page is titled "Internet" and includes a navigation menu with "Settings", "Functions", and "Management". The breadcrumb trail is "Settings >> WAN >> WAN/Creating".

The configuration is split into two tabs: "Basic" and "All Settings".

**Basic Tab:**

- Connection type: PPPoE Dual Stack
- Enable connection:
- MTU: 1500
- PPP: Without authorization
- Username: \*
- Password: \*
- Service name: \*
- MTU: 1492
- Authentication protocol: AUTO
- Keep Alive:
- LCP interval: 30
- LCP fails: 3
- Dial on demand:
- Maximum idle time (in seconds): 0
- Static IP address: \*
- PPP IP extension:
- PPP debug:

**All Settings Tab:**

- Ethernet:
  - MAC address: 9C:D6:43:3D:01:02
  - Clone MAC address of your NIC (70:F3:95:0E:5C:41):
  - RESTORE DEFAULT MAC ADDRESS
- IP:
  - Get IPv6: Automatically
  - Gateway by SLAAC:
  - Gateway IPv6 address: \*
  - Obtain DNS server addresses automatically:
  - Primary IPv6 DNS server: \*
  - Secondary IPv6 DNS server: \*
- Miscellaneous:
  - NAT:
  - Firewall:
  - RIP:
  - Ping:
  - Isolate connection:

An "APPLY" button is located at the bottom of the page.

## PPTP

Choose **PPTP** (Point-to-Point-Tunneling Protocol ) if your Internet Service Provider (ISP) uses a PPTP connection. Your ISP will provide you with a username and password. Choose Basic configuration or All Settings.

### Basic

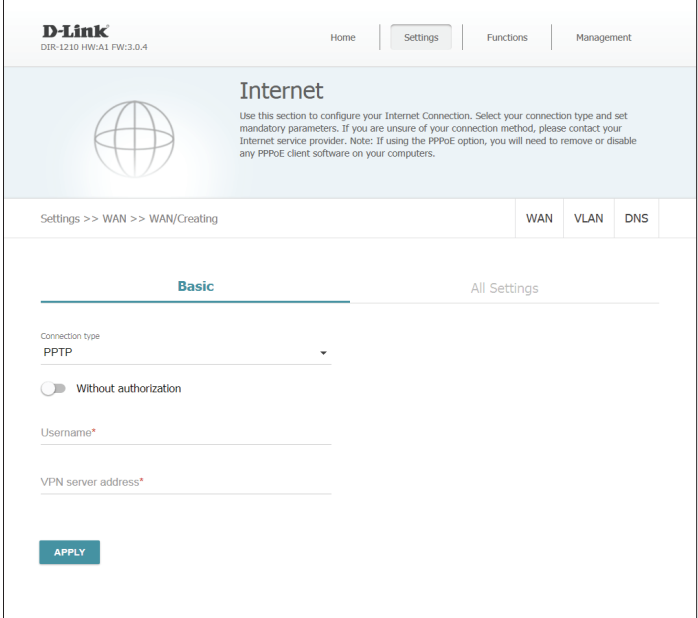
**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**VPN Server address:** Specify the VPN server address provided by your ISP.

Click **Apply** when you are done.



The screenshot shows the D-Link DIR-1210 Internet configuration page. The page title is "Internet" and it includes a globe icon. Below the title, there is a note: "Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers." The page is divided into two tabs: "Basic" (selected) and "All Settings". The "Basic" tab contains the following settings:

- Connection type: PPTP (selected)
- Without authorization:  (disabled)
- Username\*:
- VPN server address\*:

At the bottom of the form, there is an "APPLY" button. The breadcrumb trail at the top of the form reads "Settings >> WAN >> WAN/Creating".

## PPTP (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note:** this option can only be edited in the WAN/Creating mode.

- Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### PPP

- Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**VPN Server address:** Specify the VPN server address provided by your ISP.

D-Link  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
PPTP

Enable connection  
The number of characters should not exceed 32

Without authorization

Username\*

Password\*

VPN server address\*

MTU\*  
1456

Authentication protocol  
AUTO

Encryption protocol  
No encryption

Keep Alive

LCP interval\*  
30

LCP fails\*  
3

Dial on demand

Maximum idle time (in seconds)  
0

Extra options

Static IP address

PPP debug  
 Enable MPPC

Miscellaneous

NAT  
 Firewall  
 RIP  
 Ping  
 Isolate connection

APPLY

## PPTP (cont)

- MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1456.
- Authentication protocol:** Choose from **AUTO**, **PAP**, **CHAP**, **MS-CHAP**, or **MS-CHAPv2**. **AUTO** is selected by default.
- Encryption protocol:** Choose **No Encryption**, **MPPE 40 125 bit**, **MPPE 40 bit**, or **MPPE 128 bit**.
- Keep alive:** Toggle this switch to maintain your connection when no activity is detected.
- LCP interval:** If you have enabled **Keep alive**, specify the LCP Echo frequency in seconds. The default setting is 30.
- LCP fails:** If you have enabled **Keep alive**, specify the maximum number of LCP fails before the connection is dropped.
- Dial on demand:** Enable this option to automatically dial a PPPoE connection when data flow is detected.
- Maximum idle time:** If you have enabled **Dial on demand**, specify a maximum idle time in seconds before the connection will be dropped.
- Extra options:** Specify extra options if required by your ISP.
- Static IP address:** Specify the IP address provided by your ISP.
- PPP debug:** Toggle this switch to enable PPP debug. This feature is disabled by default.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
PPTP

Enable connection

The number of characters should not exceed 32

Without authorization

Username\*

Password\*

VPN server address\*

MTU\*  
1456

Authentication protocol  
AUTO

Encryption protocol  
No encryption

Keep Alive

LCP interval\*  
30

LCP fails\*  
3

Dial on demand

Maximum idle time (in seconds)  
0

Extra options

Static IP address

PPP debug

Enable MPPC

Miscellaneous

NAT

Firewall

RIP

Ping

Isolate connection

APPLY

## PPTP (cont)

**Enable MPPC:** Toggle this switch to enable Microsoft Point-to-Point Compression (MPPC). This setting is disabled by default.

### Miscellaneous

**NAT:** Toggle this switch to enable Network Address Translation (NAT). This setting is enabled by default.

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for configuring the Internet connection. The page is titled "Internet" and includes a "Basic" tab and an "All Settings" tab. The "All Settings" tab is active, showing various configuration options for PPTP.

**Basic:**

- Connection type: PPTP
- Enable connection:
- The number of characters should not exceed 32

**All Settings:**

- Without authorization:
- Username\*
- Password\*
- VPN server address\*
- MTU\*: 1456
- Authentication protocol: AUTO
- Encryption protocol: No encryption
- Keep Alive:
- LCP interval\*: 30
- LCP fails\*: 3
- Dial on demand:
- Maximum idle time (in seconds): 0
- Extra options
- Static IP address
- PPP debug:
- Enable MPPC:
- Miscellaneous:
  - NAT:
  - Firewall:
  - RIP:
  - Ping:
  - Isolate connection:

**APPLY**

## L2TP

Choose **L2TP** (Layer 2 Tunneling Protocol) if your Internet Service Provider (ISP) uses a L2TP connection. Your ISP will provide you with a username and password. Choose Basic configuration or All Settings.

### Basic

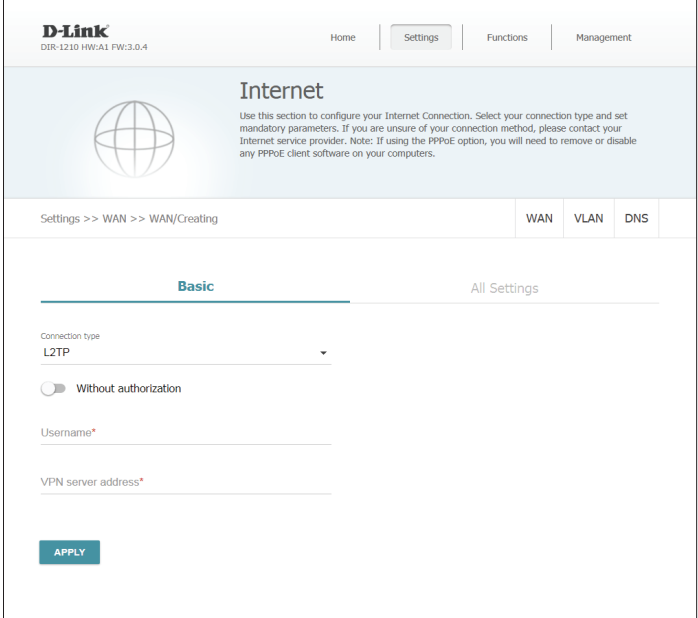
**Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**VPN Server address:** Specify the VPN server address provided by your ISP.

Click **Apply** when you are done.



The screenshot shows the D-Link DIR-1210 Internet configuration page. The page title is "Internet" and it includes a navigation menu with "Home", "Settings", "Functions", and "Management". Below the title, there is a globe icon and a brief instruction: "Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers." The page is divided into two tabs: "Basic" (selected) and "All Settings". Under the "Basic" tab, there are three main sections: "Connection type" (set to "L2TP"), "Without authorization" (a toggle switch that is currently turned off), and "Username\*" (an empty text input field). Below these is a "VPN server address\*" field, also empty. At the bottom of the form is a blue "APPLY" button. The breadcrumb trail at the top of the form reads "Settings >> WAN >> WAN/Creating".



## L2TP (cont)

### All Settings

- Connection Type:** Select your connection type from drop-down menu:  
 For **Dynamic IPv4** refer to page **24**.  
 For **Static IPv4** refer to page **27**  
 For **Dynamic IPv6** refer to page **31**  
 For **Static IPv6** refer to page **35**  
 For **PPPoE** refer to page **38**  
 For **PPPoE IPv6** refer to page **42**  
 For **PPPoE Dual Stack** refer to page **47**  
 For **PPTP** refer to page **52**  
 For **L2TP** refer to page **56**

**Note:** this option can only be edited in the WAN/Creating mode.

- Enable Connection:** Toggle this switch to enable the connection. This is enabled by default. Disabling this feature may disable your Internet connection.

### PPP

- Without authorization:** Enable this setting to connect without a username and password. This configuration is uncommon and is disabled by default.

**Username:** If **Without authorization** is disabled, specify the PPP username provided by your ISP.

**Password:** If **Without authorization** is disabled, specify the PPP password provided by your ISP.

**VPN Server address:** Specify the VPN server address provided by your ISP.

The screenshot shows the 'Internet' configuration page for a D-Link DIR-1210 router. The page is titled 'Internet' and includes a navigation menu with 'Home', 'Settings', 'Functions', and 'Management'. The breadcrumb trail is 'Settings >> WAN >> WAN/Creating'. There are tabs for 'WAN', 'VLAN', and 'DNS'. The page is divided into 'Basic' and 'All Settings' sections. In the 'All Settings' section, the 'Connection type' is set to 'L2TP'. There is a toggle for 'Enable connection' which is turned on. Below it, a note states 'The number of characters should not exceed 32'. The 'Without authorization' option is disabled. Fields for 'Username\*', 'Password\*', and 'VPN server address\*' are present. The 'MTU\*' is set to 1456. The 'Authentication protocol' is set to 'AUTO' and the 'Encryption protocol' is set to 'No encryption'. There is a 'Keep Alive' toggle which is turned on. The 'LCP interval\*' is set to 30 and the 'LCP fails\*' is set to 3. The 'Dial on demand' toggle is disabled. The 'Maximum idle time (in seconds)' is set to 0. There is an 'Extra options' section with a 'Static IP address' field. The 'PPP debug' toggle is disabled. In the 'Miscellaneous' section, 'NAT' and 'Firewall' are enabled, while 'RIP', 'Ping', and 'Isolate connection' are disabled. An 'APPLY' button is at the bottom.

## L2TP (cont)

- MTU:** Specify the Maximum Transmission Unit of your Internet connection. You may need to change the MTU for optimal performance with your ISP. The default setting is 1456.
- Authentication protocol:** Choose from **AUTO**, **PAP**, **CHAP**, **MS-CHAP**, or **MS-CHAPv2**. **AUTO** is selected by default.
- Encryption protocol:** Choose **No Encryption**, **MPPE 40 125 bit**, **MPPE 40 bit**, or **MPPE 128 bit**.
- Keep alive:** Toggle this switch to maintain your connection when no activity is detected.
- LCP interval:** If you have enabled **Keep alive**, specify the LCP Echo frequency in seconds. The default setting is 30.
- LCP fails:** If you have enabled **Keep alive**, specify the maximum number of LCP fails before the connection is dropped.
- Dial on demand:** Enable this option to automatically dial a PPPoE connection when data flow is detected.
- Maximum idle time:** If you have enabled **Dial on demand**, specify a maximum idle time in seconds before the connection will be dropped.
- Extra options:** Specify extra options if required by your ISP.
- Static IP address:** Specify the IP address provided by your ISP.
- PPP debug:** Toggle this switch to enable PPP debug. This feature is disabled by default.

The screenshot shows the D-Link Web UI for the DIR-1210. The top navigation bar includes 'Home', 'Settings', 'Functions', and 'Management'. The 'Settings' tab is selected, and the 'WAN/Creating' page is displayed. The 'Internet' section is active, showing a 'Basic' tab and an 'All Settings' tab. The 'All Settings' tab is selected, and the following configuration options are visible:

- Connection type:** L2TP
- Enable connection:**
- Without authorization:**
- Username\*:** [Empty field]
- Password\*:** [Empty field]
- VPN server address\*:** [Empty field]
- MTU\*:** 1456
- Authentication protocol:** AUTO
- Encryption protocol:** No encryption
- Keep Alive:**
- LCP interval\*:** 30
- LCP fails\*:** 3
- Dial on demand:**
- Maximum idle time (in seconds):** 0
- Extra options:** [Empty field]
- Static IP address:** [Empty field]
- PPP debug:**
- Miscellaneous:**
  - NAT:**
  - Firewall:**
  - RIP:**
  - Ping:**
  - Isolate connection:**

An 'APPLY' button is located at the bottom left of the configuration area.

## L2TP (cont)

### Miscellaneous

**NAT:** Toggle this switch to enable Network Address Translation (NAT). This setting is enabled by default.

**Firewall:** Toggle this switch to enable firewall functionality. This setting is enabled by default.

**RIP:** Toggle this switch to enable Routing Information Protocol (RIP). This setting is disabled by default.

**Ping:** Toggle this switch to enable WAN Ping. This setting is disabled by default.

**Isolate connection:** Toggle this switch to enable connection isolation. This setting is disabled by default.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:AL FW:3.0.4

Home Settings Functions Management

### Internet

Use this section to configure your Internet Connection. Select your connection type and set mandatory parameters. If you are unsure of your connection method, please contact your Internet service provider. Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Settings >> WAN >> WAN/Creating

WAN VLAN DNS

Basic All Settings

Connection type  
L2TP

Enable connection

The number of characters should not exceed 32

PPP

Without authorization

Username\*

Password\*

VPN server address\*

MTU\*  
1456

Authentication protocol  
AUTO

Encryption protocol  
No encryption

Keep Alive

LCP interval\*  
30

LCP fails\*  
3

Dial on demand

Maximum idle time (in seconds)  
0

Extra options

Static IP address

PPP debug

Miscellaneous

NAT

Firewall

RIP

Ping

Isolate connection

APPLY

# VLAN

VLAN tagging allows for services such as Triple-Play to be used, and divides a network into segments that can only be accessed by other devices in the same VLAN.

In the Settings menu on the bar on the top of the page, click **Internet**, then click the **VLAN** link.

Click on any VLAN to configure it. Refer to **VLAN Add/Edit** on page **61** for configuration instructions.

## VLAN List

**Add:** Click here to add a new VLAN. Refer to **VLAN Add/Edit on page 61**

**Delete:** Click here to delete the selected VLAN.

**Name:** This column indicates the name of the VLAN.

**Type:** This column indicates the type of the VLAN.

**Untagged Ports:** This column indicates the untagged ports belonging to the VLAN.

**Tagged port:** This column indicates the tagged ports belonging to the VLAN.

**VLAN ID:** Indicates the VLAN ID to which the tagged ports belong.

**Enable:** Indicates whether the VLAN is enabled or not.

**D-Link**  
DIR-1210 HWv1 FW3.0.4

Home Settings Functions Management

## VLAN

A Triple-Play (VLAN) is a switched network that is logically segmented by function, project team, or application, without regard to the physical location of the users. You can configure which hardware port will be assigned to a VLAN, and all packets from a network device in a VLAN will only be forwarded to other devices in the same VLAN.

Settings >> VLAN

WLAN **VLAN** DNS

VLAN List ADD DELETE

<input type="checkbox"/>	Name	Type	Untagged ports	Tagged port	VLAN ID	Enable
<input type="checkbox"/>	lan	Untagged LAN	LAN1, LAN2, LAN3, LAN4, wifi_2G-1, wifi_5G-1, wifi_2G-2-na, wifi_5G-2-na	-	-	Yes
<input type="checkbox"/>	wan	Untagged NAT	WAN	-	-	Yes

## VLAN Add/Edit

**Name:** Specify a name for the VLAN.

**Enable:** If prompted, toggle this switch.

**Type:** If prompted, select a VLAN type from the list.

**VLAN ID:** If prompted, specify the VLAN ID.

### Untagged Ports

**Untagged Ports:** If you have chosen to edit an existing untagged connection, or if you have chosen to add a bridge connection, select the untagged ports to be included in the VLAN.

**Note:** Ports can only belong to one VLAN at a time, and may need to be freed from other VLANs before changing this setting.

### Tagged Ports

**VLAN ID:** If you have chosen to edit an existing tagged connection, or if you have chosen to add a bridge connection, select the tagged ports to be included in the VLAN.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings Functions Management

### VLAN

A Triple-Play (VLAN) is a switched network that is logically segmented by function, project team, or application, without regard to the physical location of the users. You can configure which hardware port will be assigned to a VLAN, and all packets from a network device in a VLAN will only be forwarded to other devices in the same VLAN.

Settings >> VLAN Add

WLAN VLAN DNS

Name\*

Enable

ⓘ Use this VLAN settings

Type  
Bridge

VLAN ID\*

Untagged Ports

LAN4

Tagged Ports

WAN

ⓘ The group must include at least one tagged port

APPLY

# DNS

Domain Name System (DNS) servers convert URLs into IP addresses to make it easier to navigate the internet. This screen allows you to manually configure DNS servers if required by your ISP or if a custom configuration is needed

## DNS IPv4/IPv6

**Manual:** Enable this to specify name servers manually under **Name Server IPv4/IPv6**.

**Default Gateway:** If the **Manual** switch is set to disabled, apply below Interface setting as default.

**Interface:** Select the interface to which your DNS settings will apply.

## Name Servers IPv4/IPv6

**IP address:** If **Manual** is set as enabled, specify one or more IP addresses for DNS name servers.

**Default Gateway:** If the **Manual** switch is set as disabled, apply below Interface setting as default.

**Add Server:** Click here to add an additional server.

## Hosts

**Add:** Click **Add** to add a manual entry for DNS resolution. Refer to **Add Hosts** on page **63** for more information.

The screenshot shows the D-Link web interface for DNS configuration. The top navigation bar includes 'Home', 'Settings', 'Functions', and 'Management'. The 'DNS' tab is selected. The main content area is split into two columns: 'DNS IPv4' and 'DNS IPv6'. Both columns have a 'Manual' toggle switch turned on. Below each toggle is an 'Interface' dropdown menu with 'Dynamic\_IPv4\_80' selected. Under 'DNS IPv4', there are two input fields for 'Name Servers IPv4' with the value '192.168.23.1' and an 'ADD SERVER' button. Under 'DNS IPv6', there are two input fields for 'Name Servers IPv6' with the value '2001:4860:4860:8888' and an 'ADD SERVER' button. At the bottom, there is a 'Hosts' section with a table containing one entry: IP address '192.168.0.11' and Name 'Desktop'. There are 'ADD' and 'DELETE' buttons for the hosts table. An 'APPLY' button is located at the bottom right of the page.

## Add Hosts

**Delete:** Click **Delete** to delete a selected host from the list

**IP address:** Indicates the IP address of the host.

**Name:** Indicates the name of the host.

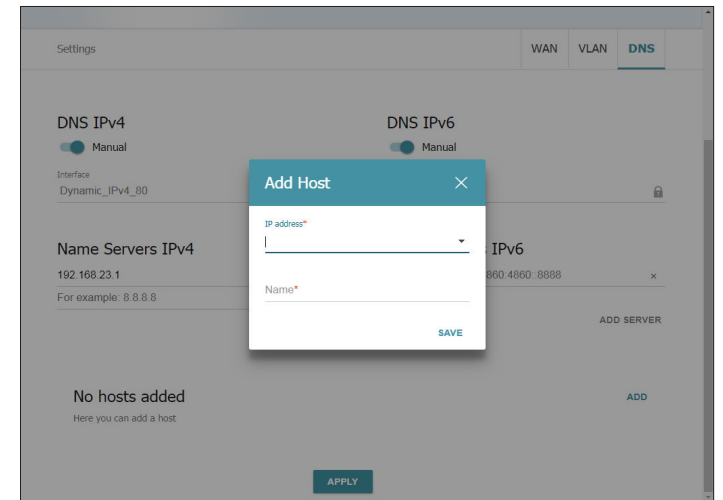
Click **Apply** when you are done.

### Edit Host

**IP address:** Specify the IP address of the host, or select from the drop-down menu.

**Name:** Enter a name for the specified host.

Click **Save** when you are done.



# WAN Failover

WAN Failover allows the device to switch to another WAN or Internet connection in the event that the primary connection becomes unavailable.

**Enable:** Toggle to enable WAN Failover.

**Basic connection:** Select your primary internet connection from the drop-down menu.

**Backup connection:** Select the backup connection from the drop-down menu

**Test host (IP):** Specify a test host IP address the router will use to determine the status of the connection. The default setting is 8.8.8.8, which is Google DNS.

**Check interval:** Specify the frequency to check your connection in seconds. The default setting is 10 seconds.

**Timeout check:** Specify the amount of time in seconds the device will wait before considering a ping to have timed out.

**Number of inspections of active connection:** Specify the number of consecutive failures before switching to the backup connection.

**Number of inspection of inactive connection:** Specify the number of consecutive successes before switching to the primary connection.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:A1 FW:3.0.4

Home Settings Functions Management

## WAN Failover

On the WAN Failover page, you can enable the WAN backup function, which provides you with uninterrupted access to the Internet. When your main connection breaks down, your device activates the backup connection; and when the main channel is recovered, the device switches to it and disconnects the reserve one.

Settings >> WAN Failover

Enable

Basic connection: Dynamic\_IPv4\_80

Backup connection: Dynamic\_IPv4\_80

Test host (IP): 8.8.8.8

Check interval (in seconds)\*: 10

Timeout check (in seconds)\*: 3

Number of inspections of active connection\*: 3

Number of inspections of inactive connection\*: 5

APPLY



# Wireless network

From this page you can configure your wireless network settings. There are two tabs for 2.4 GHz and 5 GHz. 802.11n/g/b operate on 2.4 GHz, while 802.11ac/n/a operates over 5 GHz. 2.4 GHz and 5 GHz networks are configured independently.

## General Settings

**Enable Wireless:** Toggle this switch to enable wireless access.

**Wireless mode:** Select a wireless mode from the list.

**Select channel automatically:** Toggle this switch to enable to allow the router to automatically select an operating channel.

**Enable additional channels:** Toggle this switch to enable higher channels on the 5 GHz band. Note: This feature is only supported over 5 GHz.

**Channel:** If **Select channel automatically** is disabled, select the channel your router will use.

**Enable periodic scanning:** Toggle this switch to periodically scan for an optimal channel.

**Scanning period:** If **Enable periodic scanning** is enabled, specify the amount of time in seconds between scans.

## Wi-Fi Network

**Network name (SSID):** Specify the desired SSID for your wireless network. All devices must connect to this SSID.

**Hide SSID:** Toggle this switch to prevent SSID broadcasting. Clients will still need to enter the correct SSID to connect to your network.

The screenshot displays the 'Wireless network' configuration page for a D-Link DIR-1210 router. The page is divided into two main frequency bands: 2.4GHz and 5GHz. The 2.4GHz band is currently selected.

**General Settings (2.4GHz):**

- Enable Wireless:**
- Wireless mode:** 802.11 B/G/N mixed
- Select channel automatically:**
- Channel:** auto (channel 13)
- Enable periodic scanning:**
- Scanning period (in seconds):** 60

**Wi-Fi Network (2.4GHz):**

- Network name (SSID):** DIR-1210-1122
- Hide SSID:**
- Max associated clients:** 0
- Enable shapping:**
- Broadcast wireless network:**
- Clients isolation:**

**Security Settings (2.4GHz):**

- Network authentication:** WPA2-PSK
- Password (PSK):** [Masked]
- Encryption type:** AES
- Group key update interval (in seconds):** 3600

Buttons at the bottom: APPLY, ADD WI-FI NETWORK

## Wireless network (cont)

**Max Associated Clients:** Specify the maximum number of clients that can be connected at one time. Enter 0 for unlimited clients. The default setting is 0.

**Enable shaping:** Toggle this switch to enable shaping. This setting is disabled by default.

**Shaping (Mbits/s):** If **Enable shaping** is set to enable, specify the shaping threshold in Mbits/second.

**Broadcast wireless network:** Toggle this switch to disable broadcasting of a wireless network. This is useful if the router is being configured as a Wi-Fi client. This setting is enabled by default.

**Clients isolation:** Toggle this switch to prevent Wi-Fi clients from interacting with each other.

### Security Settings

**Network authentication:** Select **Open**, **WPA-PSK**, **WPA2-PSK**, **WPA-PSK/WPA2-PSK mixed**, **WPA**, **WPA2**, or **WPA/WPA2 mixed**. The default and recommended setting is WPA2-PSK.

If you have selected **WPA-PSK**, **WPA2-PSK**, or **WPA-PSK/WPA2-PSK mixed**:

**Password:** Specify a wireless password. Each device connecting to your network must enter this password.

**Encryption type:** Select an encryption type.

**D-Link**  
DIR-1210 HW-A1 FW:3.0.9

Home Settings Functions Management

### Wireless network

Use this section to configure the wireless settings for your D-Link Router. Please make sure that any changes made in this section will need to be updated on your wireless device.

Settings >> Wireless network

2.4GHz 5GHz

**General Settings**

- Enable Wireless
- Wireless mode: 802.11 AC/A/N mixed
- Select channel automatically
- Enable additional channels
- Channel: auto (channel 120)
- Enable periodic scanning
- Scanning period (in seconds): 60

**Wi-Fi Network**

Network name (SSID)\*: DIR-1210-5G-1122

Hide SSID

Max associated clients\*: 0

Enable shaping

Broadcast wireless network

Clients isolation

**Security Settings**

Network authentication: WPA2-PSK

Password PSK\*: .....

Encryption type\*: AES

Group key update interval (in seconds)\*: 3600

APPLY ADD WI-FI NETWORK

## Wireless network (cont)

**Group key update interval:** Specify an update interval in seconds. The default setting is 3600.

If you have selected WPA, WPA2, or WPA/WPA2 mixed

**WPA2 Pre-authentication:** Toggle this switch to enable WPA pre-authentication.

**IP address RADIUS server:** Specify the IP address of the RADIUS authentication server.

**RADIUS server port:** Specify the port of the RADIUS authentication software.

**RADIUS encryption key:** Specify the RADIUS encryption key.

**Encryption type:** Select the encryption type. As of this writing, only AES is supported.

**Group key update interval:** Specify an update interval in seconds. The default setting is 3600.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.9

Home Settings Functions Management

### Wireless network

Use this section to configure the wireless settings for your D-Link Router. Please make sure that any changes made in this section will need to be updated on your wireless device.

Settings >> Wireless network

2.4GHz 5GHz

**General Settings**

- Enable Wireless
- Wireless mode: 802.11 B/G/N mixed
- Select channel automatically
- Channel: auto (channel 13)
- Enable periodic scanning
- Scanning period (n seconds): 60

**Wi-Fi Network**

- Network name (SSID)\*: DIR-1210-1122
- Hide SSID
- Max associated clients\*: 0
- Enable shapping
- Broadcast wireless network
- Clients isolation

**Security Settings**

- Network authentication: WPA2-PSK
- Password1 PSK\*: ••••••••
- Encryption type\*: AES
- Group key update interval (n seconds)\*: 3600

APPLY ADD WI-FI NETWORK

# Network

This section will allow you to change the local network settings of the router and to configure the DHCP settings. In the Settings menu on the bar on the top of the page, click **Network**. Click **IPv4** and **IPv6** to configure their respective settings.

## IPv4

### Local IP Address

**IP Address:** Specify the IP address of the router. The default IP address is **192.168.0.1**.

If you change the IP address, once you click **Apply** you will need to enter the new IP address in your browser to access the configuration utility.

**Subnet Mask:** Specify the subnet mask of the router. The default subnet mask is **255.255.255.0**.

**Gateway IP Address:** *For Access Point, Repeater, and Client modes only.* Specify the gateway IP address which is used by the router to connect to the internet. (Optional)

**Device domain name:** Specify the device domain name and URL to access the management utility. The default URL is **http://dlinkrouter.local/**

### Dynamic IP Addresses

**Mode of Dynamic IP address assignment:** Select **Disable**, **DHCP server**, or **DHCP relay**. The default setting is **DHCP server**.

The screenshot displays the D-Link web management interface for the DIR-1210 router. The 'Network' section is active, and the 'IPv4' tab is selected. The 'Local IP Address' section contains the following fields: IP address\* (192.168.0.1), Subnet mask\* (255.255.255.0), and Device domain name (dlinkrouter.local). The 'Dynamic IP Addresses' section shows the mode set to 'DHCP server', with a Start IP of 192.168.0.2 and an End IP of 192.168.0.100. The lease time is set to 1440 minutes, and the 'DNS relay' checkbox is checked. A 'Static IP Addresses' section is located at the bottom, with a note about assigning IP addresses to MAC addresses and a 'CLIENTS LIST' link. An 'APPLY' button is visible at the bottom of the configuration area.

## IPv4 (cont)

**Start IP:** If **DHCP server** has been selected, specify the starting IP address in the DHCP server pool.

**End IP:** If **DHCP server** has been selected, specify the end IP address in the DHCP server pool.

**Lease Time:** If **DHCP server** has been selected, specify the lease time in minutes for DHCP-issued IP addresses.

**Enable DNS Relay:** Disable to transfer the DNS server information from your ISP to your computers. If enabled, your computers will use the router for a DNS server.

**External DHCP server IP:** If **DHCP relay** has been selected, specify the external DHCP server from which IP addresses should be assigned. Click on the **Add** button to add more server IPs.

### Static IP Addresses

**Clients list:** Click this button to select a current host to add to the table of reserved static IP address. See **Clients List** below.

**Add:** Click this button to manually reserve a local IP address.

**Delete:** Click this button to delete a selected reserved IP address.

**IP address:** Indicates the reserved static IP.

**MAC address:** Indicates the MAC address for which the IP is reserved.

**Hostname:** Indicates the hostname of the client for which the IP is reserved.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW:AI FW:3.0.9

Home Settings Functions Management

### Network

Use this section to configure the network settings for your device. You can enter a name for your device in the management link field, and use the link to access web UI in a web browser. We recommend you change the management link if there are more than one D-Link devices within the network.

Settings >> Network

**IPv4** IPv6

**Local IP Address**

IP address\*  
192.168.0.1

Subnet mask\*  
255.255.255.0

Device domain name  
dlinkrouter.local

Specify a domain name ending with .local. In order to access the web-based interface using the domain name, enter the name with a dot and slash at the end in the address bar of the web browser (for example, dlinkrouter.local/)

**Dynamic IP Addresses**

Mode of dynamic IP address assignment  
DHCP server

Start IP\*  
192.168.0.2

End IP\*  
192.168.0.100

Lease time (in minutes)\*  
1440

DNS relay

**Static IP Addresses** [CLIENTS LIST](#) [ADD](#)

In order to assign an IP address to a MAC address, select a device from the list of connected clients or add a new device

[APPLY](#)

## IPv4 (cont)

### Clients List

**Clients list:** Click the corresponding client(s) on this list to automatically add their information to the Static IP Addresses list.

**Refresh:** Click here to refresh the connected clients list.

Click **OK** to save changes or click the X in the upper right hand corner to cancel changes.

### Add/Static IP Addresses

**IP address:** Specify the IP address you wish to reserve for the given client.

**MAC address:** Specify the MAC address of the client for which the IP address is reserved.

**Hostname:** Specify the Hostname of the client for which the IP address is reserved.

Click **Apply** to save changes or click the X in the upper right hand corner to cancel changes.

### Clients List

Select clients for which you want to specify MAC-IP pairs (set a fixed IP address in the local area network for a device with a certain MAC address)

<input type="checkbox"/>	192.168.0.5 (Galaxy-Tab-S2) fc:42:03:95:55:87
<input type="checkbox"/>	192.168.0.7 (08514PCWIN10) f8:bc:12:99:3f:35

REFRESH OK

### Static IP

IP address\*

MAC address\*

Hostname

APPLY

# IPv6

## Local IPv6 Address

**Mode of local IPv6 address assignment:** Select **Static** or **Prefix delegation** as the means of acquiring a local IPv6 address.

**IP Address:** If **Static** has been selected, specify the static IPv6 address of the router. The default IPv6 address is **fd01::1**.  
If you change the IP address, once you click **Apply**, you may need to enter the new IP address in your browser to access the configuration utility.

**Prefix:** Specify the IPv6 prefix of the router. The default prefix is **64**.

**Gateway IP Address:** For Access Point, Repeater, and Client modes only. Specify the gateway IP address which is used by the router to connect to the internet. (Optional)

## Dynamic IPv6 Addresses

**Mode of Dynamic IPv6 address assignment:** Select **Disable**, **Stateful**, or **Stateless**.

**Start IPv6:** If **Stateful** has been selected, specify the starting IP address in the DHCP server pool.

**End IPv6:** If **Stateful** has been selected, specify the end IP address in the DHCP server pool.

**Lease Time:** If **Stateful** or **Stateless** has been selected, specify the lease time in minutes for dynamic IPv6 addresses.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW-A1 FW:3.0.9

Home Settings Functions Management

### Network

Use this section to configure the network settings for your device. You can enter a name for your device in the management link field, and use the link to access web UI in a web browser. We recommend you change the management link if there are more than one D-Link devices within the network.

Settings >> Network

IPv4 **IPv6**

**Local IPv6 Address**

Mode of local IPv6 address assignment  
Prefix delegation

IPv6 address  
fd01::1

Prefix  
64

APPLY

**Dynamic IPv6 Addresses**

Mode of dynamic IPv6 address assignment  
Stateless

Lease time (in minutes)  
5

**D-Link**  
DIR-1210 HW-A1 FW:3.0.9

Home Settings Functions Management

### Network

Use this section to configure the network settings for your device. You can enter a name for your device in the management link field, and use the link to access web UI in a web browser. We recommend you change the management link if there are more than one D-Link devices within the network.

Settings >> Network

IPv4 **IPv6**

**Local IPv6 Address**

Mode of local IPv6 address assignment  
Prefix delegation

IPv6 address  
fd01::1

Prefix  
64

**Dynamic IPv6 Addresses**

Mode of dynamic IPv6 address assignment  
Stateful

Start IPv6\*  
fd01::2

End IPv6\*  
fd01::ffff:ffff:ffff

Lease time (in minutes)  
5

**Static IP Addresses** [CLIENTS LIST](#) [ADD](#)

In order to assign an IP address to a MAC address, select a device from the list of connected clients or add a new device

APPLY

## Clients List

**Clients list:** Click the corresponding client(s) on this list to automatically add their information to the Static IP Addresses list.

**Refresh:** Click here to refresh the connected clients list.

Click **OK** to save changes or click the X in the upper right hand corner to cancel changes.

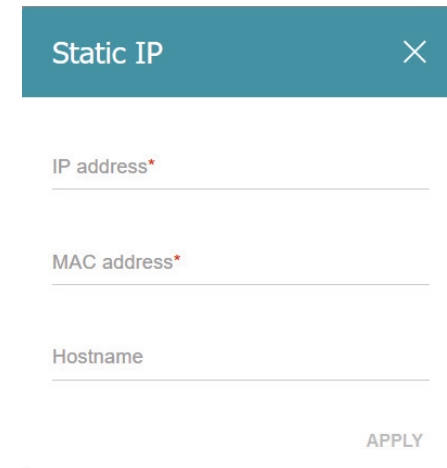
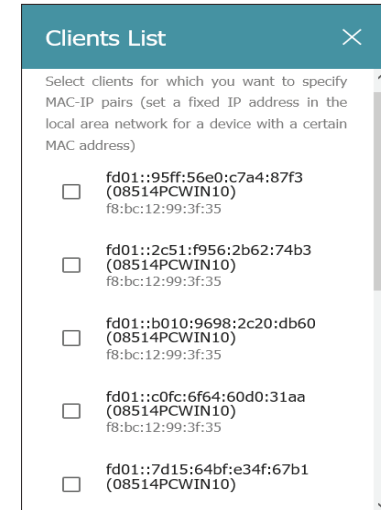
## Add/Static IP Addresses

**IP address:** Specify the IP address you wish to reserve for the given client.

**MAC address:** Specify the MAC address of the client for which the IP address is reserved.

**Hostname:** Specify the Hostname of the client for which the IP address is reserved.

Click **OK** to save changes or click the X in the upper right hand corner to cancel changes.





# Functions

## Firewall

### IP Filter

The IP Filters page manages LAN users' access to the Internet. It is possible to permit access to the Internet for specified IP addresses within your LAN or to restrict access for specified IP addresses. You can also define filters for port access.

The currently defined IP filters are displayed in the table. You may define up to 16 IP filtering rules. If you wish to remove a rule, click the corresponding check box to select it and then click **Delete**. If you wish to create a new rule, click the **Add** button.

#### Filters

**Add:** Click here to add a new filter to the firewall. For details, see **IP Filter Create/Edit** on **page 74**.

**Delete:** If you have a selected one or more filters, click this button to delete the selected filter(s).

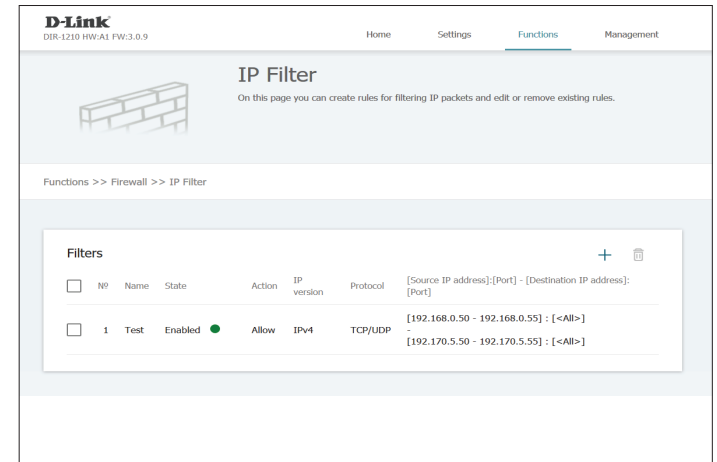
**No:** Indicates the number of the filter.

**Name:** Indicates the name of the filter.

**State:** Indicates whether the is enabled or disabled.

**Action:** Indicates the action taken when the filter is triggered.

**IP version:** Indicate to which IP version the filter applies.



## IP Filter Create/Edit

**Protocol:** Indicates to which protocol(s) the filter applies.

**[Source IP address]** Indicates the IP address range and port(s) to which the filter applies.

### General Settings

**Enable rule:** Toggle this switch to enable the rule.

**Name:** Specify a name for the rule. This name is for reference only and does not affect functionality.

**Action:** Choose the action to be taken when the rule is triggered. Choose **Allow** or **Deny**.

**Protocol:** Choose which protocol to which the rule will apply. Choose from **TCP/UDP, TCP, UDP, ICMP**, or **<All>**

**IP version:** Choose if the rule should apply to **IPv4** or **IPv6**.

### Destination IP Address

**Set as:** Choose **Range or single IP address** to enter a specific IP address or ranges for the destination filter. Choose **Subnet** to specify a subnet only.

**Start/End IPv4/IPv6 address:** If you have selected **Range or single IP address**, specify an IP address range for the destination filter. To enter a single address, use only the **Start IPv4/IPv6 address** field and leave the **End IPv4/IPv6 address** field blank.

**Subnet IPv4/IPv6 address:** If you have selected **Subnet**, specify the destination subnet to filter.

**D-Link**  
DIR-1210 HWvA1 FW:3.0.9

Home Settings **Functions** Management

### IP Filter

On this page you can create rules for filtering IP packets and edit or remove existing rules.

Functions >> Firewall >> IP Filter/Creating

#### General Settings

Enable rule

Name\*

The number of characters should not exceed 32

Action: **Allow**

Protocol: **TCP/UDP**

IP version: **IPv4**

#### Source IP Address

You can specify a range of IP addresses, a single IP address, or a subnet IP address (for example, 10.10.10.10/24 for IPv4 or 2001:0db8:85a3:08d3:1319:8c2e:0370:7532/64 for IPv6)

Set as: **Range or single IP address**

Start IPv4 address:

End IPv4 address:

#### Destination IP Address

You can specify a range of IP addresses, a single IP address, or a subnet IP address (for example, 10.10.10.10/24 for IPv4 or 2001:0db8:85a3:08d3:1319:8c2e:0370:7532/64 for IPv6)

Set as: **Range or single IP address**

Start IPv4 address:

End IPv4 address:

#### Ports

You can specify one port, several ports separated by a comma (for example, 80,90), or a range of ports separated by a colon (for example, 80-90)

Destination port:

Set source port manually

**APPLY**

## IP Filter Create/Edit (cont)

### Source IP Address

**Set as:** Choose **Range or single IP address** to enter a specific IP address or ranges for the source filter. Choose **Subnet** to specify a subnet only.

**Start/End IPv4/IPv6 address:** If you have selected **Range or single IP address**, specify an IP address range for the source filter. To specify a single address, use only the **Start IPv4/IPv6 address** field and leave the **End IPv4/IPv6 address** field blank.

**Subnet IPv4/IPv6 address:** If you have selected **Subnet**, enter the source subnet to filter.

### Ports

**Destination port:** Specify the destination port or ports to which the filter will apply. Specify multiple ports by separating them with commas. Specify port ranges by separating the beginning and end of the range with a colon.

**Set source port manually:** Toggle this switch to specify source ports to which the filter will apply.

**Source port:** If **Set source port manually** has been enabled, specify the source port to which the filter will apply. Specify multiple ports by separating them with commas. Specify port ranges by separating the beginning and end of the range with a colon.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW v1 FW 3.0.9

Home Settings **Functions** Management

### IP Filter

On this page you can create rules for filtering IP packets and edit or remove existing rules.

Functions >> Firewall >> IP Filter/Creating

**General Settings**

Enable rule

Name\*

The number of characters should not exceed 32

Action **Allow**

Protocol **TCP/UDP**

IP version **IPv4**

**Destination IP Address**

You can specify a range of IP addresses, a single IP address, or a subnet IP address (for example, 10.10.10.10/24 for IPv4 or 2001:10db8:85a3:08d3:1319:8c2e:0370:7532/64 for IPv6)

Set as **Range or single IP address**

Start IPv4 address

End IPv4 address

**Destination IP Address**

You can specify a range of IP addresses, a single IP address, or a subnet IP address (for example, 10.10.10.10/24 for IPv4 or 2001:10db8:85a3:08d3:1319:8c2e:0370:7532/64 for IPv6)

Set as **Range or single IP address**

Start IPv4 address

End IPv4 address

**Source IP Address**

You can specify a range of IP addresses, a single IP address, or a subnet IP address (for example, 10.10.10.10/24 for IPv4 or 2001:10db8:85a3:08d3:1319:8c2e:0370:7532/64 for IPv6)

Set as **Range or single IP address**

Start IPv4 address

End IPv4 address

**Ports**

You can specify one port, several ports separated by a comma (for example, 80,90), or a range of ports separated by a colon (for example, 80-90)

Destination port

Set source port manually

**APPLY**

## DMZ

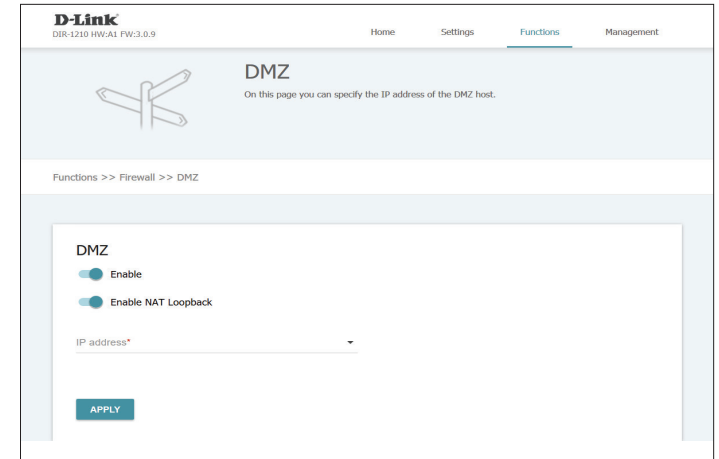
This Demilitarized Zone (DMZ) feature directly exposes the client to the Internet, and is not recommended in ordinary situations.

**Enable:** Toggle this switch to enable the DMZ feature.

**Enable NAT Loopback:** Toggle this switch to enable NAT Loopback. NAT Loopback allows LAN devices to connect directly to the DMZ host by using the WAN IP address

**IP Address:** If DMZ is enabled, specify the IP address of the DMZ host.

Click **Apply** when you are done.



## MAC Filter

The MAC filter is used to restrict or allow certain types of Ethernet Frames through the gateway based on their source or destination MAC address. These filters are helpful in securing or restricting traffic on your local network.

The currently defined MAC filters are displayed in the table. You may define up to 32 MAC filtering rules. If you wish to remove a rule, click the corresponding check box to select it and then click **Delete**. If you wish to create a new rule, click the **Add** button.

**Default Mode:** Select **Allow** to allow all traffic except from MAC addresses in the **List of exceptions** with the **Deny** action. Select **Deny** to allow all traffic except from MAC addresses in the **List of exceptions** with the **Allow** action.

### List of exceptions

**Add:** Click here to add a new filter to the firewall. For details, see **Add Rule** on page **78**.

**Delete:** If you have a selected one or more filters, click this button to delete the selected filter(s).

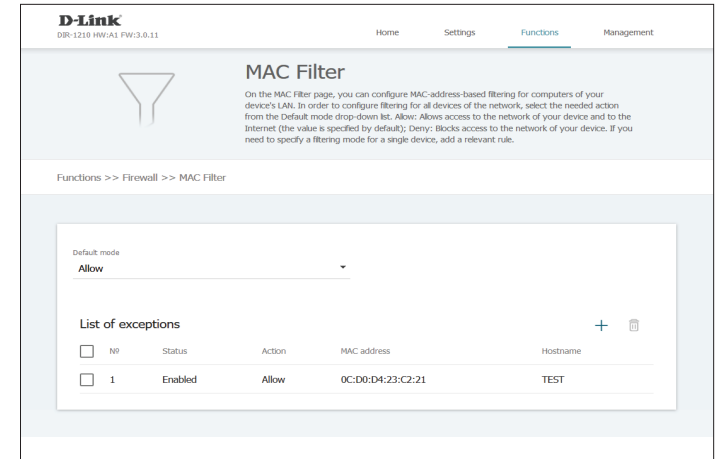
**No:** If DMZ is enabled, specify the IP address of the DMZ host.

**Status:** Indicates the number of the filter.

**Action:** Indicates the action taken when the filter is triggered.

**MAC address:** Indicates the MAC address to which the filter applies.

**Hostname:** Indicates the hostname of the device to which the filter applies.



## MAC Filter (cont)

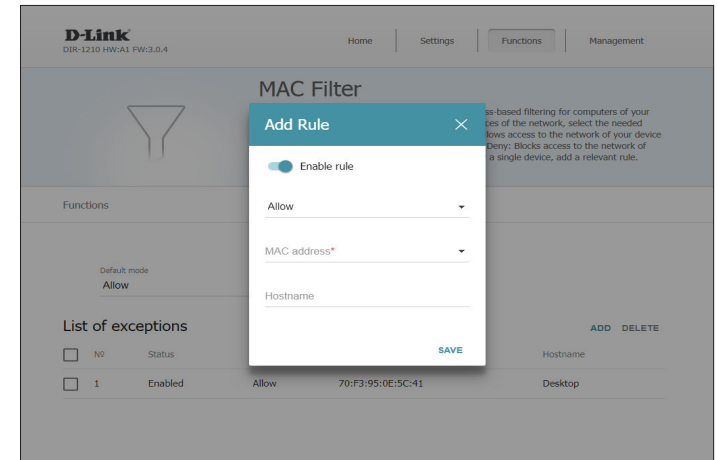
### Add Rule

**Allow/Deny:** Choose the action to be taken when the rule is triggered. Choose **Allow** or **Deny**.

**MAC address:** Specify the MAC address of the host to which the filter will apply. This field is mandatory.

**Hostname:** Specify the hostname of the host to which the filter will apply. This field is optional.

Click **Save** when you are done, or click the **X** to cancel.



## Web Site Filter

The website filter settings allow you to block access to certain web sites. You can either create a list of sites to block, or create a list of sites to allow (with all other sites being blocked).

### URL Filter

**Enable:** Toggle this switch to enable or disable web filtering.

### Addresses

**Address Filtering:** Choose from the drop down list whether you want to **Block Listed URLs** or **Block all URLs except listed**.

**Add:** Click on the Add button to add a new URL to the URL list. In the pop up window, specify a URL or keyword you want to filter. Choose from drop down list matching template options.

**Delete:** To delete an existing entry, click the checkbox corresponding to the entry you want to delete, then click on the **Delete** button.

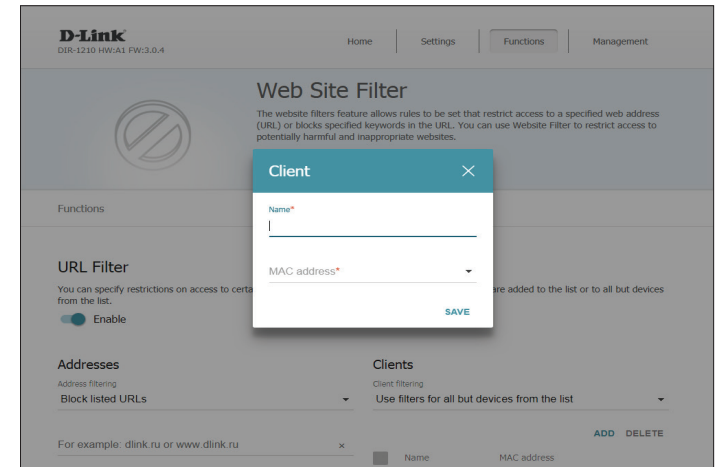
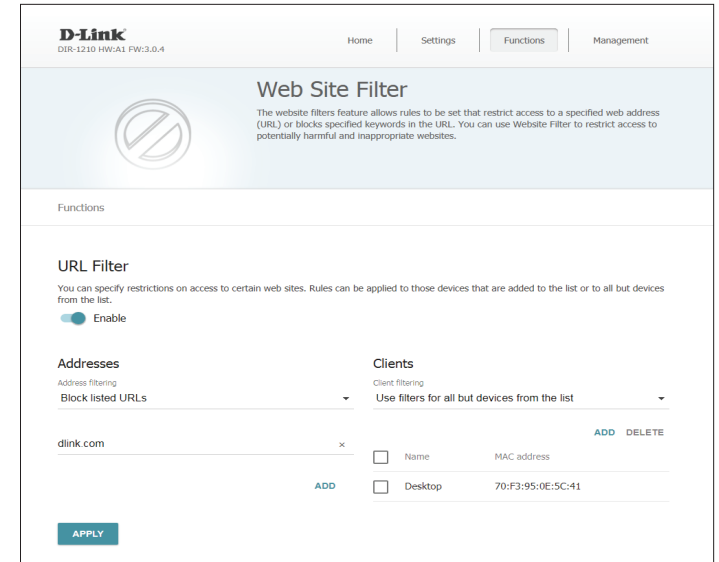
### Clients

**Client filtering:** Choose from the drop down list whether you want to filter **Devices from list** or **All but devices from list**.

**Add:** Click on the Add button to add a new client to the list of clients. In the pop up window, specify a hostname for the client and its MAC address.

**Delete:** To delete an existing entry, click the checkbox corresponding to the entry you want to delete, then click on the **Delete** button.

Click **Apply** when you are done.



## DoS Protection

DoS (Denial of Service) protection can help protect the router against certain kinds of DoS attacks. Note that this filter is not complete protection, and should be used in tandem with other tools for maximum protection.

### URL Filter

**Enable:** Toggle this switch to enable or disable the DoS Protection feature.

### Per Source IP Flood

Toggle specific IP flood sources to filter. Some of these settings have subtypes.

### Other Settings

Toggle specific attack types to filter.

Click **Apply** when you are done.

The screenshot shows the D-Link DIR-1210 web interface for DoS Protection configuration. The page title is "D-Link DIR-1210 HW:AI FW:3.0.4". The navigation menu includes "Home", "Settings", "Functions", and "Management". The "Functions" section is active, showing a toggle for "Enable" which is currently turned on. A warning icon and text state: "Enabling DoS filter may lead to a slight decrease in the overall performance of the device".

Under "Per-source IP Flood", there are three sections:

- TCP/SYN:** A toggle is turned on. Below it is a slider for "TCP/SYN threshold (pps)\*" set to 0.
- TCP/FIN:** A toggle is turned on. Below it is a slider for "TCP/FIN threshold (pps)\*" set to 0.
- UDP:** A toggle is turned on. Below it is a slider for "UDP threshold (pps)\*" set to 0.
- ICMP:** A toggle is turned on. Below it is a slider for "ICMP threshold (pps)\*" set to 0.

Under "Other Settings", there are several toggles:

- TCP/UDP port scan (turned on)
- High sensitivity (turned on)
- IP Land (turned on)
- IP Spoof (turned on)
- IP TearDrop (turned on)
- TCP scan (turned on)
- TCP/SYN with data (turned on)
- UDP Bomb (turned on)
- Block source IP (turned on)

At the bottom right, there is a "Block time (in seconds)" slider set to 0 and an "APPLY" button.



# Wi-Fi Client management

The Client Management page displays a list of currently connected Wi-Fi devices. You can view detailed information about these devices or force them to disconnect from your network.

## List of Wi-Fi Clients

**Refresh:** Click here to refresh the connected clients list.

**Disconnect:** Click here to disconnect the selected client(s) from your network. Note that this only disconnects the client, it does not prevent the client from reconnecting.

**Hostname:** Indicates the hostname of the connected client.

**MAC address:** Indicates the MAC address of the connected client.

**Band:** Indicates the band over which the client is connected.

**Network name (SSID):** Indicates the SSID to which the client is connected.

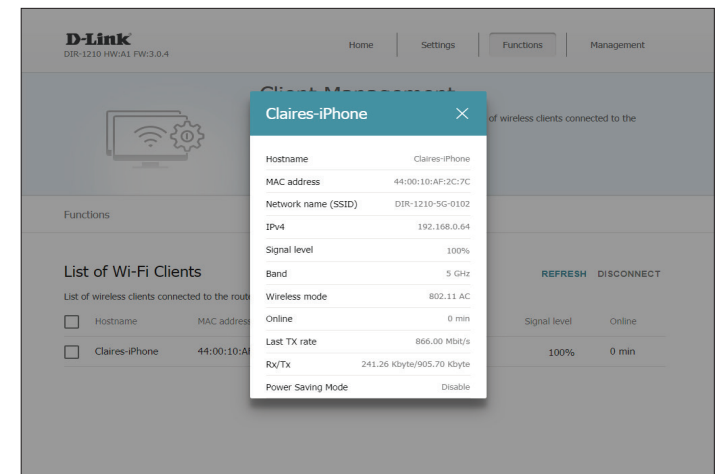
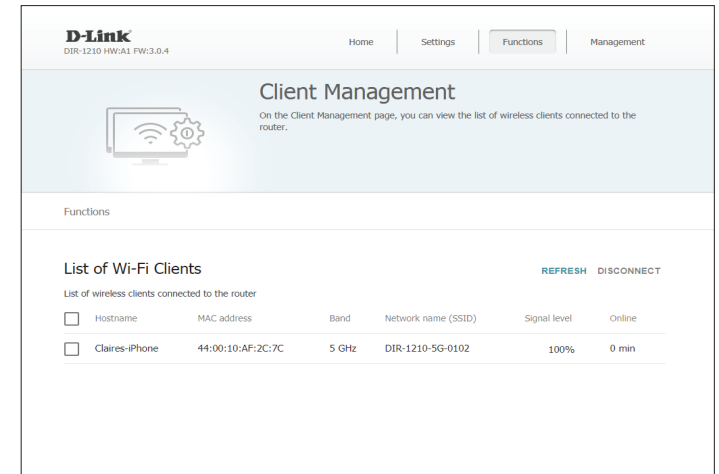
**Signal Level:** Indicates signal strength as a percentage.

**Online:** Indicates the time online in minutes.

**Last RX rate:** Indicates the last recorded transmission rate in Mbps.

**Rx/Tx:** Indicates total bytes received or transmitted this session.

**Power Saving Mode:** Indicates the power saving status of the client.



## WPS

The Wi-Fi Protected Setup page allows you to create a wireless connection between your router and a device automatically by simply pushing a button. WPS for 2.5 Ghz and 5 Ghz are configured separately by clicking the corresponding buttons for 2.5 Ghz and 5 Ghz.

### WPS Control

**Enable/Disable:** Click this button to toggle WPS. For security reasons, WPS is disabled by default.

**Establish connection:** Click this button to launch the **Establish Connection** menu, described below.

### Establish Connection

**WPS Method** Choose **PBC** (Push Button Connection).

**Connect:** Click here to initiate the pairing process.

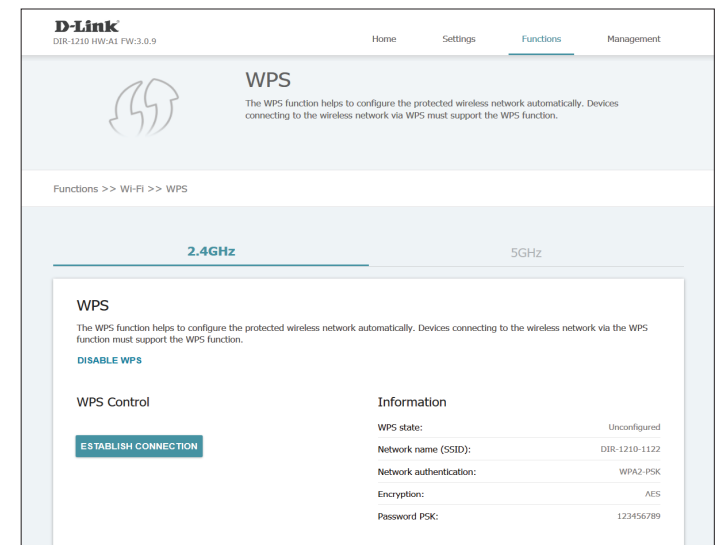
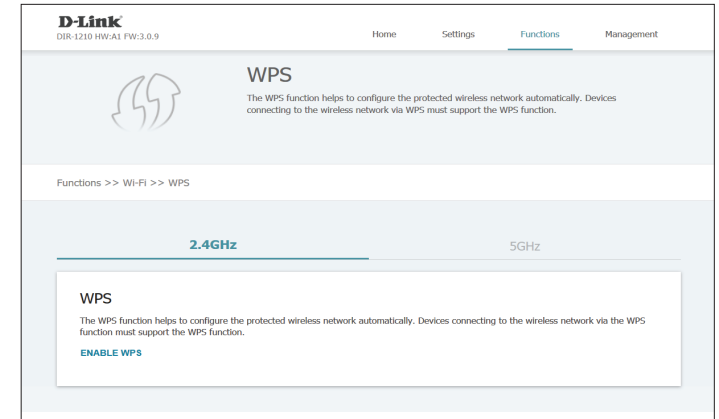
### Information

**WPS state:** Shows whether it is configured or not.

**Network name (SSID):** Indicates the SSID to which the client is connected.

**Network authentication:** Indicates the type of authentication used on the network.

**Encryption:** Indicates the encryption used by the authentication method.



## WPS (cont)

**Password PSK:** Indicates the password of the network.

**Update:** Click this button to refresh the page.

**Reset to Unconfigured:** Click here to clear WPS configuration data.

The screenshot shows the WPS configuration page for a D-Link DIR-1210. The page is titled "WPS" and includes a description: "The WPS function helps to configure the protected wireless network automatically. Devices connecting to the wireless network via WPS must support the WPS function." Below the description, there are two tabs: "2.4GHz" and "5GHz", with "5GHz" selected. The main content area is titled "WPS" and contains a "DISABLE WPS" link. Below this is a "WPS Control" section with an "ESTABLISH CONNECTION" button. To the right is an "Information" section with the following details:

WPS state:	Unconfigured
Network name (SSID):	DIR-1210-5G-1122
Network authentication:	WPA2-PSK
Encryption:	AES
Password PSK:	123456789

# WMM

WMM (Wi-Fi Multimedia) is a QoS (Quality of Service) system for improving the quality of video and voice applications on your wireless network.

## Wi-Fi Multimedia

**Work mode:** Select **Auto**, **Manual**, or **Disabled**. The default and recommended setting is **Auto**. If you select **Manual**, you will be prompted for detailed configuration. This setting is intended for advanced users only and is not recommended for most users.

## Access Point/Station

If **Work mode** has been set to **Manual**, you can click on each row to configure advanced QoS settings for that connection type.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.9

Home Settings **Functions** Management

### WMM

On the WMM page, you can enable the Wi-Fi Multimedia function. The WMM function implements the QoS features for Wi-Fi networks. It helps to improve the quality of data transfer over Wi-Fi networks by prioritizing different types of traffic.

Functions >> Wi-Fi >> WMM

**Wi-Fi Multimedia**

The mechanism for improving Wi-Fi network performance. It is recommended for users not to change the specified values

Work mode  
**Manual**

Access Point							Station						
AC	AIFSN	CWMin	CWMax	TXOP	ACM	ACK	AC	AIFSN	CWMin	CWMax	TXOP	ACM	ACK
BK	7	31	1023	0	off	off	BK	7	15	1023	0	off	off
BE	3	15	63	0	off	off	BE	3	15	1023	0	off	off
VI	1	7	15	94	off	off	VI	2	7	15	94	off	off
VO	1	3	7	47	off	off	VO	2	3	7	47	off	off

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home Settings **Functions** Management

### WMM

On the WMM page, you can enable the Wi-Fi Multimedia function. The WMM function implements the QoS features for Wi-Fi networks. It helps to improve the quality of data transfer over Wi-Fi networks by prioritizing different types of traffic.

Functions >> Wi-Fi >> WMM

**Wi-Fi Multimedia**

The mechanism for improving Wi-Fi network performance. It is recommended for users not to change the specified values

Work mode  
**Manual**

**Access Point**

AC	AIFSN	CWMin	CWMax	TXOP	ACM	ACK	AC	AIFSN	CWMin	CWMax	TXOP	ACM	ACK
BK	7	31	1023	0	off	off	BK	7	15	1023	0	off	off
BE	3	15	63	0	off	off	BE	3	15	1023	0	off	off
VI	1	7	15	94	off	off	VI	2	7	15	94	off	off
VO	1	3	7	47	off	off	VO	2	3	7	47	off	off

**Edit Access Point: Bac...** [X]

AIFSN\*  
7

CWMin  
31

CWMax  
1023

TXOP\*  
0

ACM

ACK

SAVE CLOSE

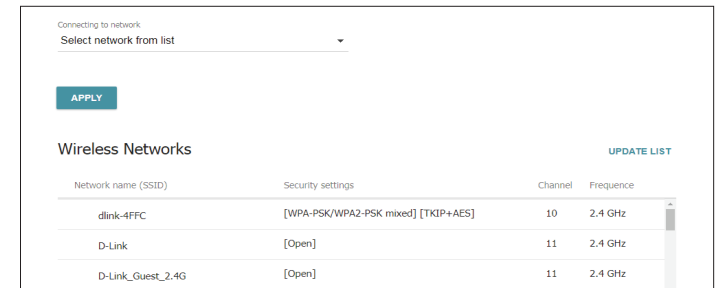
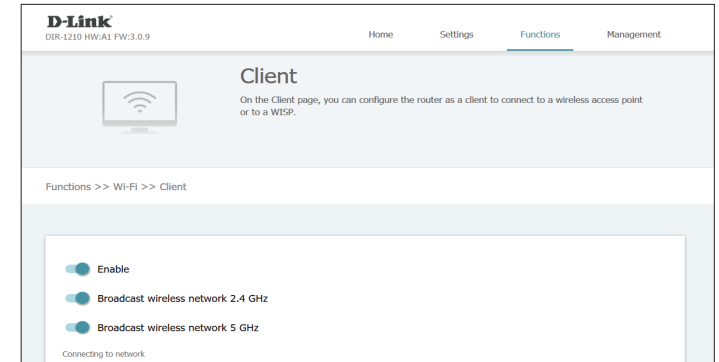
# Client

Client mode allows you to configure your router as a client on another wireless network. This would be useful to setup the router as a wireless repeater or connect to a WISP.

**Enable:** Toggle this switch to enable your router to act as a Wi-Fi client.

**Broadcast wireless network 2.4/5 GHz:** Toggle these switches to enable or disable your router's wireless APs.

**Connecting to network:** Choose **Select network from list** or **Connect to hidden network**. If you choose **Select network from list**, select the network you wish to connect to and enter any necessary security information as prompted. If you choose **Connect to hidden network**, enter the Wi-Fi information below.



## Client (cont)

### If you selected **Connect to hidden network**:

**Frequency band:** Select the frequency band used by the hidden network. This must be specified correctly to connect.

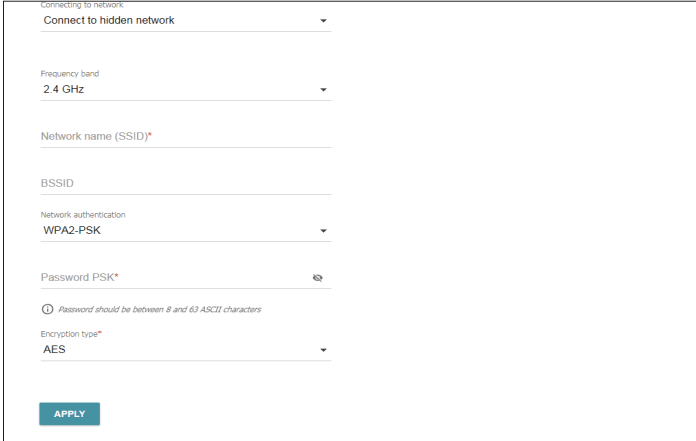
**Network name (SSID):** Specify the network name used by the hidden network. This must be specified correctly to connect.

**BSSID:** Specify the BSSID

**Network authentication:** Select the network authentication used by the hidden network. This must be specified correctly to connect.

**Password PSK:** Specify the password or PSK used by the hidden network. This must be specified correctly to connect.

Click **Apply** when you are done.



The screenshot shows a configuration form titled "connecting to network" with a dropdown menu set to "Connect to hidden network". Below this are several fields: "Frequency band" set to "2.4 GHz", "Network name (SSID)\*" (empty), "BSSID" (empty), "Network authentication" set to "WPA2-PSK", and "Password PSK\*" (empty). A note below the password field states "Password should be between 8 and 63 ASCII characters". Below the note is "Encryption type\*" set to "AES". At the bottom of the form is a blue "APPLY" button.

# Client Shaping

Client shaping allows you to impose speed limits on clients to ensure that bandwidth is not being monopolized by a single Wi-Fi client.

## Client Shaping

**Add:** Click this button to add a new client shaping rule. You will be taken to the **Add Rule** dialogue, described below.

**Delete:** Click this button to delete the selected rule(s).

**MAC address:** Indicates the MAC address of the Wi-Fi client to which the rule applies.

**Maximum upload rate:** Indicates the maximum upload rate for the given client in megabits per second.

**Maximum download rate:** Indicates the maximum download rate for the given client in megabits per second.

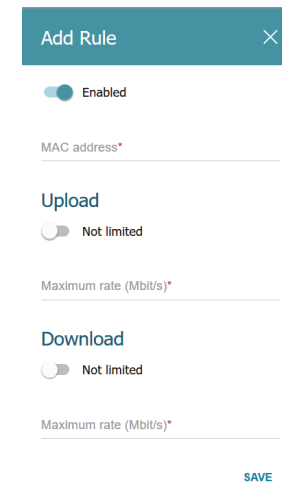
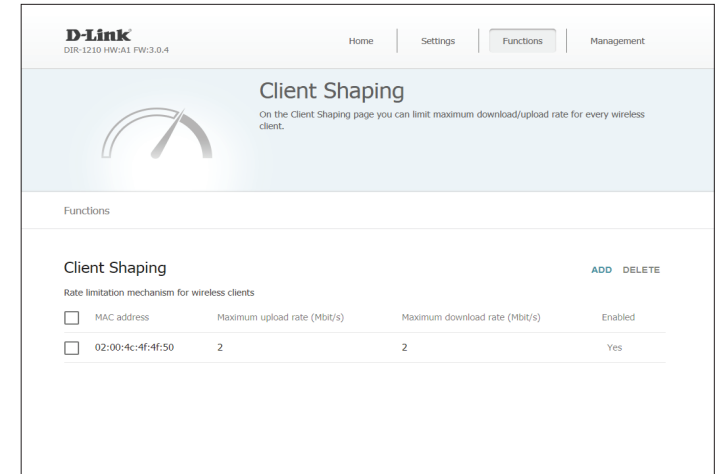
**Enabled:** Indicates if the rule is enabled.

## Add/Edit Rule

**Enabled:** Toggle this switch to enable the rule

**MAC address:** Specify the MAC address of the Wi-Fi client to which the rule will apply.

## Upload/Download



## Client Shaping (cont)

**Not limited:** Toggle this switch to disable the limit for the corresponding transfer type.

**Maximum rate:** If **Not limited** is disabled, specify a maximum transfer rate in megabits per second.

Click **Save** when you are done.

The screenshot shows the D-Link DIR-1210 Client Shaping configuration page. The page title is "Client Shaping" and it includes a sub-header: "On the Client Shaping page you can limit maximum download/upload rate for every wireless client." The breadcrumb trail is "Functions >> Wi-Fi >> Client Shaping". Below the breadcrumb, there is a table for Client Shaping rules. The table has columns for "Rate limitation mechanism for wireless clients", "Maximum upload rate (Mbit/s)", "Maximum download rate (Mbit/s)", and "Enabled".

Rate limitation mechanism for wireless clients	Maximum upload rate (Mbit/s)	Maximum download rate (Mbit/s)	Enabled
<input type="checkbox"/> MAC address			Enabled
<input type="checkbox"/> 34:8d:5a:54:92:ab	35	46	Yes

The screenshot shows the "Edit Rule" dialog box. It has a title bar "Edit Rule" with a close button. The dialog contains the following settings:

- Enabled:** A toggle switch is turned on.
- MAC address:** The value is "34:8d:5a:54:92:ab" with a lock icon to its right.
- Upload:** A toggle switch is turned off, labeled "Not limited". Below it, the "Maximum rate (Mbit/s)\*" is set to "35".
- Download:** A toggle switch is turned off, labeled "Not limited". Below it, the "Maximum rate (Mbit/s)\*" is set to "46".

A "SAVE" button is located at the bottom right of the dialog.



## Additional

The additional screen allows you to configure details of your router's Wi-Fi settings. These are advanced settings and should not be needed for normal usage. 2.4 Ghz and 5 Ghz Wi-Fi are configured separately by clicking on the corresponding tab.

**Bandwidth:** Specify the channel bandwidth. Choose from 20 MHz, 20/40 MHz, 20/40/80 MHz

**Autonegotiation 20/40 (Coexistence)** Toggle to enable or disable. (For 2.4 Ghz configuration only)

**TX Power (in percent):** Specify the routers transmission power in percentage. Choose from 300, 100, 75, 50, 25, 10

**B/G Protection:** 802.11b and 802.11g protection function is used to minimize collisions between devices of your wireless network. Choose from Auto, Always On, Always Off

**Short GI:** Choose from Enable or Disable

**Drop multicast:** Toggle to enable or disable.

**Enable TX Beamforming:** Toggle to enable or disable.

**Adaptivity mode:** Toggle to enable or disable.

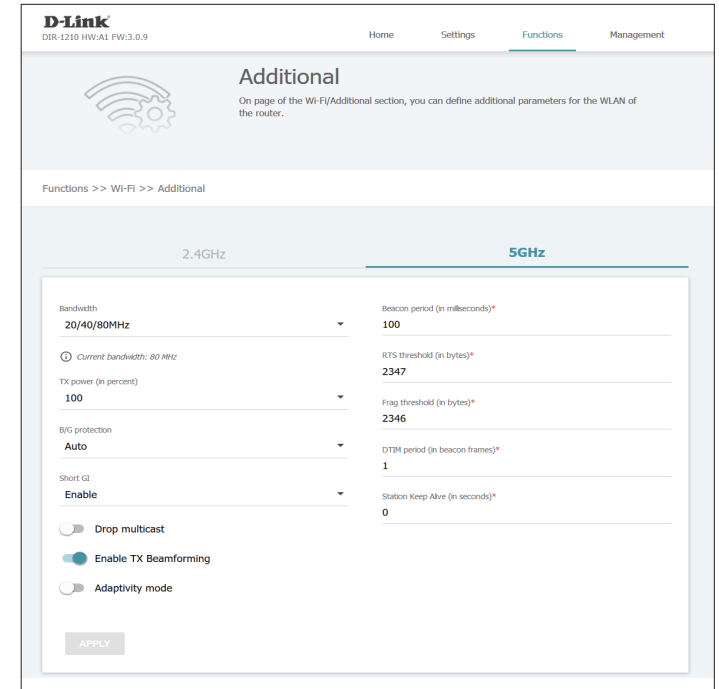
The screenshot shows the 'Additional' configuration page for the 2.4GHz Wi-Fi band. The page is titled 'Additional' and includes a sub-header 'Functions >> Wi-Fi >> Additional'. The main content area is divided into two tabs: '2.4GHz' (selected) and '5GHz'. The configuration options are as follows:

Setting	Value
Bandwidth	20/40MHz
Current bandwidth	40 MHz
Autonegotiation 20/40 (Coexistence)	Disabled
TX power (in percent)	100
B/G protection	Auto
Short GI	Enable
Drop multicast	Disabled
Enable TX Beamforming	Enabled
Adaptivity mode	Disabled
Beacon period (in milliseconds)*	100
RTS threshold (in bytes)*	2347
Frag threshold (in bytes)*	2346
DTIM period (in beacon frames)*	1
Station Keep Alive (in seconds)*	0

An 'APPLY' button is located at the bottom of the configuration area.

## Additional (cont)

- Beacon Period (in milliseconds):** Specify the time interval (in milliseconds) between packets sent to synchronize the wireless network. The default setting is 100ms.
- RTS threshold (in bytes):** Specify the minimum size (in bites) of a packet for which an RTS frame is transmitted. The default size is 2347 bytes and the standard range is 256-2346 bytes.
- Frag threshold (in bytes):** Specify in bytes the maximum frame size for a non-fragmented packet. The default size is 2346.
- DTIM period (in beacon frames):** Specify how often (by the number of beacon frames) that DTIM is transmitted. By default this is set to 1.
- Station Keep Alive (in seconds):** Specify the time interval (in seconds) between keep alive checks of wireless devices from your WLAN.

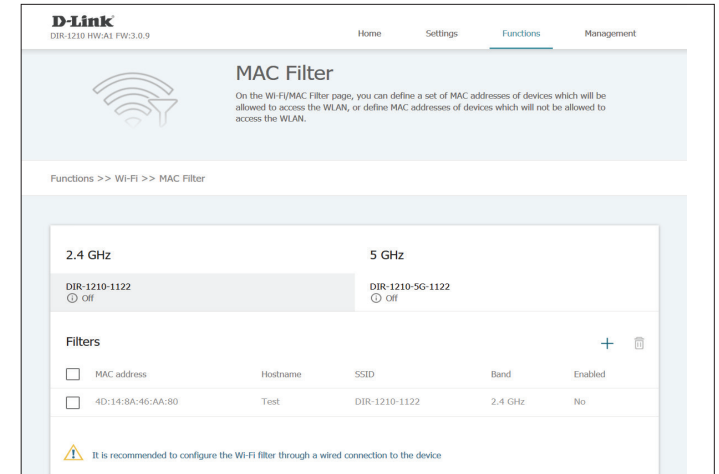


## MAC Filter

On the Wi-Fi/MAC Filter page, you can define a set of MAC addresses of devices which will be allowed to access the WLAN, or define a set of MAC addresses of devices which will not be allowed to access the WLAN.

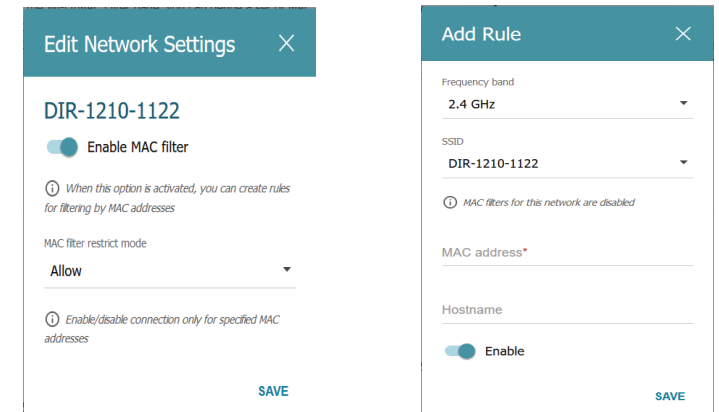
To Enable or Disable MAC Filter for a specific SSID, click on the SSID name listed below each Wi-Fi band.

- Enable MAC Filter:** Toggle this switch to enable MAC filter. When this option is activated, you can create rules for filtering by MAC addresses
- MAC filter restrict mode:** Choose either allow or deny to enable/disable connection only for specified MAC addresses.



To add a rule, click on the add button.

- Frequency Band:** Choose which frequency band you want the rule to apply to.
- SSID:** Choose which SSID you want the rule to apply to.
- MAC Address:** Specify the MAC address of the device.
- Hostname:** Specify hostname of the device (optional).
- Enable Rule** Toggle this switch to enable or disable the rule.



## MAC Filter (cont)

Once a filter has been defined, page will display the list of filters below. To edit a filter, click directly on the corresponding row.

**MAC Address:** MAC address of device

**Hostname:** Hostname of device

**SSID:** Name of wireless network

**Band:** Frequency band

**Enabled:** Current status of filter

To delete a filter, select the corresponding check box then click on the delete symbol.

**D-Link**  
DIR-1210 H/W v1 FW:3.0.9

Home Settings **Functions** Management

### MAC Filter

On the Wi-Fi/MAC Filter page, you can define a set of MAC addresses of devices which will be allowed to access the WLAN, or define MAC addresses of devices which will not be allowed to access the WLAN.

Functions >> Wi-Fi >> MAC Filter

**2.4 GHz**

DIR-1210-1122  
Off

**5 GHz**

DIR-1210-5G-1122  
Off

Filters					+
<input type="checkbox"/>	MAC address	Hostname	SSID	Band	Enabled
<input type="checkbox"/>	4D:14:8A:46:AA:80	Test	DIR-1210-1122	2.4 GHz	No

It is recommended to configure the Wi-Fi filter through a wired connection to the device

# Roaming

On the Roaming page you can enable the smart adjustment function of wi-fi clients.

To enable this function, click on **Enable**.

**Port:** Port number

**Use Multicast for Service Data Exchange:** Toggle this switch to enable. Once enabled, multicast TTL, multicast group address needs to be specified.

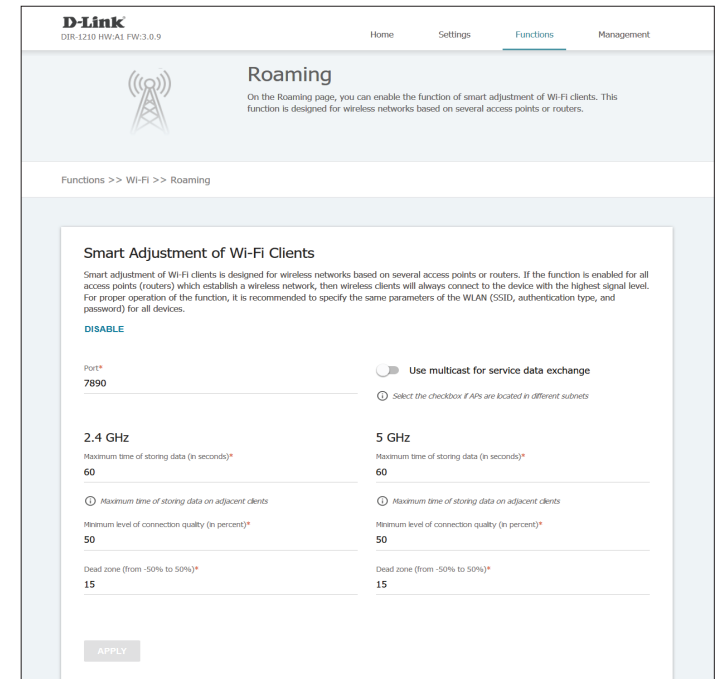
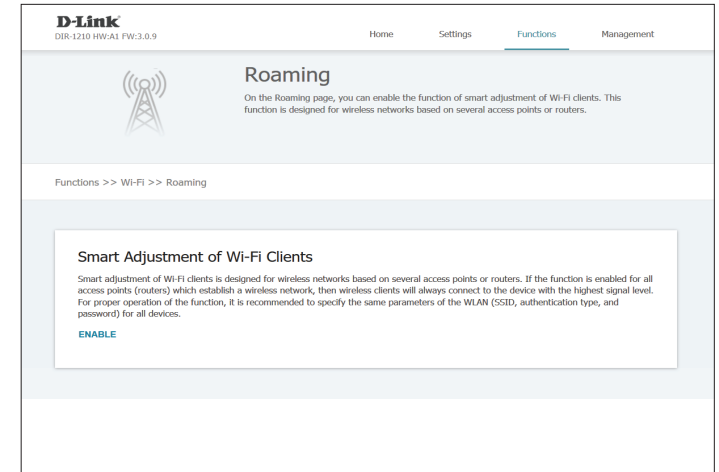
Under 2.5 GHz and 5 Ghz specify the following options:

**Maximum time of storing data (in seconds):** Specify in seconds the maximum time of storing data on adjacent clients.

**Minimum level of connection quality:** Specify in percentage the connection quality

**Dead zone:** Specify in percentage the dead zone (from -50% to 50%)

Click **Apply** when finished.



# Advanced UPnP IGD

UPnP IGD (Universal Plug and Play Internet Gateway Device) is a protocol that allows ports to automatically be mapped between your devices behind your NAT and the Internet.

**Enable:** Toggle this switch to enable or disable UPnP. If it is enabled, a table will appear indicating active UPnP connections.

## IPv4 IGD

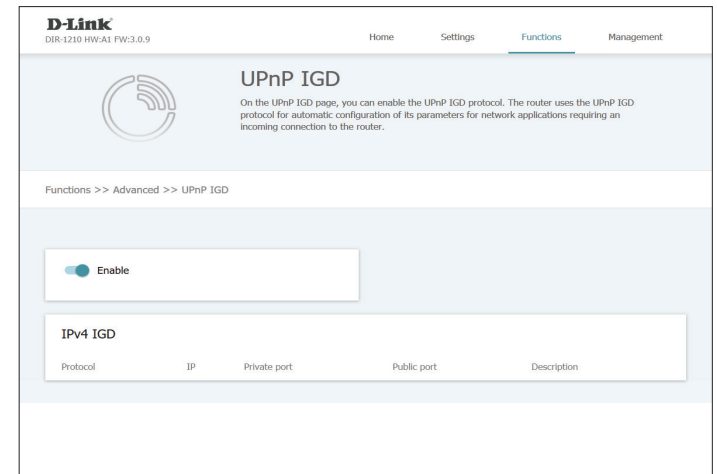
**Protocol:** Indicates the protocol used by the UPnP connection.

**IP:** Indicates the internal IP used by the UPnP connection.

**Private Port:** Indicates the internal port used by the used by the UPnP connection.

**Public port:** Indicates the port exposed to the internet used by the UPnP connection.

**Description:** Indicates the description of the protocol used by the UPnP connection.



## Remote Access

Remote access allows you to access the web GUI from WAN. By default, the access from external networks to the router is disabled for security reasons. If you need to allow access to the router from external networks, create relevant rules.

### Remote Access

**Add:** Click here to add a new rule, described below.

**Delete:** Click here to delete a selected rule.

**IP address:** Indicates the IP address permitted to access the GUI.

**Mask:** Indicates the subnet mask of the IP address permitted to access the GUI.

**Public Port:** Indicates the public port over which the IP address is permitted to access the GUI.

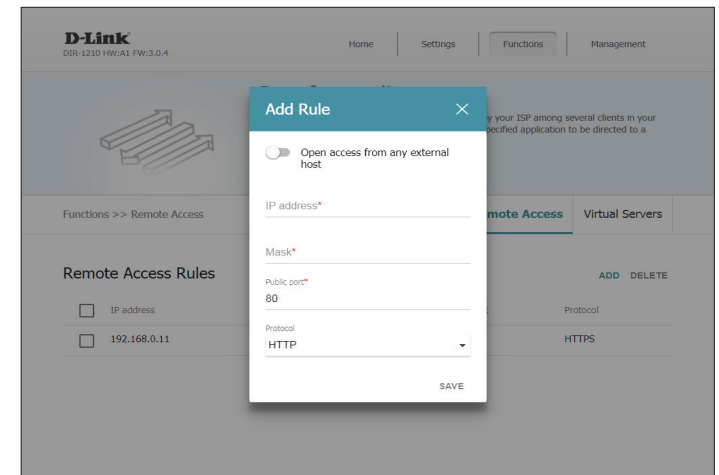
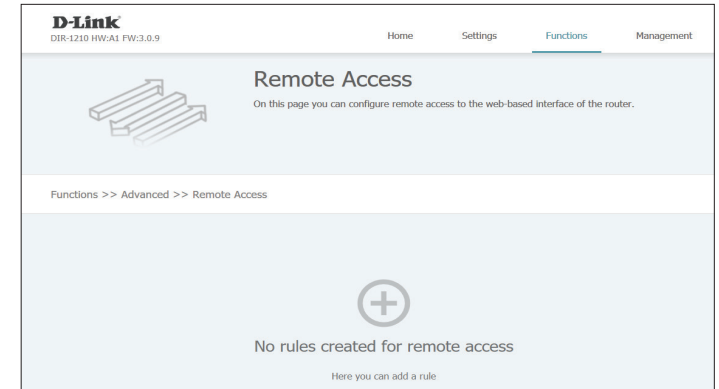
**Protocol:** Indicates the protocol used to access the GUI.

### Add Rule

**Open access:** Toggle this switch to enable any remote host to access the GUI. This is not recommended.

**IP address:** Specify the IP address of the remote host allowed to access the GUI.

**Mask:** Specify the subnet mask of the remote host allowed to access the GUI.



## Remote Access (cont)

**Public Port:** Specify the port over which the remote host will access the GUI.

**Protocol:** Choose **HTTP**, **HTTPS**, or **TELNET** as the protocol for remote access.

Click **Save** when you are done.



# Virtual Servers

Virtual Servers allows you to redirect incoming Internet traffic to a specified IP address in the local area network.

Click on **ADD** to create a new virtual server and specify the below parameters.

## General Settings

**Name:** Specify a name for the virtual server.

**Template:** Choose a template for the virtual server to pre-populate some fields, or choose **Custom** to configure all fields manually.

**Interface:** Select an interface from the drop-down menu, or select **<All>**

**Protocol:** Select a protocol from the drop-down menu to which the rule will apply.

**NAT Loopback:** Toggle this switch to enable NAT loopback.

## Public Network Settings Remote IP

**Remote IP:** Specify the remote IP to which the rule will apply.

**Add Remote IP:** Click this button to add additional remote IP fields.

**Public port (start/end):** Specify a start and an end port to which the rule will apply. If you wish to specify a single port, specify a start port only.

**D-Link**  
DIR-1210 HW:V1 FW:3.0.4

Home | Settings | **Functions** | Management

### Virtual Servers

Your router helps share a single IP address assigned by your Internet service provider among several clients in your home. Virtual servers are preset port mappings for popular services, like a web or e-mail server, that route traffic to a specified client inside.

Functions >> Port forwarding >> Virtual Servers >> Virtual Servers/Creating | Remote Access | Virtual Servers

#### General Settings

Name\*

Template  
Custom

Interface  
<All>

Protocol  
TCP

NAT Loopback

#### Private Network Settings

Private IP\*

Private port (start)\*

Private port (end)

#### Public Network Settings

Remote IP

ADD REMOTE IP

Public port (start)\*

Public port (end)

APPLY

The following ports are used in remote access settings and other rules for virtual servers: \*443, 8999\* You cannot use them for the current rule.

## Private Network Settings

**Private IP:** Specify the IP address on your local network to which the rule will forward.

**Private Port (start/end):** Specify a start and an end port to which the rule will apply. If you wish to specify a single port, specify a start port only.

Click **Apply** when you are done.

**D-Link**  
DIR-1210 HW: A1 FW: 3.0.4

Home | Settings | **Functions** | Management

### Virtual Servers

Your router helps share a single IP address assigned by your Internet service provider among several clients in your home. Virtual servers are preset port mappings for popular services, like a web or e-mail server, that route traffic to a specified client inside.

Functions >> Port forwarding >> Virtual Servers >> Virtual Servers/Creating | Remote Access | Virtual Servers

General Settings	Private Network Settings
Name*	Private IP*
Template Custom	Private port (start)*
Interface <All>	Private port (end)
Protocol TCP	
<input type="checkbox"/> NAT Loopback	
Public Network Settings	⚠ The following ports are used in remote access settings and other rules for virtual servers: "443, 8999" You cannot use them for the current rule.
Remote IP	
Remote IP	
	<a href="#">ADD REMOTE IP</a>
Public port (start)*	
Public port (end)	
<b>APPLY</b>	

# TR-069 Client

On the TR-069 Client page, you can configure the router for communication with a remote Auto Configuration Server (ACS). The TR-069 client is used for remote monitoring and management of the device.

## TR-069 Client

**Interface:** Select the interface over which the client should operate.

**Enable TR-069 client:** Toggle this switch to enable or disable TR-069.

## Auto Configuration Server Settings

**URL address:** Specify the URL of your ISP's ACS.

**Username:** Specify the username for your ISP's ACS.

**Password:** Specify the password for your ISP's ACS.

## Inform Settings

**Enable:** Toggle this switch to enable active contact with your ISP's ACS.

**Interval:** Specify the interval in seconds for each inform packet.

## Connection Request Settings

**Username:** Specify the username here.

The screenshot shows the D-Link TR-069 Client configuration page. At the top, there is a navigation bar with 'Home', 'Settings', 'Functions', and 'Management'. Below this is a header section with the title 'TR-069 Client' and a brief description: 'On the TR-069 Client page, you can configure the router for communication with a remote Auto Configuration Server (ACS). The TR-069 client is used for remote monitoring and management of the device.' Below the header is a 'Functions' section. The main configuration area is divided into several sections: 'TR-069 Client' with an 'Interface' dropdown set to 'Automatic' and an 'Enable TR-069 client' toggle switch; 'Inform Settings' with an 'Enable' toggle switch and an 'Interval (in seconds)' input field set to '120'; 'Auto Configuration Server Settings' with input fields for 'URL address', 'Username', and 'Password'; and 'Connection Request Settings' with input fields for 'Username', 'Password', 'Request port' (set to '8999'), and 'Request path / Request Path'. An 'APPLY' button is located at the bottom right of the configuration area.

## TR-069 Client (cont)

**Password:** Specify the password here.

**Request Port:** Specify the request port here.

**Request Path:** Specify the request path here.

Click **Apply** when you are done.

The screenshot shows the D-Link web interface for the TR-069 Client configuration. The page title is "TR-069 Client" and it includes a brief description: "On the TR-069 Client page, you can configure the router for communication with a remote Auto Configuration Server (ACS). The TR-069 client is used for remote monitoring and management of the device." The interface is divided into several sections:

- Functions:** A section with a sub-heading "TR-069 Client" containing:
  - An "Interface" dropdown menu set to "Automatic".
  - An "Enable TR-069 client" toggle switch that is currently turned on.
- Inform Settings:** Contains an "Enable" toggle switch (turned on) and an "Interval (in seconds)" input field set to "120".
- Auto Configuration Server Settings:** Includes input fields for "URL address", "Username", and "Password".
- Connection Request Settings:** Includes input fields for "Username", "Password", "Request port" (set to "8999"), and "Request path" (set to "Request Path").

An "APPLY" button is located at the bottom right of the configuration area.

## Static Route

Once connected to the Internet, your router automatically builds routing tables that determine where traffic should be sent. Static routes can override this process, allowing traffic to be directed to a specific client or location.

### Routing Configuration

**Add:** Click this button to add a new static route.

**Delete:** Click this button to delete the selected route(s).

**Destination network:** Indicates the IP address of the destination network.

**Gateway:** Indicates the gateway traversed by the static route.

**Interface:** Indicates the interface traversed by the static route.

**Metric:** Indicates the metric of the static route.

**Accessibility:** Indicates the current status of the route.

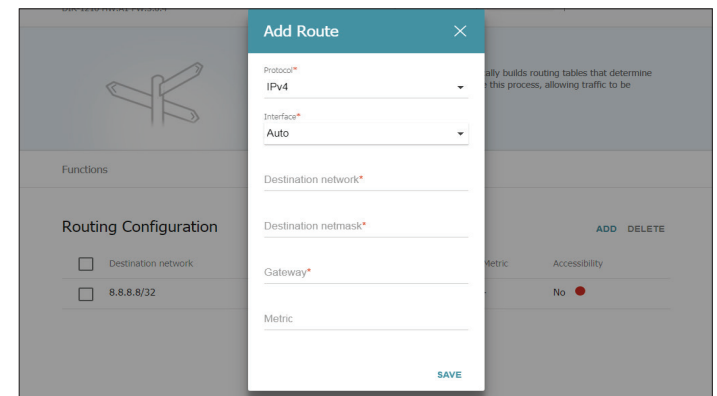
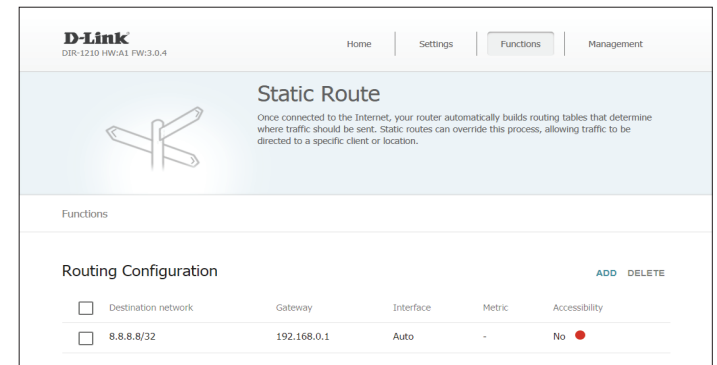
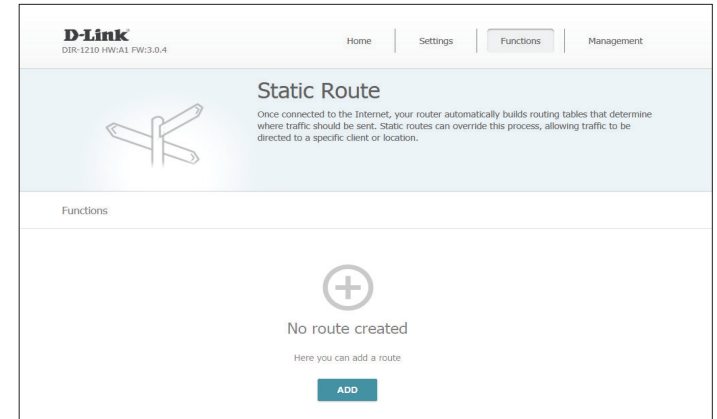
### Add Route

**Protocol:** Choose the protocol used by the static route.

**Interface:** Choose the interface used by the static route.

**Destination network:** Specify the IP address of the destination.

**Destination netmask:** Specify the netmask used by the destination IP.



## Static Route (cont)

**Gateway:** Specify the gateway used by the static route.

**Metric:** Specify a metric between 1 and 255.

Click **Save** when you are done.

## Dynamic DNS

Dynamic Domain Name Service allows your router to associate an easy-to-remember domain name such as [YourDomainName].com with the regularly changing IP address assigned by your Internet Service provider. This feature is helpful when running a virtual server.

### DDNS List

**Add:** Click this button to add a new DDNS service, described below.

**Delete:** Click this button to deleted the selected DDNS service(s).

**Hostname:** Indicates the hostname of the DDNS service.

**DDNS service:** Indicates the name of the DDNS service.

**Username:** Indicates the username used with the DDNS service.

**Update period:** Indicates the update period in minutes of the DDNS service.

### Add DDNS

**Hostname:** Specify the assigned hostname used by your DDNS service.

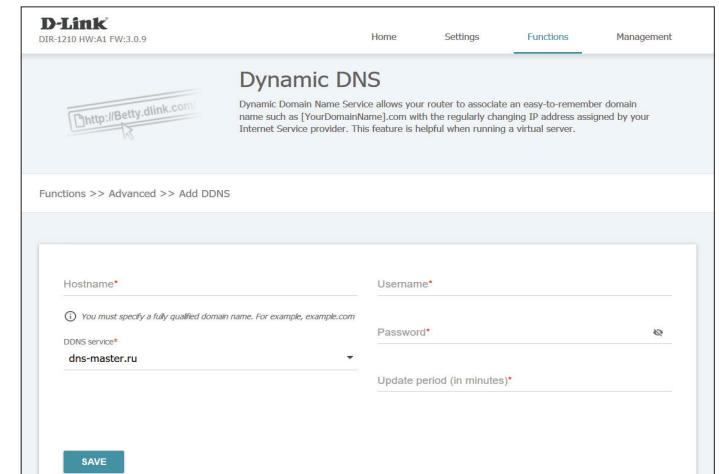
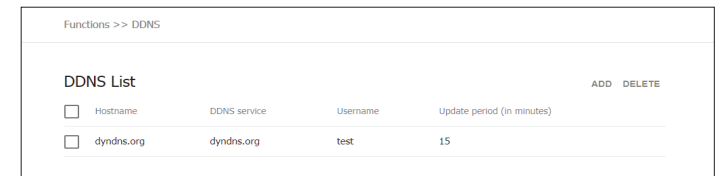
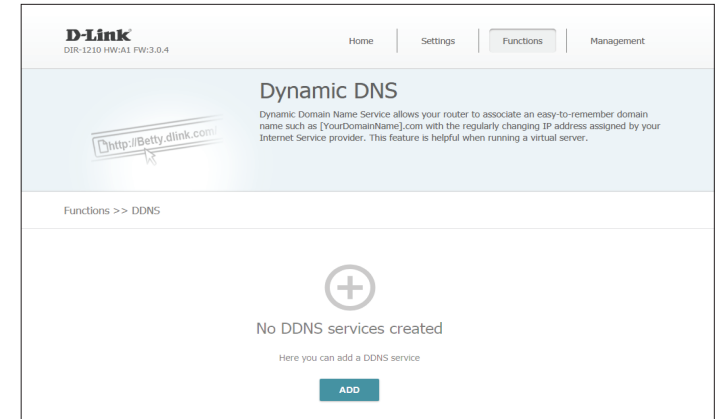
**DDNS service:** Select the DDNS service you are using.

**Username:** Specify the username for your DDNS service.

**Password:** Specify the password for your DDNS service.

**Update period:** Specify the update period in minutes.

Click **Save** when you are done.



# Bandwidth Control

The Bandwidth Control page allows you to set bandwidth controls across the device's Ethernet ports. Click any port to change its bandwidth control settings.

## Bandwidth Control

**Port:** Indicates the port to which bandwidth controls can be applied.

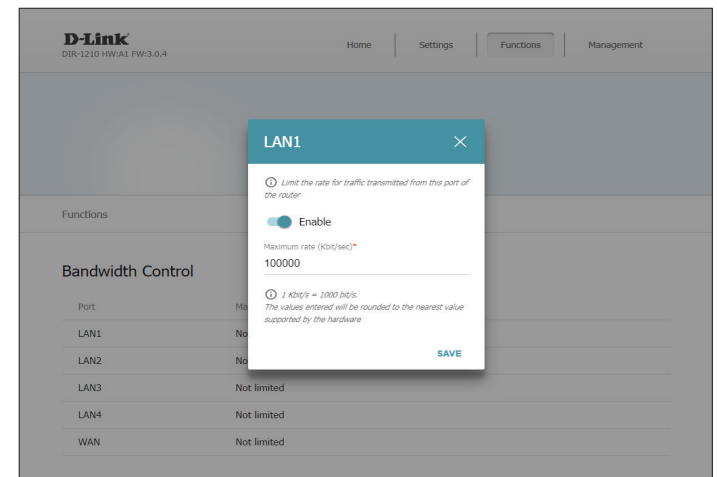
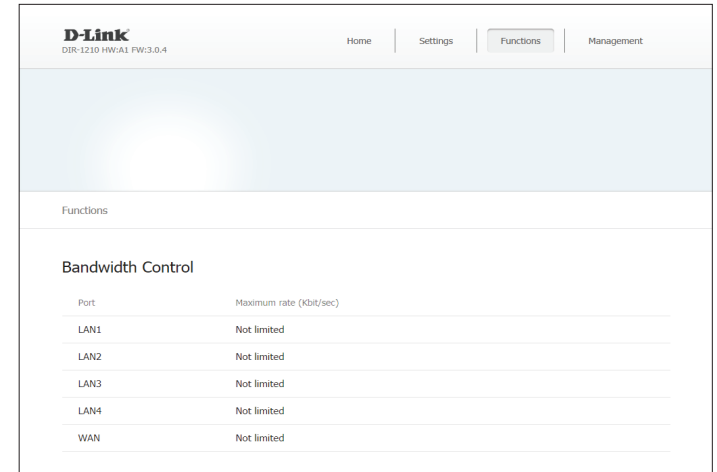
**Maximum rate:** Indicates the maximum bandwidth allowed over the port in kbps.

## Port

**Enable:** Toggle this switch to enable bandwidth control on the specified port.

**Maximum rate:** Indicates the maximum bandwidth allowed over the port in kbps.

Click **Save** when you are done.





# IPsec

The router's IPsec function allows the router to act as an IPsec client, allowing connected devices behind the router to use the tunnel without being individually configured.

**Enable:** Toggle this switch to enable the IPsec client functionality.

## Tunnels

**Add:** Click here to add a new IPsec client, described in **IPsec/Adding** on page **107**.

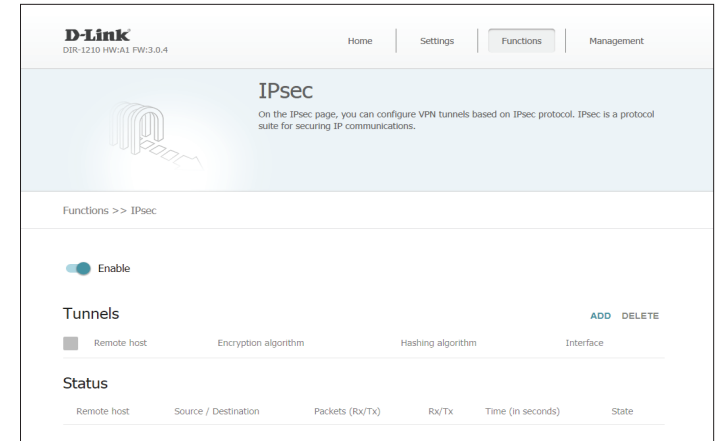
**Delete:** Click this button to delete the selected tunnel(s).

**Remote host:** Indicates the remote host of the tunnel.

**Encryption algorithm:** Indicates the encryption algorithm used by the tunnel.

**Hashing algorithm:** Indicated the hashing algorithm used by the tunnel.

**Interface:** Indicates the interface over which the tunnel operates.



## IPsec (cont)

### Status

**Remote host:** Indicates the status of the remote host of the tunnel.

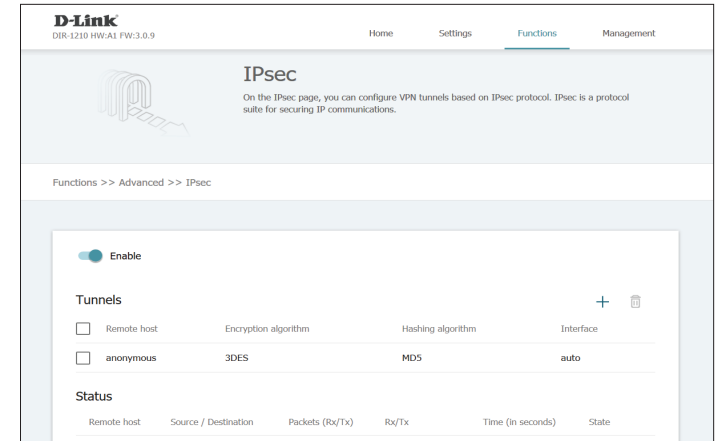
**Source/  
Destination:** Indicates source/destination WAN IP address

**Packets:** Indicates packet count of Rx/Tx

**Rx/Tx:** Indicates in bytes the Rx/Tx

**Time:** Indicates tunnel uptime in seconds

**State:** Indicates tunnel status



## IPsec/Adding

**Enable:** Toggle this switch to enable Dynamic Ipsec

**Remote Host:** Enter IP address of remote host. If Dynamic Ipsec is enabled, this field will be disabled.

**Local Identifier:** Specify from drop down list either ip address or fqdn as local identifier

**Pre-shared key:** Specify a pre-shared key

**Interface:** Specify from drop down list either automatic or WAN

**NAT Traversal:** Specify from drop down list disabled, enabled, or force

**Exchange mode:** Specify from down list base, main, or aggressive

**Enable DPD:** Toggle this switch to enable/disable Dead Peer Detection

**DPD delay:** Specify in seconds DPD delay

**Number of DPD Failures:** Specify maximum number of DPD failures.

**TCP MSS:** Specify from drop down list either Manual or Path MTU Discovery

**TCP MSS Value:** Specify packet size in bytes

**Traffic between Tunneled Networks:** Toggle this switch to enable/disable traffic between tunneled networks.

The screenshot displays the IPsec configuration interface, divided into several sections:

- General Settings:**
  - Dynamic IPsec:** A toggle switch that is currently turned off.
  - Exchange mode:** A dropdown menu set to "Base".
  - Remote host\*:** A text input field.
  - Local Identifier Address:** A dropdown menu.
  - Identifier value\*:** A text input field.
  - Pre-shared key\*:** A text input field with a copy icon.
  - Interface:** A dropdown menu set to "Automatic".
  - NAT Traversal:** A dropdown menu set to "Disabled".
  - Enable DPD:** A toggle switch that is currently turned on.
  - DPD delay, sec\*:** A text input field set to "5".
  - The maximum number of failures DPD\*:** A text input field set to "3".
  - TCP MSS:** A dropdown menu set to "Manual".
  - TCP MSS Value\*:** A text input field set to "1300".
  - Allow traffic between tunneled networks:** A toggle switch that is currently turned off.
- The First Phase:**
  - First phase encryption algorithm:** A dropdown menu set to "3DES".
  - Hashing algorithm:** A dropdown menu set to "MD5".
  - First phase Dhigroup type:** A dropdown menu set to "modp768".
  - IKE-SA lifetime\*:** A text input field set to "28800".
- The Second Phase:**
  - Second phase encryption algorithm:** A dropdown menu set to "3DES".
  - Authentication algorithm:** A dropdown menu set to "HMAC-MD5".
  - Enable PFS:** A toggle switch that is currently turned on.
  - Second phase PFSgroup type:** A dropdown menu set to "modp768".
  - IPsec-SA lifetime\*:** A text input field set to "3600".
- Tunneled Networks:**
  - A section for defining local and remote subnets, with a plus sign (+) and a trash icon (🗑️) for adding or removing entries.

An "APPLY" button is located at the bottom left of the configuration panel.

## The First Phase

**Encryption Algorithm:** Choose either 3DES or DES encryption algorithm for first phase

**Hashing Algorithm:** Choose either MD5 SHA-1 hashing algorithm or for first phase from drop down list.

**DHgroup type:** Specify DHgroup type for First Phase from drop down list.

**IKE-SA lifetime:** Specify valid value between 60 seconds and 86400 seconds.

## The Second Phase

**Encryption Algorithm** Specify from drop down list the encryption algorithm for Second Phase

**Authentication Algorithm:** Specify from drop down list the authentication algorithm for Second Phase

**Enable PFS:** Toggle this switch to enable Perfect Forward Secrecy for second phase.

**PFSgroup type:** Specify from drop down list appropriate PFSgroup type for Second Phase.

**IPsec-SA lifetime:** Specify valid value in seconds

## Tunneled Networks

**Add:** Click to add rule to apply to IPsec tunnel

**Delete:** Click to delete rule

The screenshot displays the configuration interface for an IPsec tunnel. It is divided into several sections:

- General Settings:** Includes a toggle for 'Dynamic IPsec', 'Exchange mode' set to 'Base', 'Remote host\*', 'Local identifier' set to 'Address', 'Identifier value\*', 'Pre-shared key\*', 'Interface' set to 'Automatic', 'NAT Traversal' set to 'Disabled', and a toggle for 'Allow traffic between tunneled networks'.
- The First Phase:** Includes 'First phase encryption algorithm' set to '3DES', 'Hashing algorithm' set to 'MD5', 'First phase DHgroup type' set to 'modp768', and 'IKE-SA lifetime\*' set to '28800'.
- The Second Phase:** Includes 'Second phase encryption algorithm' set to '3DES', 'Authentication algorithm' set to 'HMAC-MD5', a toggle for 'Enable PFS', 'Second phase PFSgroup type' set to 'modp768', and 'IPsec-SA lifetime\*' set to '3600'.
- Tunneled Networks:** A section for defining local and remote subnets, currently empty, with an 'APPLY' button at the bottom.

**Local Network:** Specify/shows the local subnet of IPsec tunnel

**Remote Subnet:** Specify/shows the remote subnet of IPsec tunnel

Click **Apply** when finished.

# Ports Settings

The Ports Settings page allows you to configure or disable autonegotiation of speed and duplex mode or manually configure speed and duplex mode for each Ethernet port of the router.

## Ports Settings

**Port:** Indicates port number.

**Status:** Indicates current status of port.

**Autonegotiation:** Indicates whether autonegotiation is on/off.

**Speed:** Indicates port speed.

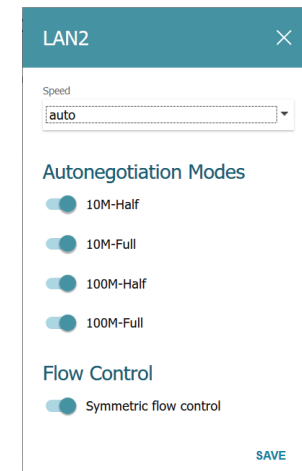
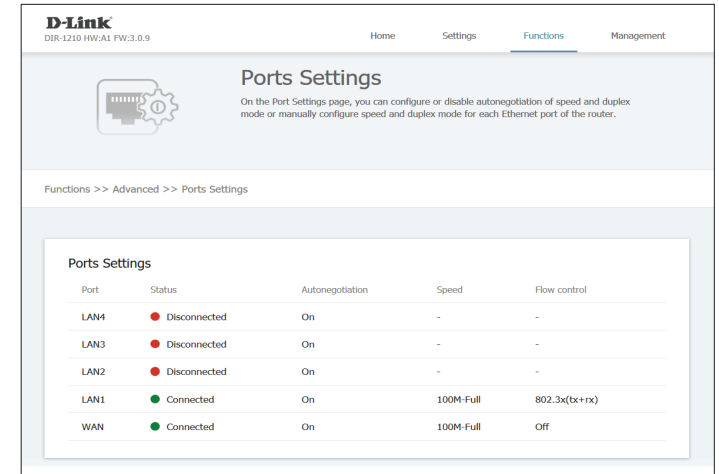
**Flow Control:** Indicates whether symmetric flow control is on/off.

To configure a port, click on the corresponding port you wish to configure.

**Speed:** Specify from drop down list port speed

**Autonegotiation Modes:** Toggle this switch to enable/disable autonegotiation modes

**Flow Control:** Toggle this switch to enable/disable symmetric flow control



# Redirect

The Redirect page allows to enable or disable notifications for when Internet connection has failed.

## Common Setting

**Enable Redirect:** Toggle this switch to enable failure notifications in the browser window

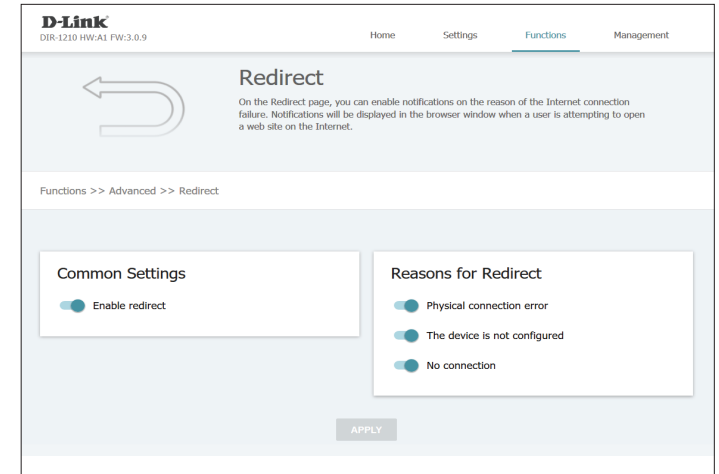
## Reasons for Redirect

The below options will only appear if redirect is enabled.

**Physical Connection Error:** Toggle this switch to enable notification if connection failure is due to physical error.

**The Device is not Configured:** Toggle this switch to enable notification if connection failure due to device not configured

**No Connection:** Toggle this switch to enable notification if connection failure to due no connection detected



# UDPXY

The UDPXY page allows you to configure the built-in UDPXY application. This application allows you to relay multicast UDP traffic to client's TCP (HTTP) connection.

Toggle this switch to enable

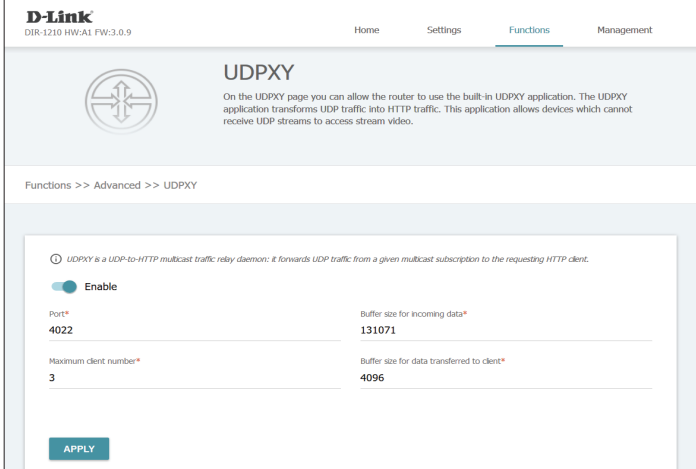
**Port:** Specify port number to be used for UDPXY application

**Buffer Size:** Specify buffer size in bytes for incoming data

**Maximum client number:** Specify maximum number of clients to be supported

**Buffer Size for Data Transferred:** Specify buffer size in bytes for data transferred to client.

Click **APPLY** when finished.



**D-Link**  
DIR-1210 HW-A1 FW:3.0.9

Home Settings **Functions** Management

## UDPXY

On the UDPXY page you can allow the router to use the built-in UDPXY application. The UDPXY application transforms UDP traffic into HTTP traffic. This application allows devices which cannot receive UDP streams to access stream video.

Functions >> Advanced >> UDPXY

UDPXY is a UDP-to-HTTP multicast traffic relay daemon: it forwards UDP traffic from a given multicast subscription to the requesting HTTP client.

Enable

Port*	4022	Buffer size for incoming data*	131071
Maximum client number*	3	Buffer size for data transferred to client*	4096

**APPLY**



## IGMP/MLD

The IGMP/MLD page allows you to enable/disable Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD). IGMP is used to managed multicast traffic for IPv4-based networks. MLD is used to manage multicast traffic in IPv6-based networks.

### IGMP

**Enable/Disable:** Toggle this switch to enable/disable IGMP.

**IGMP version** Choose from drop down list which IGMP version to use.

**Interface:** Choose from drop down list which interface to apply to

**Enable/Disable:** Toggle this switch to set the address of outgoing IGMP packets equal to 0.0.0.0

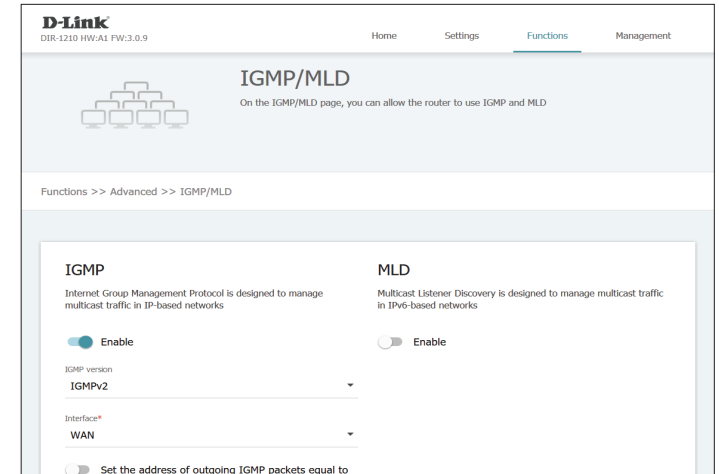
### MLD

**Enable/Disable:** Toggle this switch to enable/disable MLD.

**MLD Version:** Choose from drop down list whether to use MLDv1/MLDv2, Only MLDv1, or Only MLDv2.

**Interface:** Choose from drop down list the interface to use.

Click **APPLY** when finished.



## ALG/Passthrough

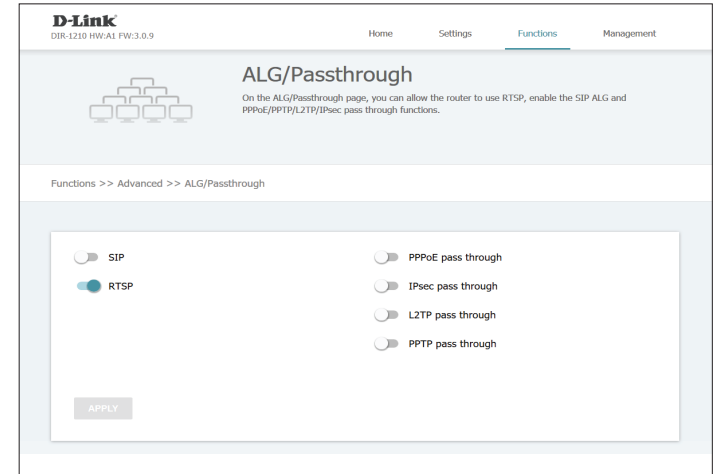
The ALG/Passthrough page allows you to configure the router to use RTSP, enable the SIP ALG and PPPoE/PPTP/L2TP/IPsec passthrough functions.

Toggle this switch to enable/disable the following:

**SIP**  
**RTSP**

**PPPoE passthrough**  
**IPsec passthrough**  
**L2TP passthrough**  
**PPTP passthrough**

Click **APPLY** when finished.



# Management

## System Time

System Time allows you to configure date and time to be synchronized with a public time server on the Internet or set manually.

**System Date:** Displays device's current system date

**System Time:** Displays router's current system Time.

**Enable/Disable:** Toggle this switch to enable/disable NTP

### NTP Servers

Displays default public time server. Click on 'x' to delete.

Click ADD SERVER to add a new public time server.

### NTP Settings

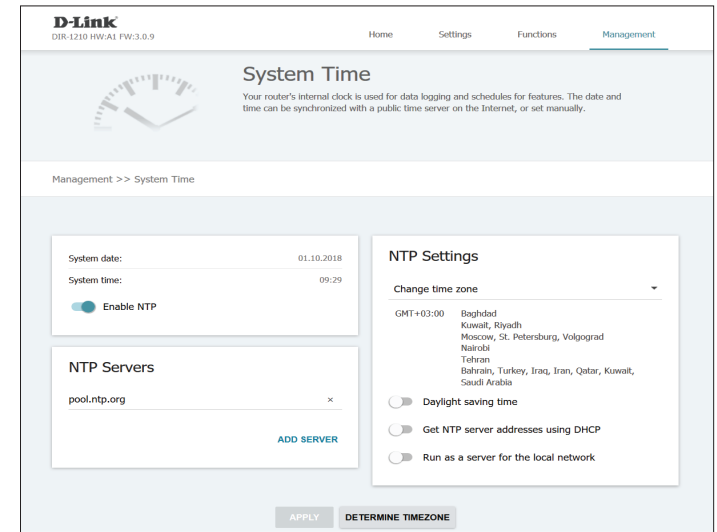
Displays current time zone. To change time zone, choose from drop down list.

Toggle this switch to enable/disable the following options:

**Daylight Saving time**

**Get NTP server addresses using DHCP**

**Run as a server for the local network.**



# System Log

The System Log page displays diagnostic information that run in the background to monitor the health of your device if enabled.

## Log

**Refresh:** Click to refresh log for new updates.

**Export:** Click to export log as text file.

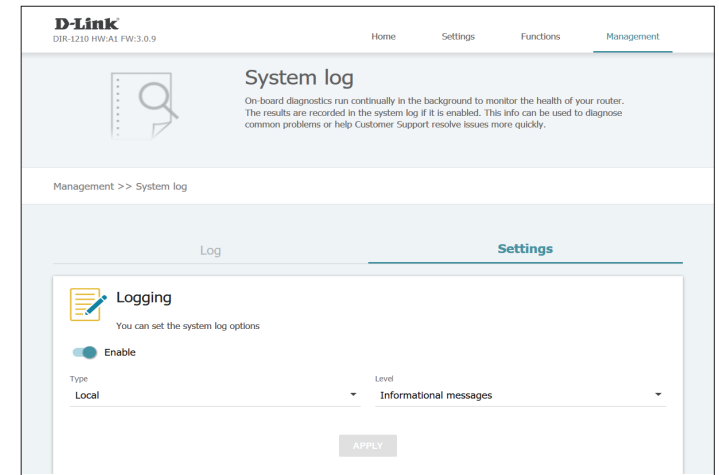
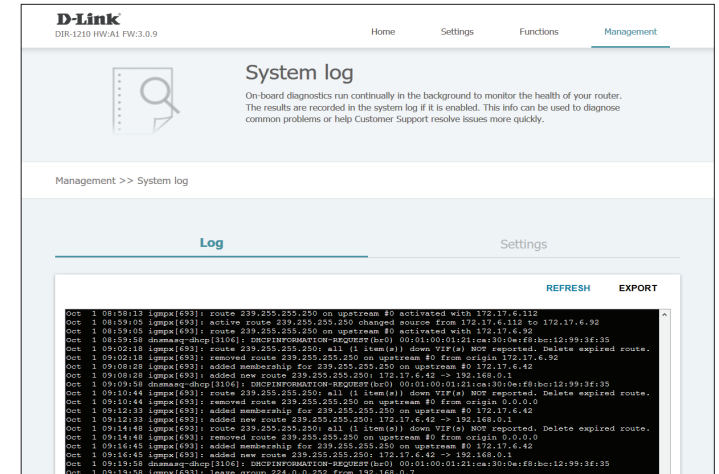
## Settings

**Enable/Disable:** Toggle this switch to enable/disable logging function.

**Type:** Choose from drop down list type of diagnostics to log.

**Level:** Choose from drop down list level of diagnostics to log.

Click **APPLY** when finished.



# Administration

The Administration page allows you to change router settings.

## User

**Login:** Username to login to router's configuration UI as the administrator. This cannot be changed.

**Password:** Specify new password. Password needs to be between 1 - 31 ASCII characters. Confirm password again below.

Click **SAVE** when finished.

**Language:** Choose router UI language from drop down list.

**Factory:** Click to reset router to factory default settings

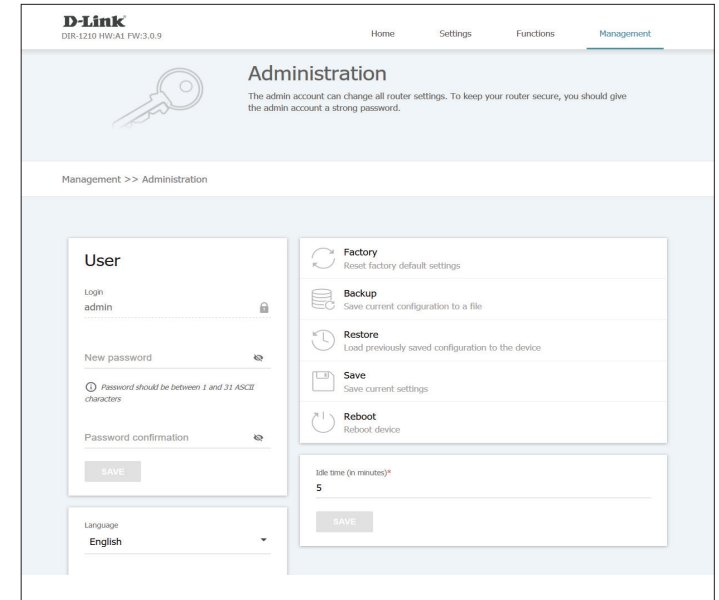
**Backup:** Click to save current configuration to a file

**Restore:** Click to load previously saved configuration file to the device.

**Save:** Click to save current settings

**Reboot:** Click to reboot device

**Idle Time:** Specify a period of inactivity (in minutes) after which the device will log you out.



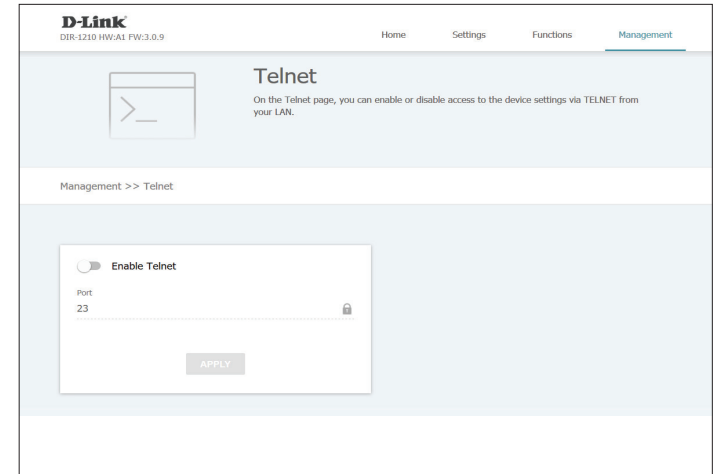
# Telnet

The Telnet page allows you to enable or disable access to the device settings via TELNET from your LAN.

**Enable/Disable:** Toggle this switch to enable Telnet.

**Port:** Specify port number for telnet access

Click **APPLY** when finished.



# Firmware Update

The Firmware Update page allows you to upgrade firmware manually or you can configure the router to check for updates automatically.

Do not turn off the router before the firmware upgrade is completed. This may cause the device to break down.

## Local Update

**Choose File:** Click to select firmware file to update.

Click on **Update Firmware** when ready.

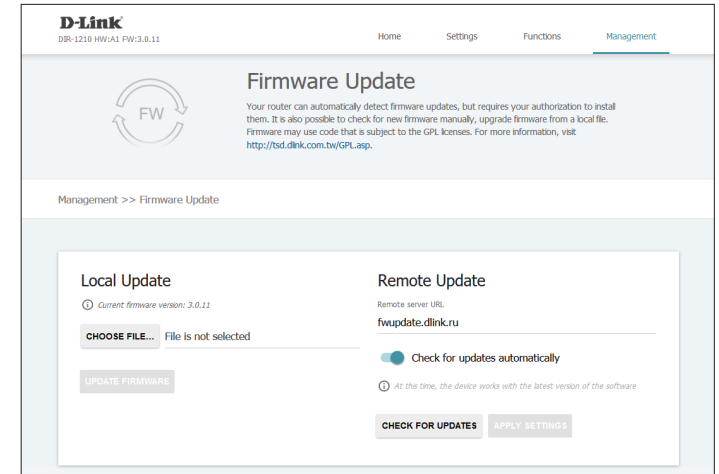
## Remote Update

**Remote Server URL:** Specify server address from which to update firmware.

**Enable/Disable:** Toggle this switch to check for updates automatically.

Click on **CHECK FOR UPDATES** to check for the latest firmware available from the remote server.

Click on **APPLY SETTINGS** when finished.



# Statistics

## Network Statistics

Network Statistics provides you with various statistics about data transmitted and received through the Internet.

### Network Statistics

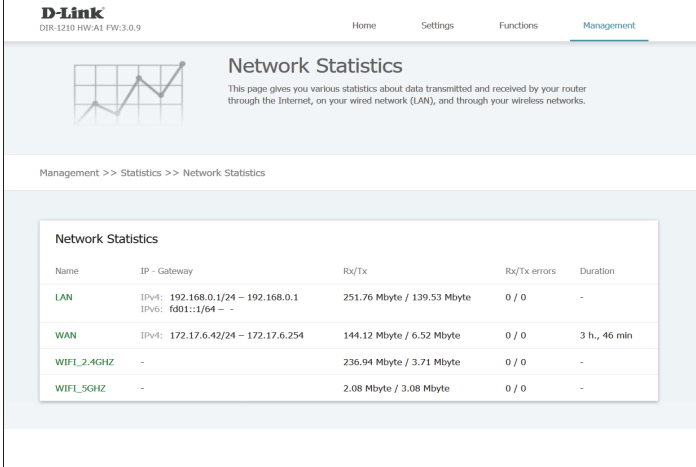
**Name:** Name of connection.

**IP - Gateway:** IP Address and Gateway

**Rx/Tx:** Receive and Transmit volume

**Rx/Tx Errors** Number of Rx/Tx errors.

**Duration** Duration of connection.



**D-Link**  
DIR-1210 HW/A1 FW:3.0.9

Home Settings Functions Management

### Network Statistics

This page gives you various statistics about data transmitted and received by your router through the Internet, on your wired network (LAN), and through your wireless networks.

Management >> Statistics >> Network Statistics

Name	IP - Gateway	Rx/Tx	Rx/Tx errors	Duration
LAN	IPv4: 192.168.0.1/24 - 192.168.0.1 IPv6: fd01::1/64 - -	251.76 Mbyte / 139.53 Mbyte	0 / 0	-
WAN	IPv4: 172.17.6.42/24 - 172.17.6.254	144.12 Mbyte / 6.52 Mbyte	0 / 0	3 h., 46 min
WIFL_2.4GHZ	-	236.94 Mbyte / 3.71 Mbyte	0 / 0	-
WIFL_5GHZ	-	2.08 Mbyte / 3.08 Mbyte	0 / 0	-



# Port Statistics

The Port Statistics Page displays statics of traffic passing through the router by ports.

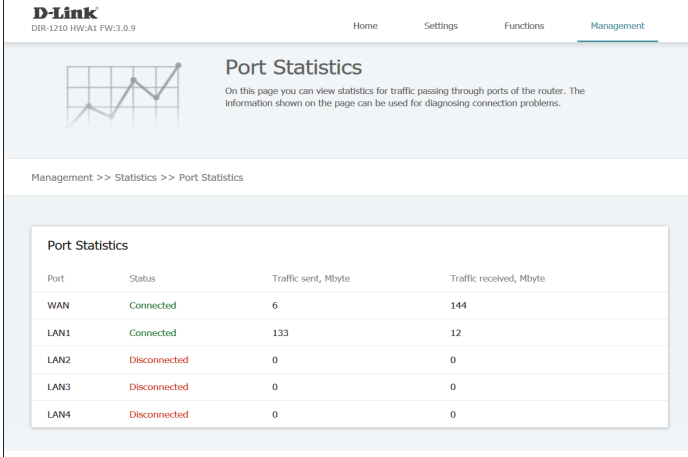
## Port Statistics

**Port:** Name of port

**Status:** Current status of port.

**Traffic sent** Amount of traffic sent in Mbyte

**Traffic received** Amount of traffic received in Mbyte



**D-Link**  
DIR-1210 HW:V1 FW:3.0.9

Home Settings Functions **Management**

### Port Statistics

On this page you can view statistics for traffic passing through ports of the router. The information shown on the page can be used for diagnosing connection problems.

Management >> Statistics >> Port Statistics

Port	Status	Traffic sent, Mbyte	Traffic received, Mbyte
WAN	Connected	6	144
LAN1	Connected	133	12
LAN2	Disconnected	0	0
LAN3	Disconnected	0	0
LAN4	Disconnected	0	0

# Routing Table

The Routing Table page displays information on routes.

## Routing Table

**Interface:** Type of Interface

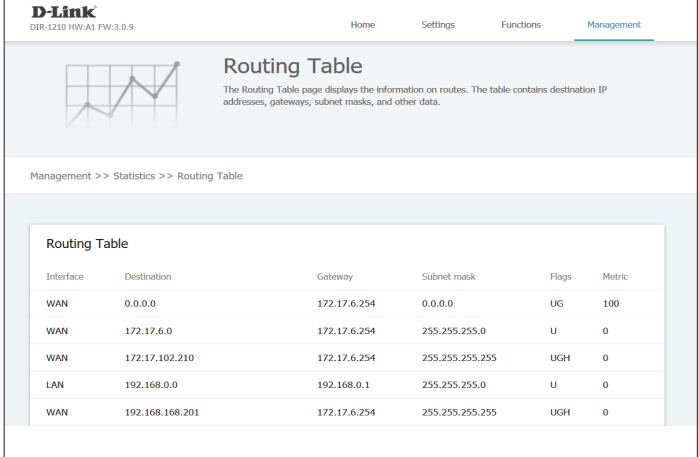
**Destination:** Destination network address

**Gateway:** Gateway address

**Subnet Mask:** Subnet Mask address

**Flags:** Displays whether a route is up, to a gateway, to a host, created by a redirect, or modified by a redirect.

**Metric:** Displays cost of route



**D-Link**  
DIR-1210 HW:AI FW:3.0.9

Home Settings Functions Management

### Routing Table

The Routing Table page displays the information on routes. The table contains destination IP addresses, gateways, subnet masks, and other data.

Management >> Statistics >> Routing Table

Interface	Destination	Gateway	Subnet mask	Flags	Metric
WAN	0.0.0.0	172.17.6.254	0.0.0.0	UG	100
WAN	172.17.6.0	172.17.6.254	255.255.255.0	U	0
WAN	172.17.102.210	172.17.6.254	255.255.255.255	UGH	0
LAN	192.168.0.0	192.168.0.1	255.255.255.0	U	0
WAN	192.168.168.201	172.17.6.254	255.255.255.255	UGH	0

## Clients and Session

The Clients and Session page displays information on current sessions in the router's network.

### Clients and Session

**Protocol:** Protocol for network packet transmission

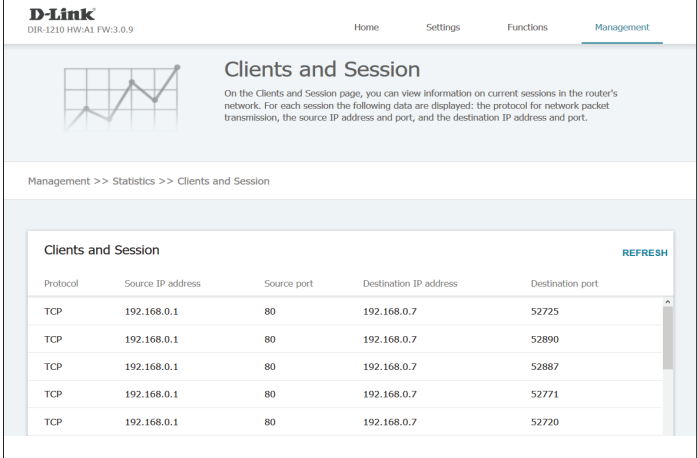
**Source IP Address:** Source IP address

**Source Port:** Source port

**Destination IP Address:** Destination IP address

**Destination Port:** Destination port.

Click on **REFRESH** to update information in the table.



**D-Link**  
DIR-1210 HW:A1 FW:3.0.9

Home Settings Functions **Management**

### Clients and Session

On the Clients and Session page, you can view information on current sessions in the router's network. For each session the following data are displayed: the protocol for network packet transmission, the source IP address and port, and the destination IP address and port.

Management >> Statistics >> Clients and Session

Protocol	Source IP address	Source port	Destination IP address	Destination port
TCP	192.168.0.1	80	192.168.0.7	52725
TCP	192.168.0.1	80	192.168.0.7	52890
TCP	192.168.0.1	80	192.168.0.7	52887
TCP	192.168.0.1	80	192.168.0.7	52771
TCP	192.168.0.1	80	192.168.0.7	52720

REFRESH

# DHCP

The DHCP page displays information on computers that have received IP addresses from the DHCP of the router.

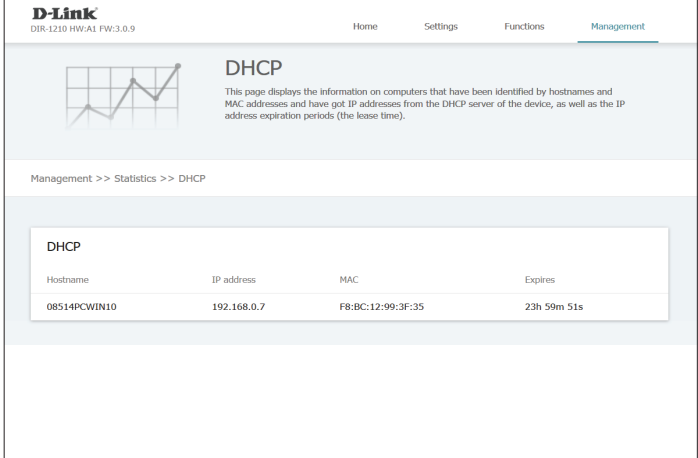
## DHCP

**Hostname:** Hostname of connected device

**IP Address:** IP address from connected device

**MAC:** MAC address of connected device

**Expires:** IP address expiration date (lease time)



**D-Link**  
DIR-1210 HW:V1 FW:3.0.9

Home Settings Functions **Management**

### DHCP

This page displays the information on computers that have been identified by hostnames and MAC addresses and have got IP addresses from the DHCP server of the device, as well as the IP address expiration periods (the lease time).

Management >> Statistics >> DHCP

DHCP			
Hostname	IP address	MAC	Expires
08514PCWIN10	192.168.0.7	F8:BC:12:99:3F:35	23h 59m 51s

# Clients

The Clients page displays list of devices connected to the local network of the router.

## Clients

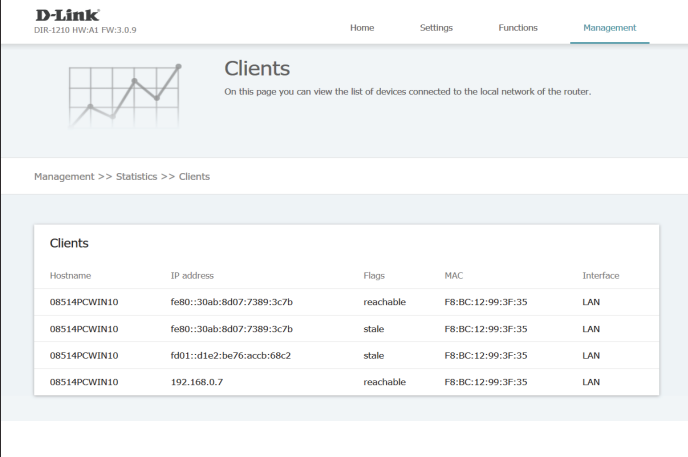
**Hostname:** Hostname of connected device

**IP Address:** IP address of connected device

**Flags:** Current connection status

**MAC:** MAC address of connected device

**Interface:** Interface that device is connected through to the device



**D-Link**  
DIR-1210 HW v1 FW:3.0.9

Home Settings Functions **Management**

### Clients

On this page you can view the list of devices connected to the local network of the router.

Management >> Statistics >> Clients

Hostname	IP address	Flags	MAC	Interface
08514PCWIN10	fe80::30ab:8d07:7389:3c7b	reachable	F8:BC:12:99:3F:35	LAN
08514PCWIN10	fe80::30ab:8d07:7389:3c7b	stale	F8:BC:12:99:3F:35	LAN
08514PCWIN10	fd01::d1e2:be76:accb:68c2	stale	F8:BC:12:99:3F:35	LAN
08514PCWIN10	192.168.0.7	reachable	F8:BC:12:99:3F:35	LAN

# Multicast Groups

This page displays addresses and the interface of active multicast group to which the device is subscribed.

## IPv4

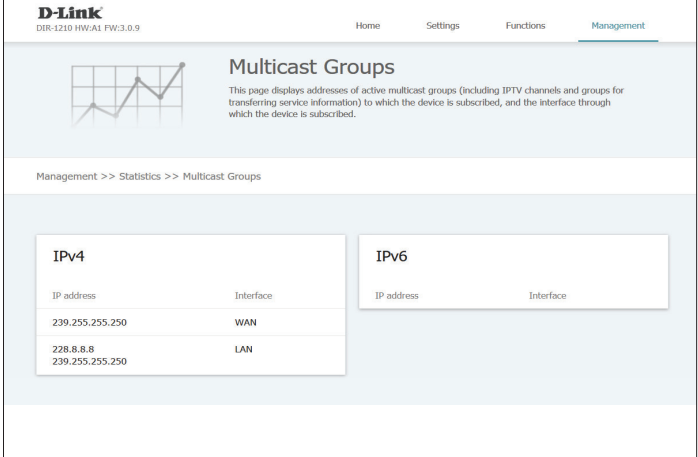
**IP Address:** IP address of active IPv4 multicast group

**Interface:** Interface of active IPv4 multicast group

## IPv6

**IP Address:** IP address of active IPv6 multicast group

**Interface:** Interface of active IPv6 multicast group



**D-Link**  
DIR-1210 HW:V1 FW:3.0.9

Home Settings Functions **Management**

### Multicast Groups

This page displays addresses of active multicast groups (including IPTV channels and groups for transferring service information) to which the device is subscribed, and the interface through which the device is subscribed.

Management >> Statistics >> Multicast Groups

IPv4		IPv6	
IP address	Interface	IP address	Interface
239.255.255.250	WAN		
228.8.8.8	LAN		
239.255.255.250			

# Diagnostics

## Ping

The Ping page allows you to manually check availability of a host from the local or global network.

**Host:** Address of host

**Count of Packets:** Number of packets to send

**IPv6:** Toggle this switch to check through IPv6 protocol

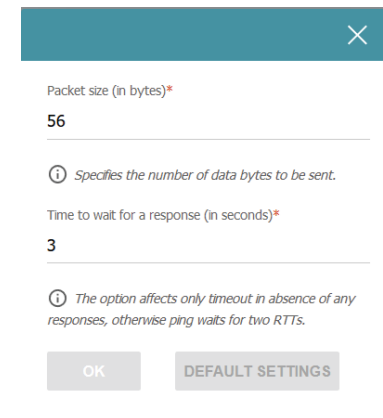
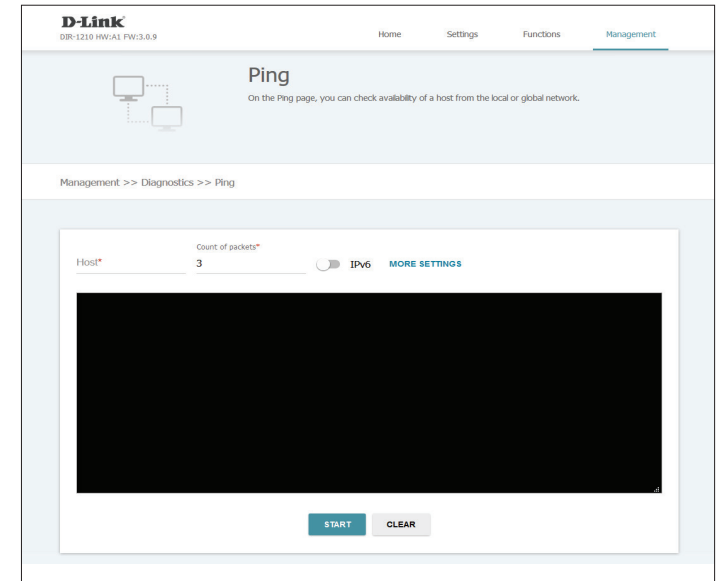
### MORE SETTINGS

**Packet Size:** Number of data bytes to send

**Wait Time:** Time to wait for a response in seconds

Click **OK** to save or **DEFAULT SETTINGS** to reset back to default configuration.

Click **START** to begin Ping Test or **CLEAR** to clear the results.



# Traceroute

The Traceroute page allows you to determine the route of data transfer to a host.

**Host:** Address of host

**IPv6:** Toggle this switch to check through IPv6 protocol

## MORE SETTINGS

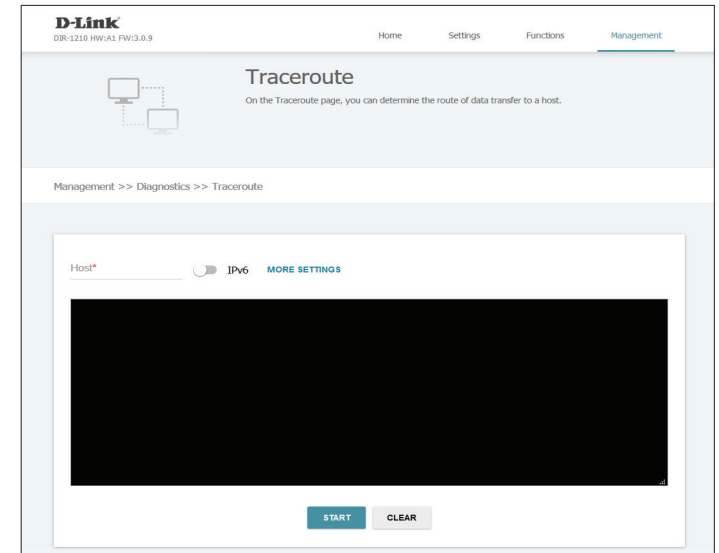
**Maximum TTL value:** Maximum number of hops

**Number of probes:** Number of probe packets to a hope

**Wait Time:** Hope response time in seconds.

Click **OK** to save or **DEFAULT SETTINGS** to reset back to default configuration.

Click **START** to begin Traceroute or **CLEAR** to clear the results.



✕

Maximum TTL value\*

30

① The maximum number of hops

Number of probes\*

2

① The number of probe packets to a hop

Wait time (in seconds)\*

3

① Hop response time



# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-1210. Read the following descriptions if you are having problems. The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to these examples.

## 1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (**192.168.0.1** for example), you are not connecting to a website, nor do you have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Internet Explorer 10 or higher
  - Firefox 44 or higher
  - Safari 8 or higher
  - Chrome 48 or higher
  - Edge 20.10240 or 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 ZoneAlarm, BlackICE, Sygate, Norton Personal Firewall, and Windows® XP 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 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. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your web management.
- If you still cannot access the configuration, unplug the power to the router 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.

## 2. What can I do if I forgot my password?

If you forgot your password, you must reset your router. This process will change all your settings back to the factory defaults.

To reset the router, locate the reset button (hole) on the bottom panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait 60 seconds or more to access the router. The default IP address is **192.168.0.1**. When you login, the wizard should start automatically.

### 3. Why can't I connect to certain sites or send and receive emails when connecting through my router?

If you are having a problem sending or receiving email, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

To find the proper MTU Size, you'll have to do a special ping of the destination you're trying to go to. A destination could be another computer, or a URL.

- Click on **Start** and then click **Run**.
- Windows® 95, 98, and Me users type in **command** (Windows® NT, 2000, XP, Vista®, and 7 users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

**ping [url] [-f] [-l] [MTU value]**

Example: **ping yahoo.com -f -l 1472**

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 203ms, Average = 132ms

C:\>
```

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, let's say that 1452 was the proper value, the actual MTU size would be 1480, which is the optimum for the network we're working with ( $1452+28=1480$ ).

Once you find your MTU, you can now configure your router with the proper MTU size.

To change the MTU rate on your router follow the steps below:

- Open your browser, enter the IP address of your router (192.168.0.1) and click **OK**.
- Enter your username (admin) and password (previously specified). Click **Login** to enter the web configuration page for the device.
- In the **Settings** menu on the bar at the top of the page, click on Internet and then go to the **WAN** page. From there click on **Edit** and go to the **All Settings** tab.
- To change the MTU, enter the number in the MTU field and click **Apply** to save your settings.
- Test your email. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

# 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 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. A wireless router is a device used to provide this link.

## **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 network.

## **Why D-Link Wireless?**

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

## **How does wireless work?**

Wireless works similarly to how cordless phones work, through radio signals that transmit data from one 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 access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point 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, university and high school campuses, airports, golf courses, and many other outdoor venues.

## **Wireless Personal Area Network (WPAN)**

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power. This makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

## **Who uses wireless?**

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

### **Home Uses/Benefits**

- 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 Uses/Benefits**

- 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 USB adapter with your laptop, you can access the hotspot to connect to the Internet from remote locations like: airports, hotels, coffee shops, libraries, restaurants, and convention centers.

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.

### **Centralize your router or access point**

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

### **Eliminate Interference**

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. 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 WEP security feature on the router. Refer to the product manual for detail information on how to set it up.



# Wireless Modes

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-hoc** – Directly connecting to another computer for peer-to-peer communication using wireless network adapters on each computer, such as two or more DIR-1210 wireless network USB adapters.

An Infrastructure network contains an access point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-hoc network contains only clients, such as laptops with wireless USB adapters. All the adapters must be in Ad-hoc mode to communicate.

# Networking Basics

## Check your IP address

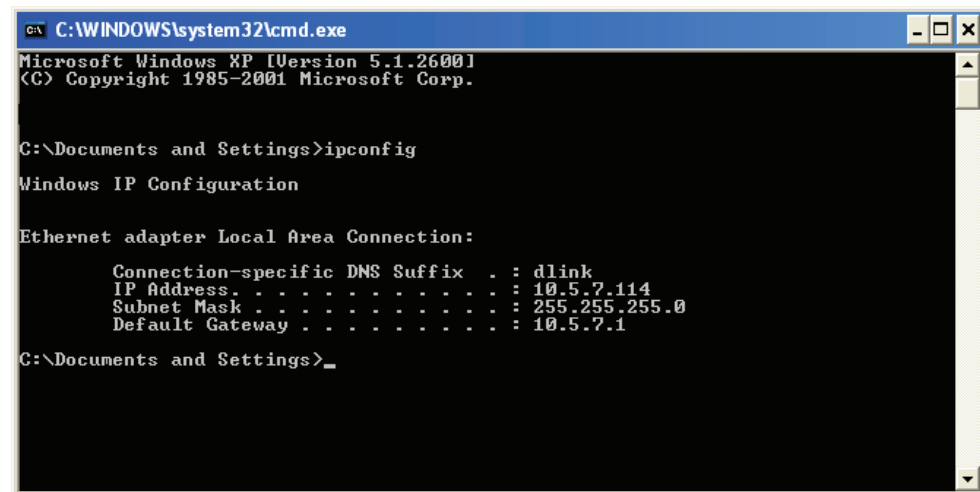
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start** > **Run**. In the run box type **cmd** and click **OK**. (Windows® 7/Vista® users type **cmd** in the **Start Search** box.)

At the prompt, type **ipconfig** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address . . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and Settings>_
```

## Statically Assign an IP address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

### Step 1

Windows® 10 - Click on **Start > Windows System > Control Panel > Network and Internet > Network and Sharing Center.**

Windows® 7 - Click on **Start > Control Panel > Network and Internet > Network and Sharing Center.**

Windows Vista® - Click on **Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.**

Windows® XP - Click on **Start > Control Panel > Network Connections.**

Windows® 2000 - From the desktop, right-click **My Network Places > Properties.**

### Step 2

Right-click on the **Local Area Connection** which represents your network adapter and select **Properties.**

### Step 3

Highlight **Internet Protocol (TCP/IP)** and click **Properties.**

### Step 4

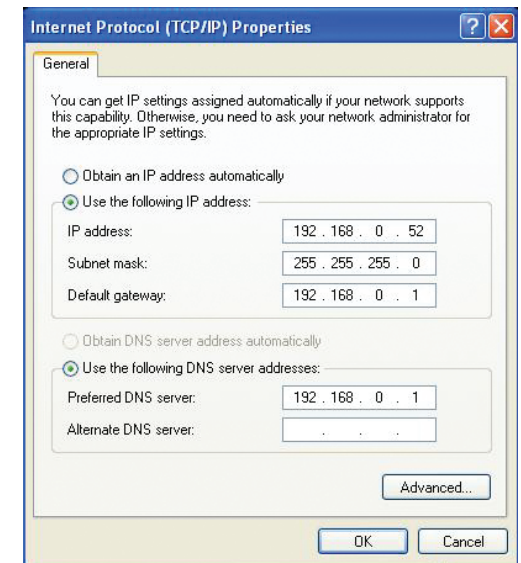
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set the Default Gateway the same as the LAN IP address of your router (I.E. 192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

### Step 5

Click **OK** twice to save your settings.



## Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-1210 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 (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. The password can include symbols (!?\*&\_) and spaces. This key must be the exact same key entered on your wireless router or access point.

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.

# Technical Specifications

## Device Interfaces

- Wireless Interface (2.4 GHz): IEEE 802.11n/g/b
- Wireless Interface (5 GHz): IEEE 802.11 ac/n/a
- Four 10/100 Mbps LAN ports
- One 10/100 Mbps WAN port

## Antenna Types

- Four external antennas

## Standards

- IEEE 802.11ac<sup>1,2,3</sup>
- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.11a
- IEEE 802.3
- IEEE 802.3u

## Security

- WPA™ - Personal/Enterprise
- WPA2™ - Personal/Enterprise
- Wi-Fi Protected Setup (WPS) PBC

## Power

- Input: 100 to 240 V AC, 50/60 Hz
- Output: 12 V DC, 1 A

## Temperature

- Operating: 0 to 40 °C (32 to 104 °F)
- Storage: -20 to 65 °C (-4 to 149 °F)

## Humidity

- Operating: 10% to 90% maximum, non-condensing
- Storage: 5% to 95% maximum, non-condensing

## Certifications

- FCC
- CE
- IC
- LVD
- UL/cUL
- CB
- NCC/BSMI

## Dimensions & Weight

- L x W x H: 190 x 133 x 38 mm (7.48 x 5.23 x 1.49 in)
- 263.1 g (9.28 oz)

<sup>1</sup> Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g, 802.11n, and 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 will adversely affect wireless signal range.

<sup>2</sup> Frequency Range varies depending on country's regulation.

<sup>3</sup> The DIR-1210 does not include 5.25-5.35 GHz & 5.47-5.725 GHz in some regions.

# Regulatory Statements

## **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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## **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.

## **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 44 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.

### **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.

### **ErP 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.

Network Standby: 2.7 watts

Switched Off: 0.14 watts

**以下警語適用台灣地區****依據 低功率電波輻射性電機管理辦法**

第十二條: 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。

第十四條: 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。

電磁波曝露量MPE標準值(MPE) 1 mW/cm<sup>2</sup>，送測產品實值為 0.77 mW/cm<sup>2</sup>



	<b>Frequency Band(s)</b> <b>Frequenzband</b> <b>Fréquence bande(s)</b> <b>Bandas de Frecuencia</b> <b>Frequenza/e</b> <b>Frequentie(s)</b>	<b>Max. Output Power (EIRP)</b> <b>Max. Output Power</b> <b>Consommation d'énergie max.</b> <b>Potencia máxima de Salida</b> <b>Potenza max. Output</b> <b>Max. Output Power</b>
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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> 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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a>
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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 icroprogramme du produit sont disponibles au téléchargement sur la page des produits à <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .

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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 atsisiųsti iš gaminio puslapio adresu <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .
Malti [Maltese]	Bil-preżenti, D-Link Corporation tiddikjara li dan il-prodott, l-aċċessorji, u s-software huma konformi mad-Direttiva 2014/53/UE. Tista' tniżżel it-test sħiħ tad-dikjarazzjoni ta' konformità tal-UE u l-firmware tal-prodott mill-paġna tal-prodott fuq <a href="http://www.dlink.com">www.dlink.com</a> .
Magyar [Hungarian]	Ezennel a D-Link Corporation kijelenti, hogy a jelen termék, annak tartozékai és szoftvere megfelelnek a 2014/53/EU sz. rendeletnek. Az EU Megfelelőségi nyilatkozat teljes szövege és a termék firmware a termék oldaláról tölthető le a <a href="http://www.dlink.com">www.dlink.com</a> 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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 programnska 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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .

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 <a href="http://www.dlink.com">www.dlink.com</a> .
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-samræmisýfirlýsinguna í heild sinni og fastbúnað vörunnar af vefsíðu vörunnar á <a href="http://www.dlink.com">www.dlink.com</a> .
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 <a href="http://www.dlink.com">www.dlink.com</a> .

**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 ein zum 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 (ricetrasmittente), 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.

## **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 Gehäuseschlitze 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.

## **CONSIGNES DE SÉCURITÉ**

Les consignes générales de sécurité ci-après sont fournies afin d'assurer votre sécurité personnelle et de protéger le produit d'éventuels dommages. Veuillez consulter les consignes d'utilisation du produit pour plus de détails.

- L'électricité statique peut endommager les composants électroniques. Déchargez l'électricité statique de votre corps (en touchant un objet en métal relié à la terre par exemple) avant de toucher le produit.
- N'essayez pas d'intervenir sur le produit et ne le démontez jamais. Pour certains produits contenant une batterie remplaçable par l'utilisateur, veuillez lire et suivre les consignes contenues dans le manuel d'utilisation.
- Ne renversez pas d'aliments ou de liquide sur le produit et n'insérez jamais d'objets dans les orifices.
- N'utilisez pas ce produit à proximité d'un point d'eau, de zones très humides ou de condensation sauf si le produit a été spécifiquement conçu pour une application extérieure.
- Éloignez le produit des radiateurs et autres sources de chaleur.
- Débranchez toujours le produit de l'alimentation avant de le nettoyer et utilisez uniquement un chiffon sec non pelucheux.

## **INSTRUCCIONES DE SEGURIDAD**

Las siguientes directrices de seguridad general se facilitan para ayudarle a garantizar su propia seguridad personal y para proteger el producto frente a posibles daños. No olvide consultar las instrucciones del usuario del producto para obtener más información.

- La electricidad estática puede resultar nociva para los componentes electrónicos. Descargue la electricidad estática de su cuerpo (p. ej., tocando algún metal sin revestimiento conectado a tierra) antes de tocar el producto.
- No intente realizar el mantenimiento del producto ni lo desmonte nunca. Para algunos productos con batería reemplazable por el usuario, lea y siga las instrucciones del manual de usuario.
- No derrame comida o líquidos sobre el producto y nunca deje que caigan objetos en las aberturas del mismo.
- No utilice este producto cerca del agua, en zonas con humedad o condensación elevadas a menos que el producto esté clasificado específicamente para aplicación en exteriores.
- Mantenga el producto alejado de los radiadores y de otras fuentes de calor.
- Desenchufe siempre el producto de la alimentación de red antes de limpiarlo y utilice solo un paño seco sin pelusa.



## **ISTRUZIONI PER LA SICUREZZA**

Le seguenti linee guida sulla sicurezza sono fornite per contribuire a garantire la sicurezza personale degli utenti e a proteggere il prodotto da potenziali danni. Per maggiori dettagli, consultare le istruzioni per l'utente del prodotto.

- L'elettricità statica può essere pericolosa per i componenti elettronici. Scaricare l'elettricità statica dal corpo (ad esempio toccando una parte metallica collegata a terra) prima di toccare il prodotto.
- Non cercare di riparare il prodotto e non smontarlo mai. Per alcuni prodotti dotati di batteria sostituibile dall'utente, leggere e seguire le istruzioni riportate nel manuale dell'utente.
- Non versare cibi o liquidi sul prodotto e non spingere mai alcun oggetto nelle aperture del prodotto.
- Non usare questo prodotto vicino all'acqua, in aree con elevato grado di umidità o soggette a condensa a meno che il prodotto non sia specificatamente approvato per uso in ambienti esterni.
- Tenere il prodotto lontano da caloriferi e altre fonti di calore.
- Scollegare sempre il prodotto dalla presa elettrica prima di pulirlo e usare solo un panno asciutto che non lasci filacce.

## **VEILIGHEIDSINFORMATIE**

De volgende algemene veiligheidsinformatie werd verstrekt om uw eigen persoonlijke veiligheid te waarborgen en uw product te beschermen tegen mogelijke schade. Denk eraan om de gebruikersinstructies van het product te raadplegen voor meer informatie.

- Statische elektriciteit kan schadelijk zijn voor elektronische componenten. Ontlaad de statische elektriciteit van uw lichaam (d.w.z. het aanraken van geaard bloot metaal) voordat u het product aanraakt.
- U mag nooit proberen het product te onderhouden en u mag het product nooit demonteren. Voor sommige producten met door de gebruiker te vervangen batterij, dient u de instructies in de gebruikershandleiding te lezen en te volgen.
- Mors geen voedsel of vloeistof op uw product en u mag nooit voorwerpen in de openingen van uw product duwen.
- Gebruik dit product niet in de buurt van water, gebieden met hoge vochtigheid of condensatie, tenzij het product specifiek geclassificeerd is voor gebruik buitenshuis.
- Houd het product uit de buurt van radiators en andere warmtebronnen.
- U dient het product steeds los te koppelen van de stroom voordat u het reinigt en gebruik uitsluitend een droge pluisvrije doek.

## Disposing of and Recycling Your Product

### ENGLISH

EN



This symbol on the product or packaging means that according to local laws and regulations this product should 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](http://www.dlinkgreen.com).

### DEUTSCH

DE



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](http://www.dlinkgreen.com).



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 CO<sub>2</sub>.

Pour en savoir plus sur les produits et emballages respectueux de l'environnement, veuillez consulter le [www.dlinkgreen.com](http://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 CO<sub>2</sub>.

Para obtener más información acerca de nuestros productos y embalajes ecológicos, visite el sitio [www.dlinkgreen.com](http://www.dlinkgreen.com).

## ITALIANO

IT



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 scollegarne 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](http://www.dlinkgreen.com).

### **NEDERLANDS**

**NL**



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 recyclen 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 CO<sub>2</sub>-emissies.

Breng een bezoek aan [www.dlinkgreen.com](http://www.dlinkgreen.com) voor meer informatie over onze milieuverantwoorde producten en verpakkingen.

### **POLSKI**

**PL**



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 CO<sub>2</sub>.

Aby dowiedzieć się więcej na temat produktów i opakowań mających wpływ na środowisko prosimy zapoznać się ze stroną Internetową [www.dlinkgreen.com](http://www.dlinkgreen.com).

### **ČESKY**

**CZ**



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, odnese 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 CO<sub>2</sub>.

Více informací o našich ekologických výrobcích a obalech najdete na adrese [www.dlinkgreen.com](http://www.dlinkgreen.com).

### **MAGYAR**

**HU**



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 elköteleztük magunkat 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 károsanyag-tartalmú termékeket gyárt és csomagolásokat alkalmaz.

A D-Link azt javasolja, hogy mindig 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](http://www.dlinkgreen.com) weboldalon tudhat meg.

## NORSK

NO



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 designer 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 CO<sub>2</sub>-utslipp.

For mer informasjon angående våre miljøansvarlige produkter og forpakninger kan du gå til [www.dlinkgreen.com](http://www.dlinkgreen.com).

## DANSK

DK



Dette symbol på produktet eller emballagen betyder, at dette produkt i henhold til lokale love og regler ikke må bortskaffes 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 CO<sub>2</sub>-udledningerne.

Du kan finde flere oplysninger om vores miljømæssigt ansvarlige produkter og emballage på [www.dlinkgreen.com](http://www.dlinkgreen.com).

## SUOMI

FI



Tämä symboli tuotteen pakkauksessa tarkoittaa, että paikallisten lakien ja säännösten mukaisesti tätä tuotetta ei pidä hävittää yleisen kotitalousjätteen seassa vaan se tulee toimittaa kierrätettäväksi. Kun tuote on elinkaarensa päässä, toimita se lähimpään viranomaisten hyväksymään kierrätyspisteeseen. 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 pitoisuuksia haitallisia aineita sisältäviä materiaaleja sekä tuotteissaan että niiden pakkauksissa.

Suosittellemme, että irrotat D-Link-tuotteesi virtalähteestä tai sammutat ne aina, kun ne eivät ole käytössä. Toimimalla näin autat säästämään energiaa ja vähentämään hiilidioksiidipäästöjä.

Lue lisää ympäristöystävällisistä D-Link-tuotteista ja pakkauksistamme osoitteesta [www.dlinkgreen.com](http://www.dlinkgreen.com).

## SVENSKA

SE



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 människors 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](http://www.dlinkgreen.com).

## PORTUGUÊS

PT



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 CO<sub>2</sub>.

Para saber mais sobre os nossos produtos e embalagens responsáveis a nível ambiental visite [www.dlinkgreen.com](http://www.dlinkgreen.com).