User Manual

4G LTE M2M Router

DWM-312W

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	July 22, 2020	• Initial release
1.01	August 13, 2020	• Updated Hardware Overview

Trademarks

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ErP Power Usage

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

Network Standby: 5 watts

Table of Contents

Package Contents

DWM-312W 4G LTE M2M Router

4 x Mounting Screws

Power Adapter

DIN Plate

3 x 3G/4G Antennas

RJ-45 Cable

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

System Requirements

- A compatible micro-SIM/UICC card with service.*

- Computer with Windows, Mac OS, or a Linux-based operating system, and an installed Ethernet adapter.

- Java-enabled browser such as Internet Explorer 6, Safari 4.0, Chrome 20.0, or Firefox 7 or above (for configuration).

* Subject to services and service terms available from your carrier.

Introduction and Features

The D-Link DWM-312W 4G LTE M2M Router is an easy-to-deploy, high-performance 3G/4G router. It features a dedicated fast Ethernet port and dual-SIM 4G LTE mobile broadband for maximum redundancy and flexibility for intense machine to machine applications. Powerful VPN tools and advanced remote management combined with ease of use makes the DWM-312W ideal for both large-scale and individual deployments.

Connectivity Where You Need It Most

Easily connect to your high-speed 3G/4G LTE mobile connection with the DWM-312W, and enjoy fast downlink speeds of up to 150 Mbps and uplink speeds up to 50 Mbps, giving you the speed you need for fast, responsive Internet access. Deploy it in a strategic location to access IP cameras and systems remotely. The blazing fast LTE connection allows multiple users to access e-mail, stream music and watch videos on the go. Configurable dual-SIM fallback provides reliability and flexibility in mixed network environments.

Reliable High Speed Virtual Private Networks

The DWM-312W 4G LTE M2M Router's integrated VPN client and server is compatible with almost any VPN policy. The router's hardware engine can support and manage multiple VPN configurations. It supports IPSec and GRE protocols, and handles pass-through traffic as well. Advanced VPN configuration settings include multiple encryption options, key management, negotiation modes, and VPN authentication using an internal user database.

Robust

The industrial grade casing means the DWM-312W provides reliable high-speed connectivity in extreme conditions. The corrosion-resistant case, wide operating temperature and humidity tolerance means that the DWM-312W is ready for the most demanding M2M applications in virtually any environment. Equipped with wall and DIN rail mounting configurations, the DWM-312W can be installed practically anywhere for optimal connectivity. Flexible power input allows the router to operate under any convenient power source.

Hardware Overview
Left Panel
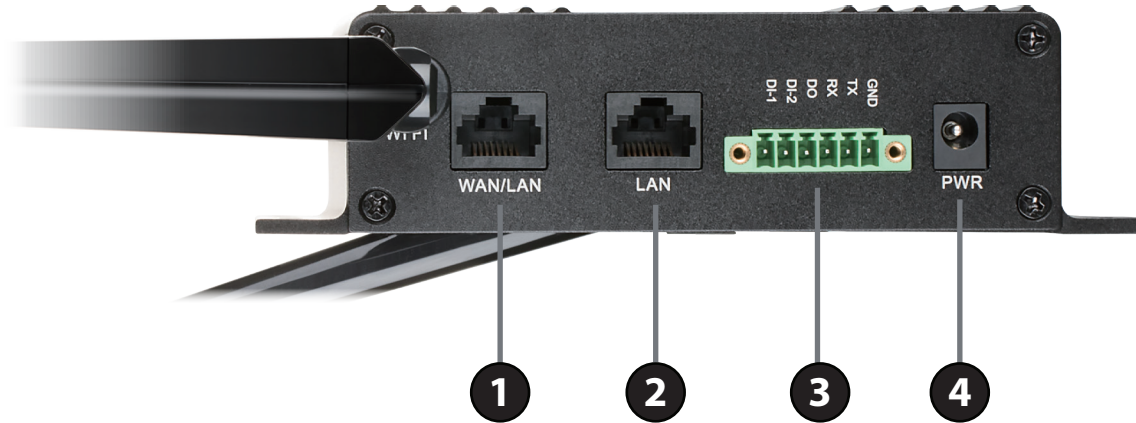
1	**Ethernet WAN/LAN Port**	This is a standard 10/100 Mbps Ethernet WAN/LAN port to connect any device via Cat 5/5e/6 RJ-45 cables.
2	**Ethernet LAN Port**	Standard 10/100 Mbps Ethernet LAN port.
3	**DI/DO*/Grounding Port (Optional Software Support)**	DI/DO/Grounding port. From left to right: DI-1, DI-2, DO, RX, TX, Grounding.
4	**DC Power Port**	5.5 mm barrel connector for power.

* DI/DO interfaces currently require custom firmware to function.

Top Panel

1	**SIM Card Slot Cover**	Covers the slots for SIM cards A and B.			
2	**SIM Card LEDs**	Indicates whether a SIM card has been inserted into slots A or B.			
3	**Signal**	Green	Indicates strong signal.	Red	Indicates weak signal.
		Amber	Indicates fair signal.	Off	Indicates no signal.
4	**Internet**	Solid Green	Connected to SIM A LTE Network.	Flashing Blue	Fallback to SIM B 3G/2G network.
		Flashing Green	Fallback to SIM A 3G/2G network.	Solid Blue	Connected to SIM B LTE Network
		Off	No service/SIM Error/APN Error		
5	**Power**	A green LED indicates the DWM-312W is receiving power.			
6	**Reset Button**	Press and hold for 3 seconds to reset.			

Dual-SIM Slots

1	**SIM A**	Primary SIM card slot.
2	**SIM B**	Secondary SIM card slot.

DIN Mounting / SMA Connectors
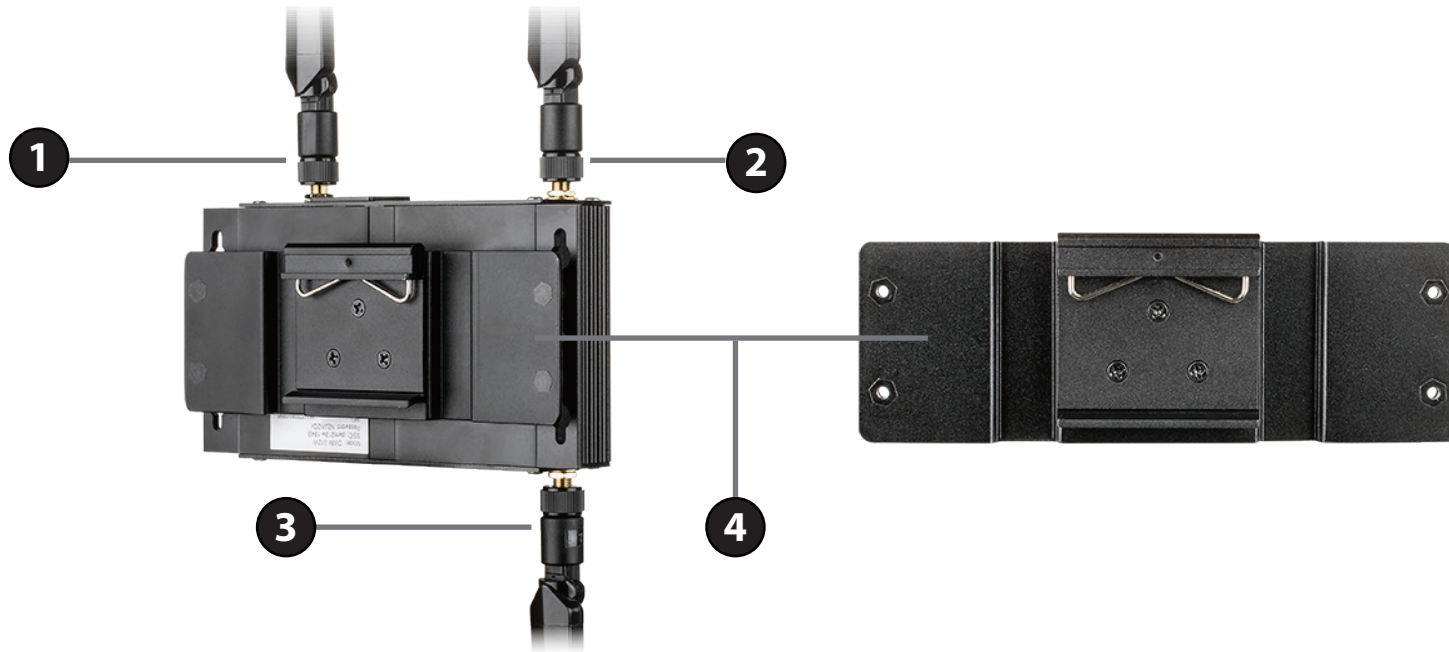
1	**SMA Connector AUX**	SMA female connector - auxiliary antenna.
2	**SMA Connector MAIN**	SMA female connector - primary antenna.
3	**SMA Connector WIFI**	SMA male connector - Wi-Fi antenna.
4	**DIN Mounting Unit**	The mounting unit used to fix the DWM-312W in place.

Installation

This section will guide you through the installation process. Placement of the router is very important. Do not place the router in an enclosed area such as a closet, cabinet, or in an attic or garage.

Before You Begin

Observe the following precautions to help prevent shutdowns, equipment failures, and personal injury:

- Install the DWM-312W in a cool and dry place. Refer to the technical specifications in the user manual for the acceptable operating temperature and humidity ranges.

- Install the router in a site free from strong electromagnetic sources, vibration, dust, excessive moisture, and direct sunlight.

- Place antennas in an unobstructed area with clear mobile signal. Avoid metal boxes, brick walls, and other dense materials. It is recommended to use the web interface to confirm signal strength before permanent installation.

- Visually inspect the power connector and make sure that it is fully secure.

- Do not stack any devices on top of the router.

Attaching the External Antennas

The DWM-312W requires three external antennas to function correctly. The included LTE antennas are interchangeable, but third-party antennas may require connection to specific ports.

1. Attach the antennas labeled **LTE** to the SMA connectors labeled **MAIN** and **AUX**. Attach the antenna labeled **WIFI** to the SMA connector labeled **WIFI.** Turn clockwise to fasten the antenna.

2. Position the router where it will receive an optimal signal. Arrange the antennae so they point upward.

Establishing a Connection

The DWM-312W is equipped with dual-SIM slots and a WAN Ethernet port. You can use either to establish an Internet connection.

To establish a wired connection, first plug one end of an Ethernet cable into your modem, then connect the other end to the port on the DWM-312W labeled WAN/LAN.

To establish a mobile connection, you will need an active SIM card with an Internet connection.

1. Insert a micro-SIM card into the slot labelled **SIM A** with the contacts facing down**.** If you wish to install a second SIM card, insert it into the slot labelled **SIM B**.

2. Gently press the micro-SIM into the slot until it locks into place. To remove, press again and the SIM card will be ejected.

Note: The DWM-312W must be configured from the web UI before an Internet connection can be established.

Configuration
Getting Started

To access the configuration utility, open a web browser such as Internet Explorer and enter the address of the router (**192.168.0.1** by default). Connecting your computer to the router's LAN port with an Ethernet cable will open the configuration utility automatically.

To log in to the configuration utility, enter the default username **admin** and the default password **admin**.

If this is your first time logging in, you will be prompted to create a new password, which must be between 8 and 30 characters and must be different from the default password.

Note: *If you get a* **Page Cannot be Displayed** *error, please refer to the* **Troubleshooting** *section for assistance.*

The Home Screen
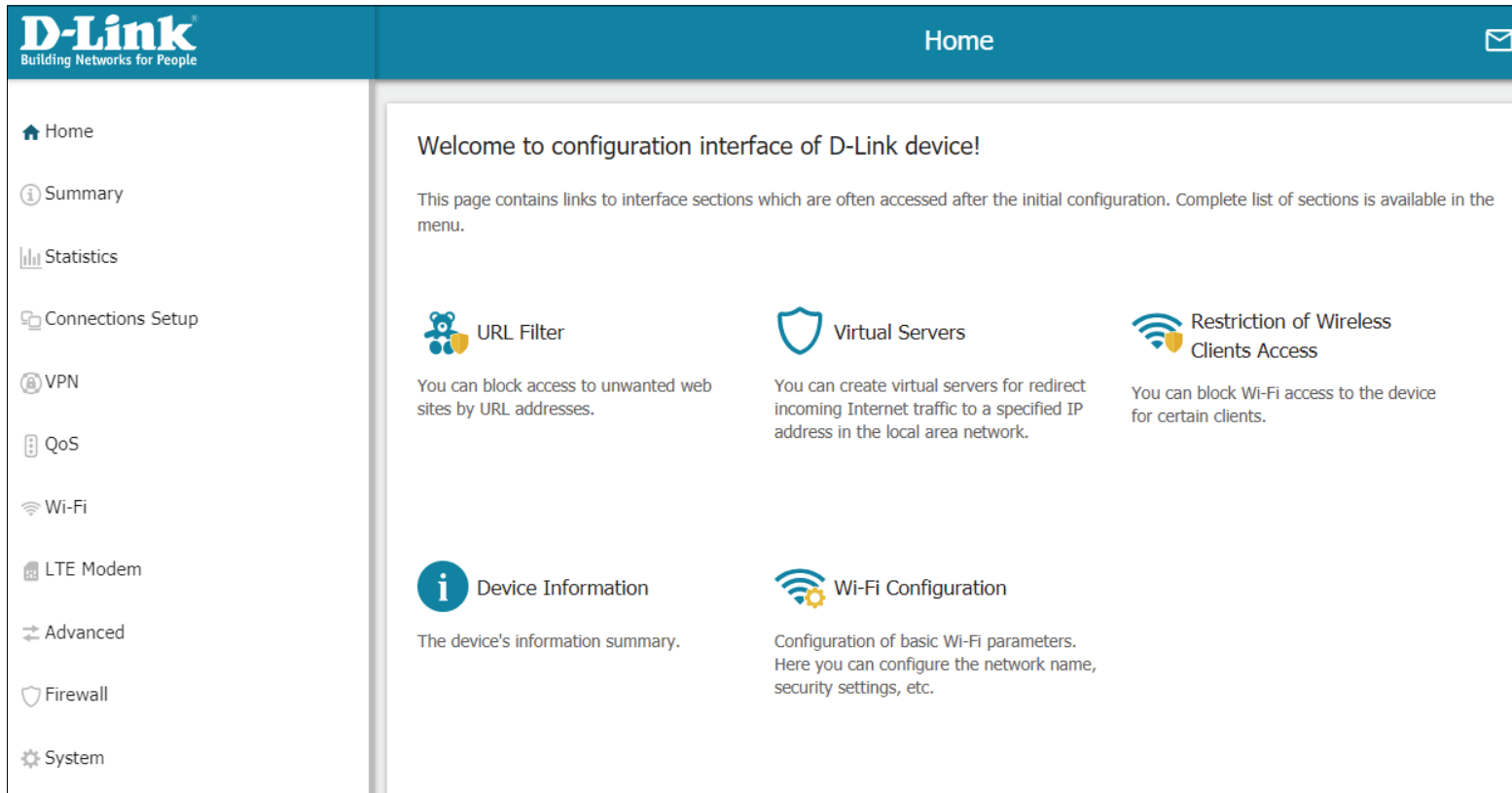
Once you have successfully logged in, you will see the **Home** page. You can use this page to navigate to the different configuration sections of the web interface.

There is a menu in the sidebar on the left side of the page. Clicking on one of the links in the sidebar will take you to the appropriate configuration section.

On each page, fill out the desired settings and click **Apply** when you are done or **Refresh** to revert to the old settings.

Summary

The Summary menu is used to display statistics from different functions of the router.

Device Information

This displays basic system information and the uptime of the router.

Device Information

Model	The model number of the router.
Hardware revision	The hardware revision of the router.
Firmware version	The firmware version of the router.
UI version	The UI version of the router.
Serial number	The serial number of the router.
Summary	The root filesystem image for the router.
Uptime	The amount of time that the router has been on for.

Device Information

Model: DWM-312W

Hardware revision: A

Firmware version: 4.0.2

UI version: 1.14.0.a51c328-embedded

Serial number: AT311019A0041

Summary: Root filesystem image for DWM_312W_MT7620A_WW

Uptime: 00h. 01min.

WLAN

This displays WLAN status information.

WLAN

Status	The status of the SSID.
Broadcasting	The broadcasting status of the SSID.
Additional networks	The number of additional Wi-Fi networks the router is broadcasting.
Network name (SSID)	The name of the SSID.
Security	The encryption modes supported by the SSID.

Wi-Fi 2.4 GHz

Status:	On ●
Broadcasting:	On ●
Additional networks:	0
Network name (SSID):	DWM-312W-03D5
Security:	WPA-PSK/WPA2-PSK mixed 🔒

WAN

The WAN menu is used to display status information for the WAN interfaces on the router.

WAN

Connection type The type of the WAN connection.

Status The status of the WAN connection.

IP address The IP address of the WAN connection.

LAN

The LAN menu is used to display status information for the LAN interfaces on the router.

Network

This displays network status information.

LAN

LAN IPv4	The IPv4 address of the LAN connection.
LAN IPv6	The IPv6 address of the LAN connection.
Wireless connections	The number of wireless connections connected to the device.
Wired connections	The number of wired connections connected to the device.

LAN

LAN IPv4:	192.168.8.254
LAN IPv6:	fd01::1/64
Wireless connections:	-
Wired connections:	1

LAN Ports

This displays LAN port status information.

LAN Ports

    Interface   The name of the LAN interface.

      Status   The status of the LAN interface.

LTE Modem

This section contains a link to the LTE Modem page (also available in the sidebar). Click this link to view information for and configure the LTE modem and SIM cards.

Statistics

The Statistics menu is used to display more in-depth statistics for the different interfaces on the router.

Network Statistics

This displays the network statistics for the router's various interfaces.

Network Statistics

Network Statistics				
Name	IP - Gateway	Rx/Tx	Rx/Tx errors	Duration
LAN	IPv4: 192.168.8.254/24 – 192.168.8.254 IPv6: fd01::1/64 – -	5.54 Mbyte / 25.46 Mbyte	0 / 0	-
dynamic_Internet	IPv4: 172.17.6.51/24 – 172.17.6.254	26.05 Mbyte / 8.53 Mbyte	0 / 0	1 h., 20 min
WIFI_2.4GHZ	-	4.24 Mbyte / -	0 / 0	-
WIFI_5GHZ	-	10.43 Mbyte / -	0 / 0	-

Name The name of the interface.

IP - Gateway The network gateway of the interface.

Rx/Tx The number of bytes and packets sent/received on the connection.

Rx/Tx errors The number of errors and discarded packets on the connection.

Duration The duration the connection has been active.

DHCP

This displays the router's DHCP (Dynamic Host Configuration Protocol) status. This consists of the information on computers that have been identified by hostnames and MAC addresses and have received IP addresses from the DHCP server, as well as their IP address expiration periods (the lease time).

DHCP

DHCP			
Hostname	IP address	MAC	Expires
08831PCWIN10	192.168.8.150	6C:4B:90:BF:C3:21	22h 31m 19s

Hostname   The name of the DHCP host.

IP Address   The IP address assigned to the host.

MAC   The MAC address of the host.

Expires   The lease time until the IP address expires.

Routing Table

This page displays routing information. The table contains destination IP addresses, gateways, subnet masks, and other data.

Routing Table

Interface The name of the interface.

Destination The destination IP address.

Subnet Mask The subnet mask of the route.

Gateway The gateway of the route.

Flags The routing table flag.

Metric The metric used by a router to make routing decisions.

Routing Table

Interface	Destination	Subnet mask	Gateway	Flags	Metric
dynamic_Int...	0.0.0.0		0.0.0.0	172.17.6.254	UG	100
dynamic_Int...	172.17.6.0	255.255.255.0	0.0.0.0	U	0
dynamic_Int...	172.17.100.71	255.255.255.255	172.17.6.254	UGH	0
LAN	192.168.8.0	255.255.255.0	0.0.0.0	U	0
LAN	224.0.0.251	255.255.255.255	0.0.0.0	UH	0
LAN	224.0.0.252	255.255.255.255	0.0.0.0	UH	0
LAN	fd01::/64		::	U	256
LAN	fd00::/8		::	U	256
LAN	fe80::1542:5c87:9cb7:b220/128		::	U	0

Clients and Sessions

This displays statistics on the clients connected to the router and their current sessions.

Clients

MAC	The MAC address of the client.
IP address	The IP address of the client.
Hostname	The hostname of the client.
Flags	The flags that apply to the client.
Interface	The network interface the client is connected to.

Port Statistics

This page displays information on the router's ports and the traffic passing through them.

Port Statistics

Port	The type of port.
Status	The status of the port.
Traffic sent	The amount of traffic sent through the port in Mb.
Traffic received	The amount of traffic received through the port in Mb.

Click a port to display in-depth information about it.

Port Statistics

You can view statistics for traffic passing through ports of the device. This information can be used for diagnosing connection problems.

Port	Status	Traffic sent, Mbyte	Traffic received, Mbyte
WAN/LAN	Connected	649	3057
LAN	Connected	1866	784

Basic Counters

Traffic sent	The traffic sent across the specified port (in bytes).
Traffic received	The traffic received on the specified port (in bytes).
Packets sent	The number of packets sent on the specified port.
Packets received	The number of packets received on the specified port.
Number of errors occurred while sending	The number of errors that occurred while sending packets on the specified port.
Number of errors occurred while receiving	The number of errors that occurred while receiving packets on the specified port.

Additional Counters for Received Packets

Drop events	The number of events in which packets were dropped by the probe due to a lack of resources.

Basic Counters

Traffic sent (byte)	680973087
Traffic received (byte)	3206035756
Packets sent	13342
Packets received	8692
Number of errors occurred while sending	0
Number of errors occurred while receiving	1

Additional Counters for Received Packets

Drop events	0

ⓘ *The total number of events in which packets were dropped by the probe due to lack of resources*

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 to.

IPv4/IPv6

IP address The address of the active multicast group to which the device is subscribed.

Interface The interface over which the device is subscribed.

IPv4

IP address	Interface
239.255.255.250	LAN

IPv6

IP address	Interface

Connections Setup

WAN

On this page you can configure your Internet connection. If you are not sure which settings to use, please contact your Internet Service Provider (ISP). Note that the DWM-312W requires either an Ethernet connection or a SIM card and active cellular Internet service to connect to the Internet.
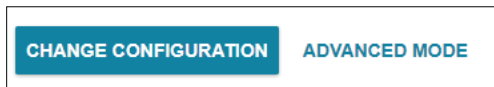
WAN

Connection type	The connection type of the WAN connection.
Status	The status of the WAN connection.
Interface	The interface of the WAN connection (WAN Ethernet port or mobile SIM card).
IP address	The IP address of the WAN interface.
Subnet mask	The subnet mask of the interface.
Gateway IP	The IP address of the default gateway for the WAN connection.

Connection type:	Dynamic IPv4
Status:	Connected ●
Interface:	WAN
IP address:	172.17.6.42
Subnet mask:	255.255.255.0
Gateway IP address:	172.17.100.71

Change Configuration

To change the configuration of the WAN connection, click the **Change Configuration** button.

CHANGE CONFIGURATION	ADVANCED MODE

Change Configuration

This menu is used to change the configuration of your connection.

General Settings

Connection type   The connection type of the WAN connection.

Interface   The interface of the WAN connection (i.e. WAN Ethernet port or mobile SIM card).
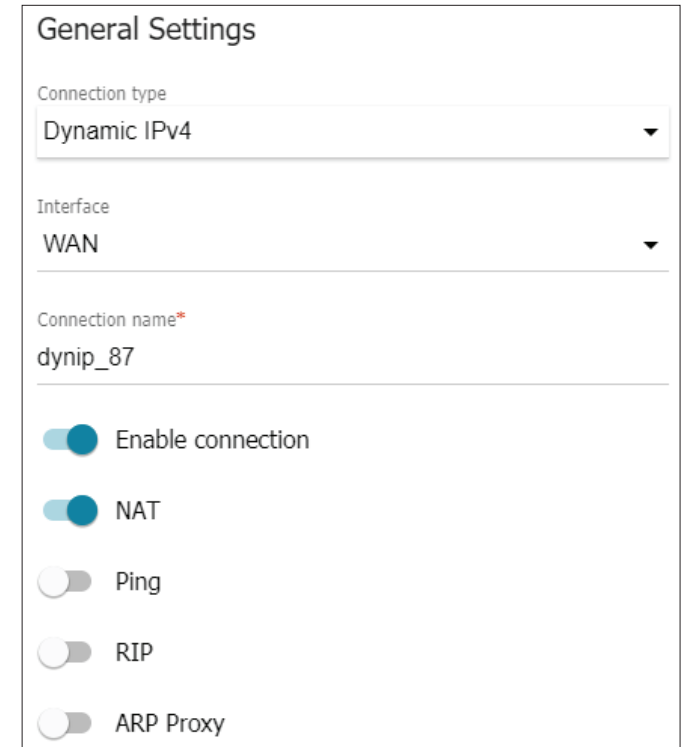
Connection name   The name of the connection.

Enable connection   Toggle this to enable or disable the selected connection.

NAT   Toggle this to enable or disable the NAT function of the router, allowing it to act as a link to your Internet connection, but without routing functions.

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

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

ARP Proxy   Toggle this switch to enable the Address Resolution Protocol proxy. This setting is disabled by default.

Ethernet

MAC address The device's MAC address.

MTU The Maximum Transmission Unit. You may need to change this for optimal performance.

To clone the MAC address of your network interface card, check the option on this page that says **Clone MAC address of your NIC**.

Click **Restore Default MAC Address** to restore your router's original MAC address if you have changed it.

Ethernet

MAC address*
00:11:22:33:44:54

◯ Clone MAC address of your NIC (94:C6:91:7F:E2:28)

RESTORE DEFAULT MAC ADDRESS

MTU*
1500

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

Secondary DNS 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.

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

IPv4

🔵 Obtain DNS server addresses automatically

Primary DNS
192.168.168.249

Secondary DNS
192.168.168.250

Vendor ID
dslforum.org

Hostname

Static IPv4

IP address Enter the IP address provided by your ISP.

Subnet mask Enter the subnet mask provided by your ISP.

Gateway IP address Enter the default gateway address provided by your ISP.

Primary DNS Enter the primary DNS server address assigned by your ISP.

Secondary DNS Enter the secondary DNS server IP address assigned by your ISP.

IPv4

IP address*
172.17.6.42

Subnet mask*
255.255.255.0

Gateway IP address*
172.17.100.71

Primary DNS*
192.168.168.249

Secondary DNS
192.168.168.250

Dynamic IPv6

Get IPv6	Choose **Automatically**, **IPv6 by DHCPv6**, **by SLAAC**, or **DHCPv6 PD** depending on your ISP's specifications. The default setting is **Automatically**.
Enable prefix delegation	Toggle this to enable or disable IPv6 prefix delegation. This setting is enabled by default.
Obtain DNS server addresses automatically	Disable this to enter the DNS server address manually. This setting is enabled by default.
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.

Static 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.

PPPoE

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).

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

Encryption protocol Select the encryption scheme to use. The options are **No encryption, MPPE 40 128-bit, MPPE 56-bit,** and **MPPE 128-bit.**

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.

PPPoE

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

LCP falls   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.

LCP interval*
30

LCP fails*
3

Dial on demand

PPPoE

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.

PPPoE (IPv4/Dual Stack)

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

Secondary DNS Specify the secondary DNS server IP address assigned by your ISP.
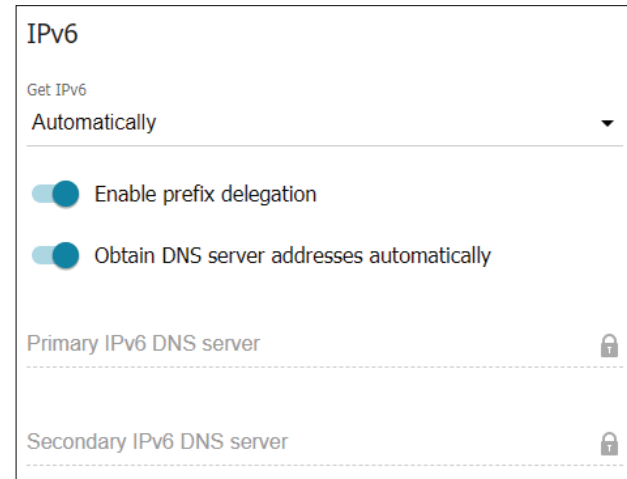
PPPoE (IPv6/Dual Stack)

Get IPv6 Choose **Automatically**, **IPv6 by DHCPv6**, **by SLAAC**, or **DHCPv6 PD** depending on your ISP. The default setting is **Automatically**.

Enable prefix delegation Toggle this to enable or disable prefix delegation. This setting is enabled by default.

Obtain DNS server addresses automatically Disable this to enter the DNS server address manually. This setting is enabled by default.

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.

PPTP

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.

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.

Encryption protocol Choose **No Encryption**, **MPPE 40 125 bit**, **MPPE 40 bit**, or **MPPE 128 bit**.

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

For the remainder of the PPTP configuration options, refer to pages 30-32.

PPP

Without authorization

Username*

Password*

VPN server address*

MTU*
1456

Encryption protocol
No encryption

Authentication protocol
AUTO

Keep Alive

L2TP

For the L2TP configuration options, refer to pages 30-32.

L2TP over IPsec

Pre-shared key	Specify a pre-shared key.
Enable PFS	Toggle this switch to enable Perfect Forward Secrecy for second phase
Specify connection port	Toggle this to set the connection port manually. The default is 1701.

For the remainder of the L2TP over IPsec options, refer to pages 30-32.

Mobile Internet

Modem/SIM card selection

Selecting a single SIM card, either **SIMA** or **SIMB,** will connect over a single SIM only. Selecting a backup option will change cause the connection to switch to the specified backup if the primary SIM cannot connect after the specified time.

Click a SIM card to display options on the configuration page.

Modem settings

MODEM/SIM CARD SELECTION

Modem/SIM card selection   ✕

Modem 1

SIM: SIMA
IMSI: 466977605386423

Modem 1

SIM: SIMB
IMSI: -
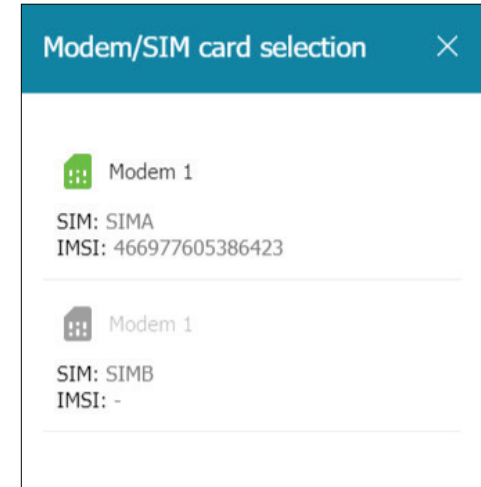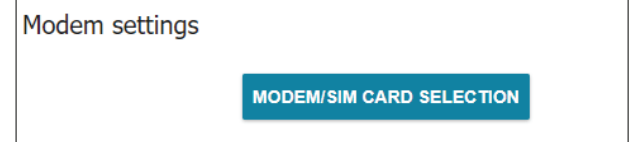
SIM Card Configuration

Mode Specify the mode. The options are **Auto, 2G / 3G, 3G / 4G, 4G, 3G, 2G.**

APN This is the Access Point Name (APN) and is a network name assigned by your ISP.

Dial number The number to dial to access the service supplied by your ISP.

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

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

Username If **Without authentication** is disabled, enter the username provided by your ISP.

Password If **Without authentication** is disabled, enter the password provided by your ISP.

IPv4 Specify whether the connection should be **IPv4, IPv6, or Dual.**

Mode
Auto

APN

Dial number
*99#

Without authorization

Authentication protocol
PAP

Username

Password

Type
IPv4

PPP

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 1370.

Keep Alive Toggle this switch to maintain your connection when no activity is detected.

LCP internal 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.

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

PPP

MTU*
1370

Keep Alive

LCP interval*
30

LCP fails*
3

Dial on demand

Maximum idle time (in seconds)

PPP debug

Health Check

Enable   Toggle this status to automatically check the status of your connection with the Ping command.

The maximum number of attempts   Specify the maximum number of Ping attempts to make when performing a health check.

Timeout   Specify the maximum response time for one attempt.

Addresses   Add addresses to attempt to reach with the Ping command.

Health Check

Enable

ⓘ *Checking connection status using the ping command*

The maximum number of attempts

10

Timeout (in seconds)

3

ⓘ *The maximum response time for one attempt*

Addresses

ⓘ *List is empty (Default 8.8.8.8)*

Advanced Mode

To select a different default gateway, configure your router's IGMP settings, or select a different connection to configure, click **Advanced Mode**.

Advanced Mode

Default Gateway IPv4 The default gateway that serves as an access point to another network in Internet Protocol version 4 (IPv4).

Default Gateway IPv6 The default gateway that serves as an access point to another network in Internet Protocol version 6 (IPv6).

IGMP Refer to page 87.

Connections List A list of connections on the router.

LAN

This section allows you to change the local network settings of your router and to configure the DHCP Server settings. **IPv4** and **IPv6** are configured separately.

IPv4

Local IP Address

IP address	The local IP address of the device.
Mask	The subnet mask of the connection.
Hostname	The web-based interface using the domain name. Enter this name with a dot and a slash at the end in the address bar of the web browser (for example, **dlinkrouter.local./**)

Local IP Address

IP address*
192.168.0.1

Mask*
255.255.255.0

Hostname
dlinkrouter.local

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

Dynamic IP Addresses

Model of dynamic IP address assignment	The mode of dynamic IP assignment. Choose between **Disable**, **DHCP server** or **DHCP relay**. The default is **DHCP server.**
Start IP	The start of the IP range.
End IP	The end of the IP range.
Lease time	How long the IP can be leased for, in minutes.

Dynamic IP Addresses

Mode of dynamic IP address assignment
Server ▾

Start IP*
192.168.0.100

End IP*
192.168.0.199

Lease time (in minutes)*
1440

**DNS relay** Enable or disable the DNS relay.

ARP Proxy Toggle this switch to enable the Address Resolution Protocol proxy. This setting is disabled by default.

DHCP Options Specify DHCP options to apply to a given client.

Static IP Addresses Specify the IP address you wish to reserve for a given client.

Hosts Specify the hostname you would like to use for a given client.
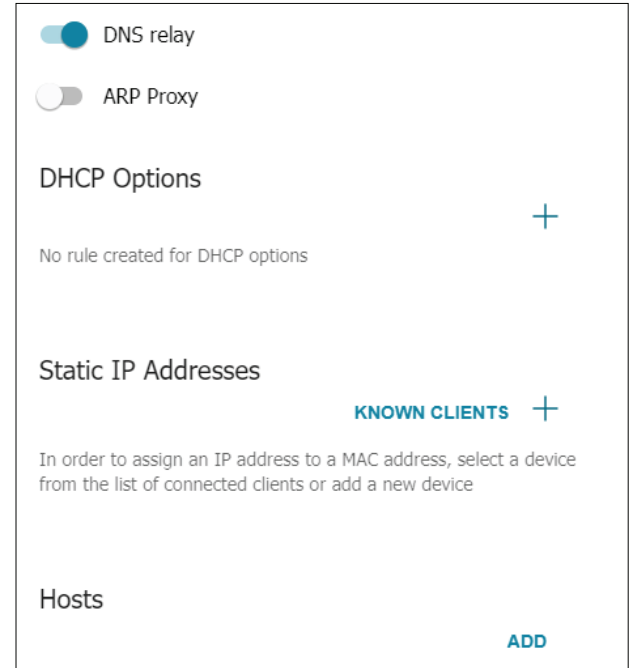
IPv6

Local IPv6 Address

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

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

The default route for LAN clients Toggle this option to make this the default route for LAN clients.

Local IPv6 Address   +   🗑

Dynamic IPv6 Addresses

Mode of dynamic IPv6 address assignment
Stateless   ▼

Lease time (in minutes)*
5

⬜ The default route for LAN clients

WAN Reservation

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

WAN Reservation

Basic connection From the drop-down list, select a WAN connection which will be used as the main one.

Backup connections From the drop-down list, select a WAN connection which will be used as the reserve one.

Check interval A time period (in seconds) between attempts to check the status of the main connection. By default, the value 10 is specified.

Timeout check A time period (in milliseconds) for an attempt to check the status of the main connection. At the end of this period the router's internal system makes a decision to enable/disable the reserve channel. By default, the value 1000 is specified

Number of checks: The maximum number of checks to perform. By default, the value 3 is specified.

Enable

Basic connection

dynip_67

Backup connections

ⓘ *Only one connection was created. Additional connections can be added to the page Connections Setup / WAN*

Check interval (in seconds)*

30

Timeout check (in milliseconds)*

1000

Number of checks*

3

Test hosts

8.8.8.8

ADD HOST

Traffic Balancing

This page allows you to direct your router to balance traffic between multiple WAN connections to ensure an even distribution of bandwidth.

Enable Toggle this to enable or disable traffic balancing.

Connection Specify the connection to apply a traffic adjustment rule to.

Traffic adjustment Select **Auto** or **Manual**. If you select **Manual**, you must also enter a traffic weight.
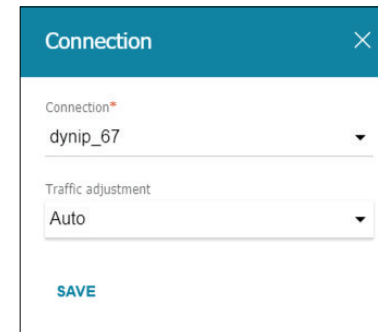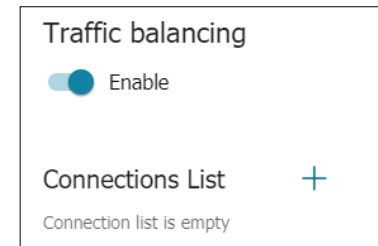
VPN

The DWM-312W supports a number of virtual private network (VPN) protocols. VPNs are used to create virtual private tunnels to remote VPN gateways. The tunnel technology supports data confidentiality, data origin authentication, and data integrity of network information by utilizing encapsulation protocols, encryption algorithms, and hashing algorithms. Supported protocols as a client include: IPSec, PPTP, L2TP, and GRE. Supported protocols as a server include PPTP and L2TP.

IPSec

IPSec

Enable	Toggle this to enable or disable IPsec client functionality.

Tunnels

|	
Add	Click here to add a new IPsec client, described in **IPsec/Adding** on page 49.
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	Indicates the hashing algorithm used by the tunnel.
Interface	Indicates the interface over which the tunnel operates.
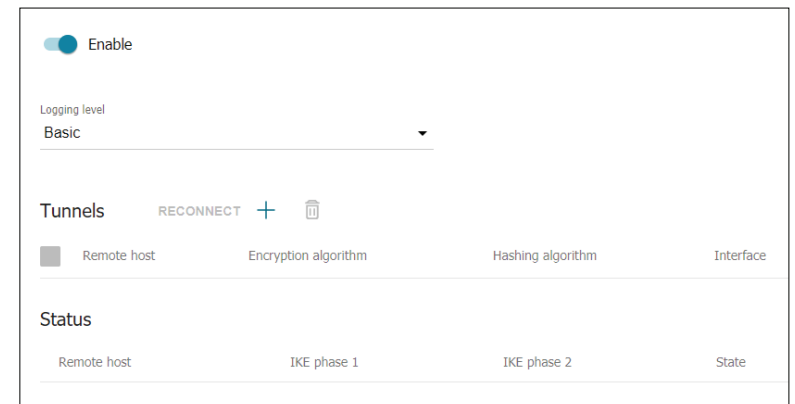
Status

Remote host   Indicates the status of the remote host of the tunnel.

IKE phase 1   Indicates the status of Internet Key Exchange (IKE) phase 1.

IKE phase 2   Indicates the status of IKE phase 2.

State   Indicates the tunnel status.

Status

Remote host	IKE phase 1	IKE phase 2	State

IPsec/Adding

General Settings

Dynamic IPsec	Toggle this switch to enable Dynamic IPsec.
Type	Select between **Address** and **FQDN.**
Remote host	Enter the IP address of the remote host. If **Dynamic IPsec** is enabled, this field will be disabled.
Identifier value	Specify the local identifier value.
Pre-shared key	Specify a pre-shared key.
Local WAN	Specify the WAN from the drop-down list.
NAT Traversal	Specify either **Disabled, Enabled** or **Force.**
Type	Specify the IPsec mode of operation (either **TUNNEL** or **TRANSPORT**).

The First Phase

Encryption mode	Select the encryption mode to use. The default is **CBC**.
First phase encryption algorithm	Choose the encryption algorithm to use for the first phase.
Hashing mode	Choose the hashing mode to use for the first phase.
Size of hash	Select the hash size to use.
Hashing algorithm	Select the hash function to use from **MD5, SHA1,** and **SHA2** (recommended).
First phase DHgroup type	Specify the DHgroup type for the first phase from the drop-down list.
IKE-SA lifetime	Enter a value between 60 and 864000 seconds.
IKE version	Select either IKE version 1 or 2. IKEv2 is recommended.

Encryption mode

CBC

First phase encryption algorithm

DES

Hashing mode

HMAC

Size of hash

96

Hashing algorithm

MD5

First phase DHgroup type

MODP768

IKE-SA lifetime*

10800

IKE version

1

Dead Peer Detection

Enable	Toggle this to enable dead peer detection.
DPD delay	Enter the DPD delay in seconds.
DPD timeout	Enter the DPD timeout in seconds.
TCP MSS	Select either **Manual** or **Path MTU discovery**.

The Second Phase

Encryption mode Select the encryption mode to use. The default is **CBC**.

Second phase encryption algorithm Choose the encryption algorithm to use for the second phase.

Hashing mode Choose the hashing mode to use for the second phase.

Size of hash Select the hash size to use.

Hashing algorithm Select the hash function to use from **MD5, SHA1,** and **SHA2** (recommended).

Enable PFS Toggle this switch to enable Perfect Forward Secrecy for the second phase.

Second phase DHgroup type Specify the DHgroup type for the second phase from the drop-down list.

IPsec-SA lifetime Enter a value between 60 and 864000 seconds.

Encryption mode
CBC

Second phase encryption algorithm
DES

Hashing mode
HMAC

Size of hash
96

Hashing algorithm
MD5

Enable PFS

Second phase DHgroup type
MODP768

IPsec-SA lifetime*
3600

GRE

Tunnel settings

Name	Enter the name of the IP tunnel.
IP address	Enter the IP address of the virtual interface the tunnel will use.
Mask	Enter the subnet mask to use on the virtual interface.
Interface	Select the interface to use to establish the GRE tunnel.
Remote IP	Enter the IP address of the remote end of the tunnel.
MTU	Specify the Maximum Transmission Unit of the connection. The default setting is 1400.
Allow traffic GRE -> LAN	Toggle this to disable traffic over the LAN interface.

Static route settings

Remote LAN IP address	Enter the IP address to use for the local LAN subnet.
Remote LAN mask	Enter the IP mask for the remote LAN subnet.
Remote GRE interface IP address	Enter the IP address for the remote GRE interface.

Name*

GRE_68

IP address*

Mask*

Interface*

Not selected

Remote IP*

MTU*

1400

Allow traffic GRE -> LAN

Remote LAN IP address*

Remote LAN mask*

Remote GRE interface IP address*

PPTP/L2TP Servers

PPTP

VPN network

<table>
<tr><td>**Server local IP address**</td><td>Enter an IP address for the VPN server.</td></tr>
<tr><td>**Start client IP**</td><td>Enter a starting address for the range of IPs to be assigned to clients.</td></tr>
<tr><td>**End client IP**</td><td>Enter an ending address for the range of IPs to be assigned to clients.</td></tr>
<tr><td>**Interface**</td><td>Select the interface to use from the drop-down.</td></tr>
<tr><td>**Enable authentication**</td><td>Toggle this to enable authentication and select a protocol.</td></tr>
<tr><td>**Enable MMPE**</td><td>Toggle this to enable MMPE encryption.</td></tr>
</table>

VPN network

Server local IP address*

Start client IP*

End client IP*

Interface*
Not selected

Authentication
Enable authentication

MPPE
Enable MPPE

Access policies and NAT

Toggle these settings to **Allow** or **Deny** to allow clients using the VPN to send or receive data using the interface in question.

Advanced settings

Maximum number of connections Specify the maximum number of connections.

MTU Specify the Maximum Transmission Unit of the connection. The default setting is 1400.

Enable debug mode Toggle this switch to enable debug mode.

VPN <-> LAN*
Unknown

VPN <-> WAN*
Unknown

VPN -> Router*
Unknown

NAT VPN -> WAN

NAT VPN -> LAN

Advanced settings

Maximum number of connections*
100

MTU*
1400

Enable debug mode

DNS

Obtain DNS server addresses automatically   Toggle this to obtain DNS server addresses automatically.

Primary DNS   If the previous option is disabled, enter the primary DNS server address.

Secondary DNS   If the previous option is disabled, enter the secondary DNS server address.

DNS

• Obtain DNS server addresses automatically

Primary DNS
192.168.168.249

Secondary DNS
192.168.168.250

L2TP

VPN network

Server local IP address	Specify the IP address the L2TP server should use as the client gateway.
Start client IP	Specify the start of the IP range.
End client IP	Specify the end of the IP range.
Interface	Select the interface to use for this VPN.
Enable authentication	Toggle this to enable authentication.
MMPE	Toggle this to enable or disable MMPE security.

For the rest of the L2TP options, refer to page 53.

VPN network

Server local IP address*

Start client IP*

End client IP*

Interface*
Not selected

Authentication

Enable authentication

MPPE

Enable MPPE

VPN Users

You can use this page to add VPN users to the router or modify existing users by changing their username or password.

EoGRE

EoGRE

Name Enter a name that will identify the EoGRE tunnel.

Remote IP address Specify the tunnel destination address.

Tagged Toggle this to specify whether the tunnel will be tagged or untagged.

Tag ID If **Tagged** is enabled, enter an ID that will identify the tag.

Interface Specify the interface over which the tunnel will be created.

MTU Specify the maximum transmission unit. The default is set to 1400.

QoS

The **QoS Engine** improves the performance of certain bandwidth or latency-sensitive applications by ensuring that such traffic is prioritized over other network traffic, such as FTP or web traffic.

Classifications

Classification Settings

Name	Specify the name to use to refer to the rule.
Destination Network	Specify the destination network for the rule to affect.
Source Network	Specify the source network for the rule to affect.
Interface	Specify the interface.
VLAN ID	Specify the VLAN ID.
COS	Enter the COS.
Protocol	Specify the protocol to use (e.g. TCP, ICMP, etc).

Destination MAC Address	Enter the MAC address of the destination.	
Source MAC Address	Enter the MAC address of the source.	
Destination port	Enter the destination port.	
Source port	Enter the source port.	
DSCP	Enter the Differentiated Service Code Point (DSCP) value.	
ToS	Enter the ToS value.	

Destination MAC Address
Source MAC Address
Destination port
Source port
DSCP
ToS

QoS Settings

This page allows you to set QoS settings for your router.

QoS Settings

Interface Specify the interface (e.g. LAN, WAN, etc).

Algorithm Select the algorithm to use from the drop-down menu.

Add class Click this to create a new class.

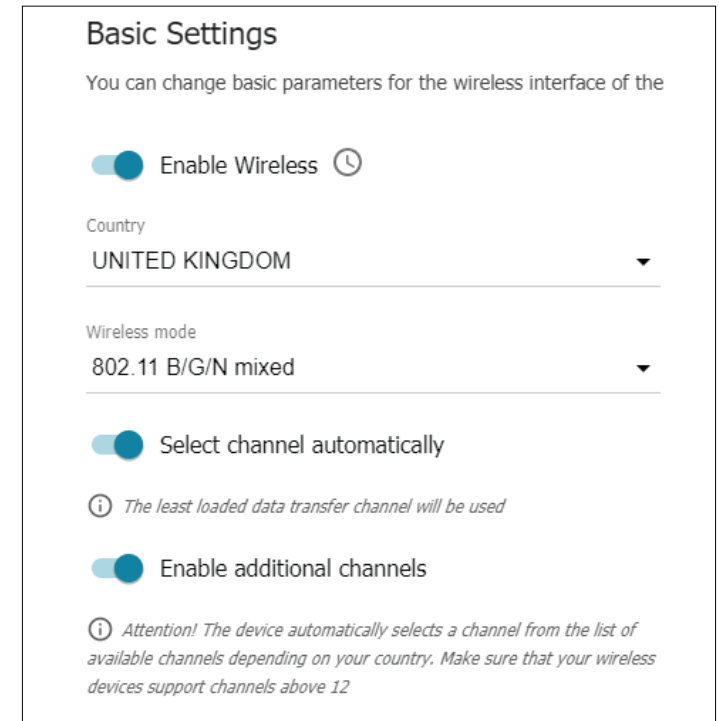**Number of classes** Specify the number of classes.

Wi-Fi

This allows you to configure the wireless networks broadcast by your DWM-312W and add new networks.

Basic Settings

Basic Settings

Enable Wireless — Check this box to enable wireless access. When you enable this option, the following parameters become available.

Country — The country that your network is located in.

Wireless mode — Select the IEEE 802.11 standard used by your wireless clients.

Select channel automatically — Enabling this feature will allow the router to automatically scan for the best wireless channel to use.

Enable additional channels — Select this if you would like to set your router to allow connections on other Wi-Fi channels.

Basic Settings

You can change basic parameters for the wireless interface of the

⬤ Enable Wireless ⏱

Country
UNITED KINGDOM ▼

Wireless mode
802.11 B/G/N mixed ▼

⬤ Select channel automatically

ⓘ *The least loaded data transfer channel will be used*

⬤ Enable additional channels

ⓘ *Attention! The device automatically selects a channel from the list of available channels depending on your country. Make sure that your wireless devices support channels above 12*
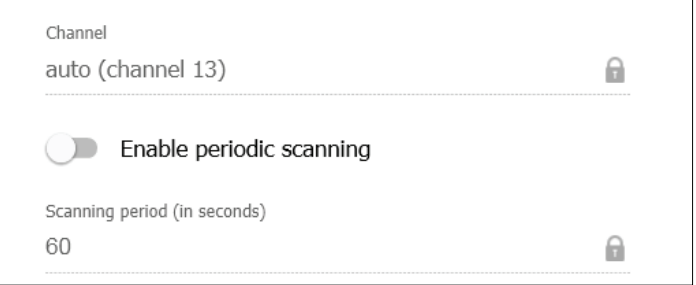
General Settings

Channel   If **Select Channel Automatically** is disabled, select the desired channel here.

Enable periodic scanning   Select this to set the router to automatically repeat the channel scan.

Scanning period   If the previous option is enabled, use this to instruct the router how often to perform the scan.

Channel
auto (channel 13)

Enable periodic scanning

Scanning period (in seconds)
60

Wi-Fi Network

Network name (SSID)	Also known as the SSID (Service Set Identifier), this is the name of your Wireless Local Area Network (WLAN).
Hide SSID	Check this to prevent this network from appearing in lists when users scan for Wi-Fi networks.
Max associated clients	Enter a number here to limit the number of clients allowed to connect to this network.
Enable shaping	Enable or disable traffic shaping to manage bandwidth.
Broadcast wireless network	Disable this to temporarily stop broadcasting the Wi-Fi network.
Clients isolation	Enable this to block traffic between devices connected to the access point.

Wi-Fi Network

Network name (SSID)*
DWM-312W-03D5

ⓘ The number of characters should not exceed 32

Hide SSID

ⓘ Wireless network name (SSID) will not appear in the list of available wireless networks with customers. Go to a hidden network, you can connect to manually specify the SSID of the access point

BSSID
00:11:22:33:44:55

Max associated clients*
0

Broadcast wireless network ⏰

ⓘ Allows you to enable/disable broadcast of this SSID without disconnecting the wireless module of the router. Can be used with the mode "Wi-Fi Client"

Clients isolation

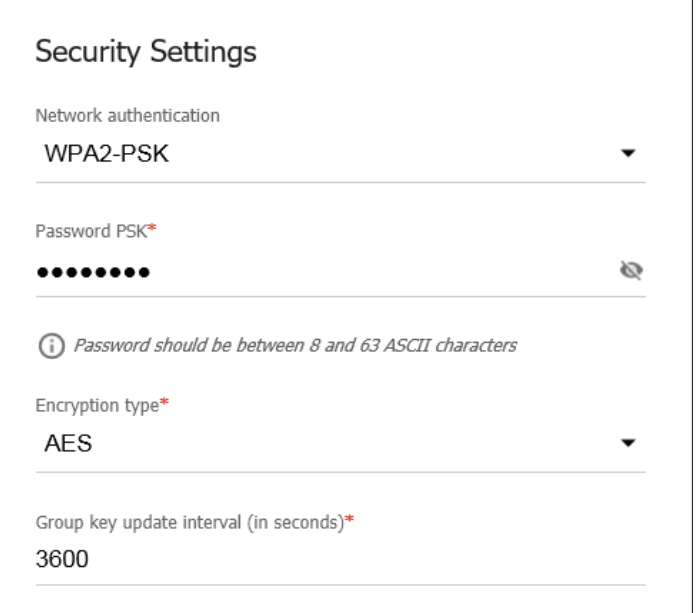ⓘ Block traffic between devices connected to the access point

Security Settings

Network authentication The encryption level to use to restrict access to your network.

Password PSK The password required to access your network.

Encryption type The cipher used to encrypt your data. This is set to **AES** by default.

Ground key update interval If you selected **WPA encryption**, use this to set the interval at which new encryption keys will be created.

Security Settings

Network authentication

WPA2-PSK ▾

Password PSK*

●●●●●●●● ⦸

ⓘ *Password should be between 8 and 63 ASCII characters*

Encryption type*

AES ▾

Group key update interval (in seconds)*

3600

Add Wi-Fi Network

Wi-Fi Network

Network name (SSID)	Also known as the SSID (Service Set Identifier), this is the name of your Wireless Local Area Network (WLAN).
Hide SSID	Check this to prevent this network from appearing in lists when users scan for Wi-Fi networks.
Max associated clients	Enter a number here to limit the number of clients allowed to connect to this network.
Enable shaping	Enable or disable traffic shaping to manage bandwidth.
Broadcast wireless network	Disable this to temporarily stop broadcasting the Wi-Fi network.
Clients isolation	Enable this to block traffic between devices connected to the access point.
Enable guest network	Toggle this switch to enable a guest network and isolate Wi-Fi clients from the LAN network.

Wi-Fi Network

Network name (SSID)*
DWM-312W-03D5

ⓘ The number of characters should not exceed 32

⬜ Hide SSID

ⓘ Wireless network name (SSID) will not appear in the list of available wireless networks with customers. Go to a hidden network, you can connect to manually specify the SSID of the access point

BSSID
00:11:22:33:44:55   🔒

Max associated clients*
0

🔵 Broadcast wireless network 🕐

ⓘ Allows you to enable/disable broadcast of this SSID without disconnecting the wireless module of the router. Can be used with the mode "Wi-Fi Client"

⬜ Clients isolation

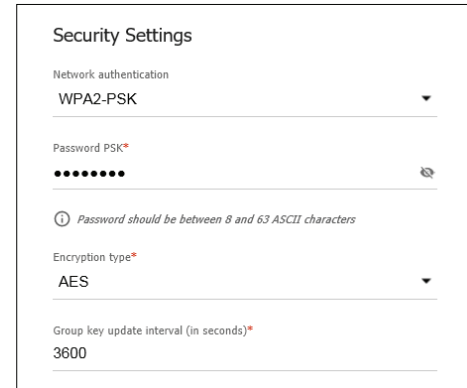ⓘ Block traffic between devices connected to the access point

Security Settings

Network authentication   The encryption level to use to restrict access to your network.

Password PSK   The password required to access your network.

Encryption type   The cipher used to encrypt your data. This is set to **AES** by default.

Ground key update interval   If you selected **WPA encryption**, use this to set the interval at which new encryption keys will be created.

Security Settings

Network authentication

WPA2-PSK ▾

Password PSK*

•••••••• 🚫

ⓘ *Password should be between 8 and 63 ASCII characters*

Encryption type*

AES ▾

Group key update interval (in seconds)*

3600

Client Management

This screen enables you to view information for and manage the devices that are connected to your Wi-Fi network.
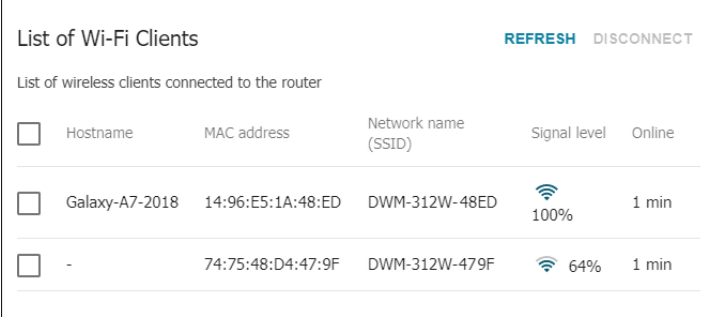
List of Wi-Fi Clients

Hostname	The name of the device.
MAC address	The device's MAC address.
Band	The band of the network that this device is connected to.
Network name (SSID)	The name of the Wi-Fi network that this device is connected to.
Signal level	The strength of the connection between the client and your network.
Online	The length of time the device has been connected to your network.

List of Wi-Fi Clients   REFRESH DISCONNECT

List of wireless clients connected to the router

	Hostname	MAC address	Network name (SSID)	Signal level	Online
☐	Galaxy-A7-2018	14:96:E5:1A:48:ED	DWM-312W-48ED	100%	1 min
☐	-	74:75:48:D4:47:9F	DWM-312W-479F	64%	1 min

WPS

On the **Wi-Fi / WPS** page, you can enable the Wi-Fi Protected Setup feature.

Before using the function, you need to configure one of the following authentication types:

- **Open (no encryption)**
- **WPA2-PSK**
- **WPA-PSK/WPA2-PSK with the AES encryption method**

WPS 2.4 GHz/5 GHz

Enable WPS   Toggle this switch to activate the WPS function.
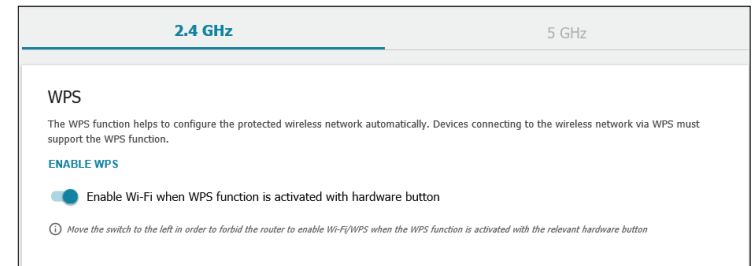
When the WPS function is enabled, the **Information** section will become available on the page.

Information

WPS state	The status of the router's WPS settings.
Default PIN code	The PIN code of the router. This parameter is used when connecting the router to a registrar to set the parameters of the WPS function.
Network name (SSID)	The name of the router's wireless network.
Network authentication	The network authentication type specified for the wireless network.
Encryption	The encryption type specified for the wireless network.
Password PSK	The encryption password specified for the wireless network.

Click on the **UPDATE** button to update the router's WPS settings.

Click on **RESET TO UNCONFIGURED** to reset the parameters of the WPS function.

Information

WPS state:	Configured
Default PIN code:	64860718
Network name (SSID):	DWM-312W-03D5
Network authentication:	WPA-PSK/WPA2-PSK mixed
Encryption:	AES
Password PSK:	dlinkwifi

UPDATE

WMM

On this 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.

Wi-Fi Multimedia

Work mode Select the desired mode (**Auto**, **Manual** or **Disabled**) from the drop-down list.

If you select the **Manual** mode, **Access Point** and **Station** tables will become available.

Access Point

The WMM function allows you to assign priorities to the four Access Categories (AC):

BK (Background) For low priority traffic (print jobs, file downloads, etc).

BE (Best Effort) For traffic from legacy devices or devices/applications that do not support QoS.

VI (Video) For video traffic.

VO (Voice) For voice traffic.

Parameters of the Access Categories are defined for both the router itself (in the **Access Point** section) and wireless devices connected to it (in the **Station** section).

Wi-Fi Multimedia

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

Work mode

Auto

Access Point

AC	AIFSN	CWMin	CWMax	TXOP	ACM	ACK
BK	7	15	1023	0	off	off
BE	3	15	63	0	off	off
VI	1	7	15	3008	off	off
VO	1	3	7	1504	off	off

Station

AC	AIFSN	CWMin	CWMax	TXOP	ACM
BK	7	15	1023	0	off
BE	3	15	1023	0	off
VI	2	7	15	3008	off
VO	2	3	7	1504	off

Client

This menu allows you to connect your router to a Wi-Fi network. Toggle the **Enable** switch to enable or disable the feature.
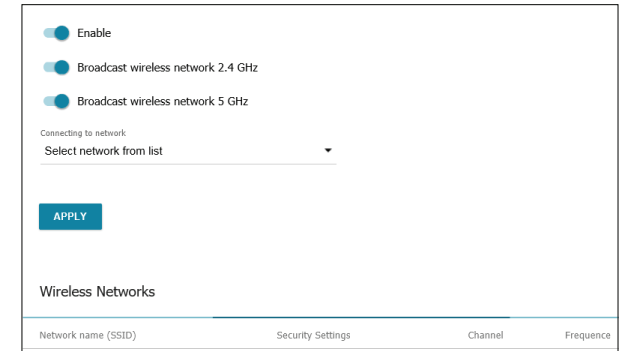
If enabled:

Broadcast wireless network 2.4/5 GHz Toggle these switches to enable or disable broadcasting on the frequency in question.

Connecting to network Use this drop-down to either select a network from the list below, or connect to a hidden network (entered manually).

Additional

Wi-Fi Additional Settings

Bandwidth
The channel width to use. Choose between **20 MHz** and **20/40 MHz**.

Autonegotiation 20/40
Toggle to enable or disable.

TX power (in percent)
Specify the router's transmission power as a percentage. Choose from 300%, 100%, 75%, 50%, 25%, and 10%.

Drop multicast
Toggle to enable or disable multicasting (IGMP, SSDP, etc) for the wireless network.

Adaptivity mode
Toggle to enable or disable adaptivity mode.

Wi-Fi Additional Settings

B/G protection	The 802.11b and 802.11g protection function is used to minimize collisions between devices on your wireless network. Choose from **Auto, Always On,** and **Always Off.**
Short GI	Guard interval (in nanoseconds). This parameter defines the interval between transmissions when the router is communicating with wireless devices. Select **Enable** to use a 400 ns short guard interval. Select **Disable** to use a standard 800 ns guard interval.
Beacon period (in milliseconds)	Specify the time interval (in milliseconds) between packets sent to synchronize the wireless network. The default setting is 100 ms.
RTS threshold (in bytes)	Specify the minimum size (in bites) of a packet for which an RTS frame can be 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.

B/G protection
Auto

Short GI
Enable

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

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.

Your current 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 checkbox to select it and then click **Delete**. If you wish to create a new rule, click the **Add** button.

Add Rule

SSID	Choose which SSID you want the rule to apply to.
MAC address	Specify the MAC address of the device.
Hostname	Specify the hostname of the device (optional).

LTE Modem

On the **LTE Modem** page, you can view data on the modem and select which SIM card to use.

Basic Settings

Information

Model	The model number of the modem.	
Vendor	The modem's vendor.	
IMEI	The International Mobile Equipment Identity. This is a unique number assigned to every mobile device.	
Interface	The interface of the modem.	
Revision	The device's revision number.	
Serial number	The serial number of the modem.	
	Click **Disable Power** to disable the LTE modem.	

Information	
Model	EC25
Vendor	Quectel
IMEI	866758049198613
Interface	unet0
Revision	EC25EFAR06A06M4G
Serial number	-

DISABLE POWER

Network information

Mode	Indicates the network mode (e.g. LTE).	
EcIo	The EC/IO value, indicating the interference level of the signal.	
RSSI	Indicates the Received Signal Strength Indicator (RSSI) of the signal.	
RSCP	Indicates the Received Signal Code Power (RSCP) of the signal.	
Signal level	Indicates the signal strength.	
Roaming	Indicates whether roaming is enabled or disabled.	
IMSI	The international mobile subscriber identity of the SIM card.	
PIN status	The PIN status of the SIM card.	
SMS	Indicates the SMS setting of the SIM card.	
USSD	Click this link to send a USSD request.	

Network information

Mode	Unknown
EcIo	-7
RSSI	-94 dBm
RSCP	-87 dBm
Signal level	74%
Roaming	Enabled
IMSI	-
PIN status	Unknown
SMS	Unknown
USSD	

Active SIM card

Select the SIM card to configure.

SIM cards list

Name The name of the SIM card. The DWM-312W can have up to two SIM cards (labeled A and B).

IMSI The international mobile subscriber identity of the SIM card.

PIN status The PIN status of the SIM card.

SMS The SMS configuration of the SIM card.

Active SIM card

◉ SIM A

◯ SIM B

SIM cards list

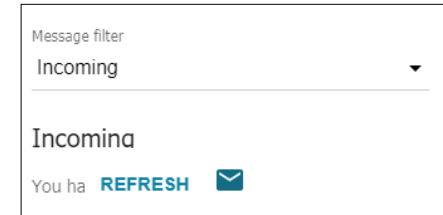| Name	IMSI	PIN status	SMS
SIM A	-	Unknown	Unknown
SIM B	-	Unknown	Unknown

SMS

On this page, you can view incoming and outgoing SMS sent using either of the router's SIM cards.

SMS

Message filter Select whether to view incoming or outgoing messages.

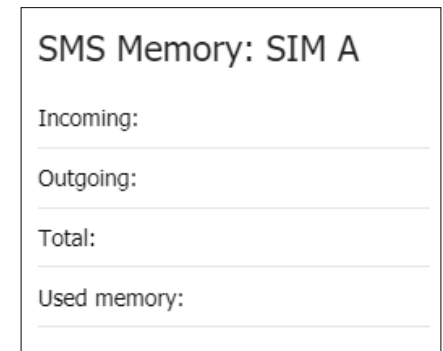**Refresh** Click this to refresh the list of messages.

SMS Memory

Incoming The number of incoming messages.

Outgoing The number of outgoing messages.

Total The total number of SMS (both sent and received).

Used memory The memory used by incoming and outgoing messages respectively.

USSD

Unstructured Supplementary Service Data (USSD) allows ISP-specific applications to be activated with an SMS.

USSD

Number	Enter the USSD code to send to your ISP.
Response	The response to your USSD code will show up here. It may take a minute or two for it to show up.

USSD: SIM A

You can send a USSD request

⚠ Waiting for SIM card

Number

Response

SEND

Advanced

In this menu, you can configure advanced settings for your network and router.

VLAN

This page allows you to set up and configure virtual LANs (VLANs).

VLAN List

VLAN ID	The ID of the VLAN.
Name	The name used to identify the VLAN.
Tagged Ports	The tagged ports included in the VLAN.
Untagged ports	The untagged ports included in the VLAN.

VLAN Add

Ports	The ports to include or exclude in the VLAN.
Wireless interfaces	The wireless interfaces to include or exclude in the VLAN.

WAN assignment

The WAN assignment menu allows you to designate a different port to use to access the external network. Select the desired port, and then click **Apply** to save your settings.
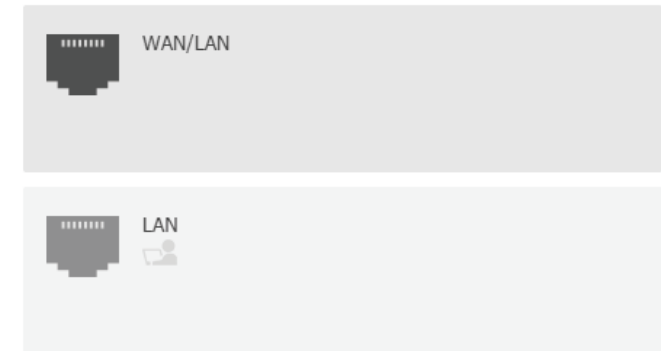
SNMP

Configuration

Enable SNMP	Toggle this switch to enable the Simple Network Management Protocol (SNMP).
Remote subnet	Enter the address of the remote subnet.
Hostname	Enter the hostname.
The contact information for this administrator	Enter an email that can be used to contact the administrator.
System location	Enter the physical location of the system.

Users

Click the **Add** (+) button to add SNMP users.

Communities

Click the **ADD** button to add SNMP communities.

Configuration

Enable SNMP

Remote subnet
0.0.0.0/0

Hostname
Router

The contact information for the administrator
Admin <root@localhost>

System location
Test room

Users   +
There are no users

Communities

×

×

ADD

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.
Reserve servers IPv4/IPv6:	Enter the address of the reserve server.
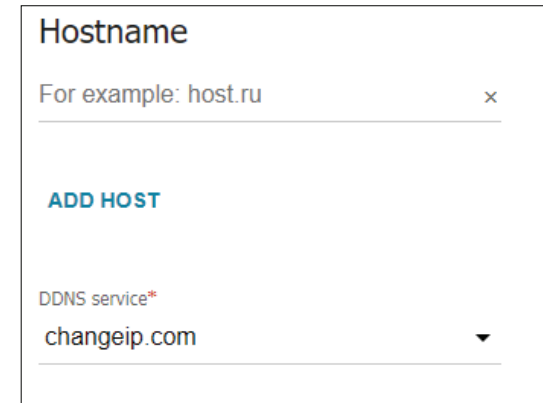
DDNS

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

DDNS

Hostname   Specify the hostname of the DDNS service.

DDNS service   Specify the name of the DDNS service.

Username   Specify the username used with the DDNS service.

Password   Specify the password associated with the DDNS username.

Update period   Specify the update period in minutes of the DDNS service.
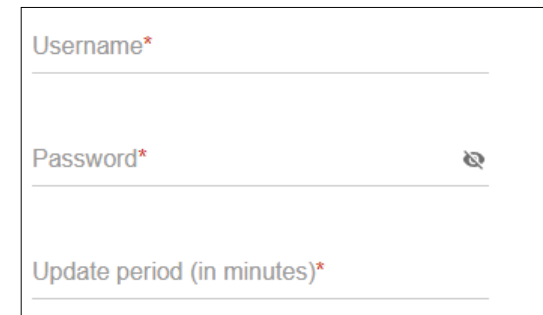
Hostname

For example: host.ru   ✕

ADD HOST

DDNS service*

changeip.com   ▼

Username*

Password*   👁

Update period (in minutes)*

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

Port	Indicates the port number.
Status	Indicates the current status of the port.
Autonegotiation	Indicates whether autonegotiation is on or off.
Speed	Indicates the port speed.
Flow control	Indicates whether symmetric flow control is on or off.

To configure a port, click on it to bring up the configuration menu.

Configure Ports

Speed	Specify the desired port speed from the drop-down list.
Autonegotiation Modes	Toggle this switch to enable or disable autonegotiation modes.
Flow control	Toggle this switch to enable or disable symmetric flow control.

Port	Status	Autonegotiation	Speed	Flow control
WAN/LAN	● Connected	On	100M-Full	Off
LAN	● Connected	On	100M-Full	802.3x(tx+rx)

Speed

Auto ▼

Autonegotiation Modes

▬● 100M-Full

▬● 100M-Half

▬● 10M-Full

▬● 10M-Half

Flow control

○ Symmetric flow control

Redirect

The **Redirect** page allows you to enable or disable notifications to alert you when the Internet connection has failed.

Reasons for Redirect

Physical connection error	Toggle this switch to enable notifications if the connection failure is due to a physical error.
No connection	Toggle this switch to enable notifications if the failure comes from no connection being detected.
The device is not configured	Toggle this switch to enable notifications if the connection failure is due to the device not being configured.
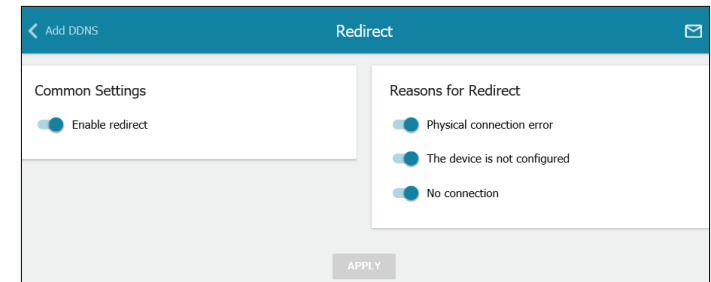
Routing

On this page, you can configure the routing feature and add new routes.

Add route

Enable	Toggle this to enable the routing feature.
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.
Gateway	Specify the gateway used by the static route.
Metric	Specify a metric between 1 and 255.
Table	Specify the table which the route should belong to.
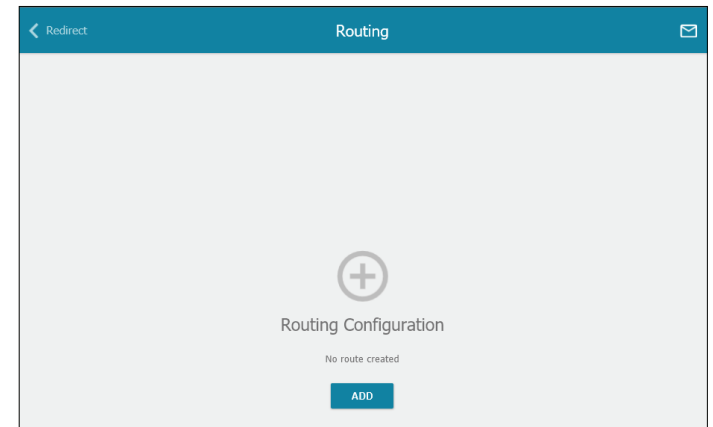
Remote Access

On this page, you can allow and conﬁgure remote access to the router's web UI.

Add Rule

IP version	Select the IP version (IPv4 or IPv6).
Open access from any external host	Toggle this switch to allow 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.
Public port	Specify the port over which the remote host may access the GUI.
Protocol	Choose **HTTP**, **HTTPS**, or **TELNET** as the protocol for remote access.
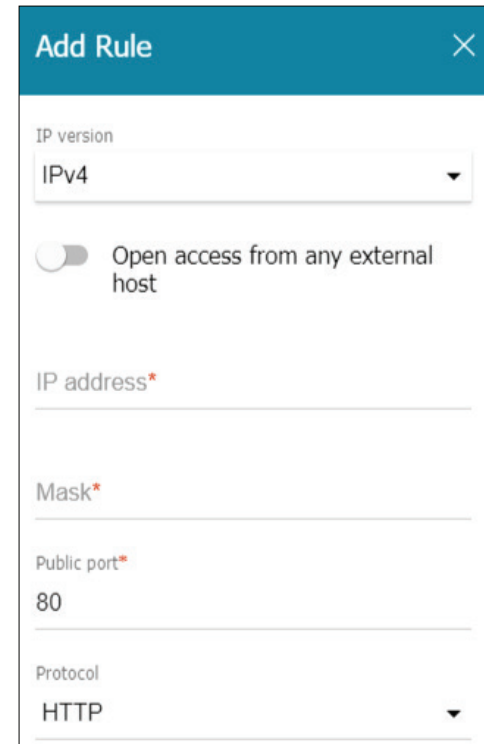
UPnP IGD

Use this page to configure Universal Plug-and-Play (UPnP) Internet Gateway Devices (IGD) connected to your router.

IPv4 IGD

Enable	Toggle this to enable or disable UPnP IGD.
Protocol	Indicates the protocol used by the UPnP connection.
IP address	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.
Duration	Indicates the duration that the UPnP connection in question has been active.
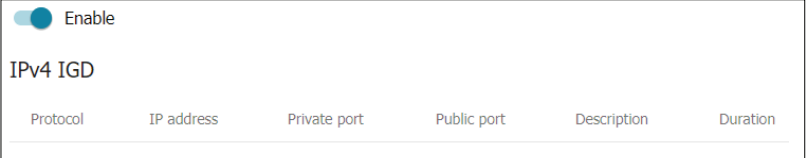
IGMP

The **IGMP** page allows you to enable/disable Internet Group Management Protocol (IGMP). IGMP is used to managed multicast traffic for IPv4-based networks.

IGMP

Enable	Toggle this to enable or disable IGMP.
IGMP version	Choose from the drop-down list which IGMP version to use.
Interface	Choose from the drop-down list which interface to apply IGMP to.

ALG/Passthrough

The **ALG/Passthrough** page allows you to configure the router to use RTSP and enable the SIP ALG and PPPoE/PPTP/L2TP/IPsec passthrough functions.

ALG/Passthrough

SIP **SIP** is used for creating, modifying, and terminating communication sessions. This protocol allows telephone calls via the Internet.

RTSP **RTSP** is used for real-time streaming multimedia data delivery. This protocol allows applications to receive audio/video from the Internet.

PPPoE passthrough The **PPPoE passthrough** function allows PPPoE clients to connect to the Internet through the router.

PPTP/L2TP/IPsec passthrough The **PPTP passthrough, L2TP passthrough** and **IPsec passthrough** functions allow VPN PPTP, L2TP and IPsec traffic to pass through the router so that clients from your LAN can establish relevant connections with remote networks.
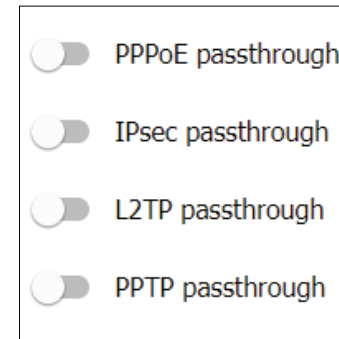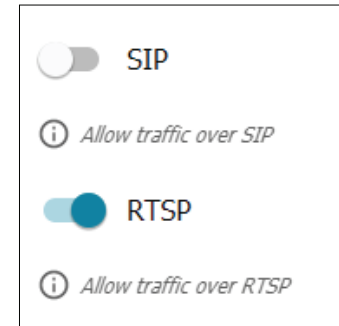
BGP

This page allows you to set BGP rules for your router.

BGP

RouterID:	The router to apply a rule for.
Rules:	Click the plus (+) icon to create a new BGP rule.

Adding a rule

Enable	Toggle this to enable the BGP rule.
Autonomous systems:	Enter the AS number for the rule.
No synchronization:	Toggle this to enable or disable synchronization.
WAN group:	Select a WAN group from the drop-down list.

Click the appropriate **Add** (+) button to add a route map, network, neighbor, access rule or prefix.

OSPF

This page allows you to configure your router's Open Shortest Path First (OSPF) routing protocol.
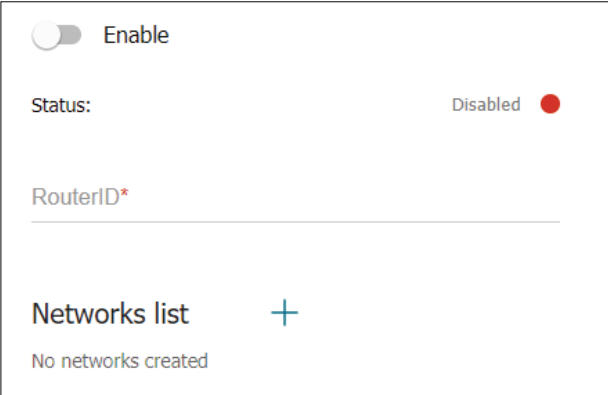
OSPF

Enable:	Toggle this to enable or disable OSPF.
Status:	The status of OSPF.
RouterID:	Enter the router ID.
Networks list:	Click the plus sign (+) to add a network to apply the OSPF routing protocol to.

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.

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**.
Direction	Choose from **LAN to WAN, WAN to LAN,** and **LAN to Router**.

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.

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.

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

Source port

Virtual Servers

On the **Firewall / Virtual servers** page, you can create virtual servers for redirecting incoming Internet traffic to a specified IP address in the local area network.

General Settings

Enable	Toggle this switch to enable the feature and create or edit a virtual server.
Name	Enter a name that will be used to identify the virtual server.
Template	Select a virtual server template from the drop-down list, or select **Custom** to specify all parameters of the new virtual server manually.
Interface	A WAN connection to which this virtual server will be assigned.
Protocol	A protocol that will be used by the new virtual server. Select a value from the drop-down list.
NAT Loopback	Toggle this to enable or disable NAT loopback.

Public Network Settings
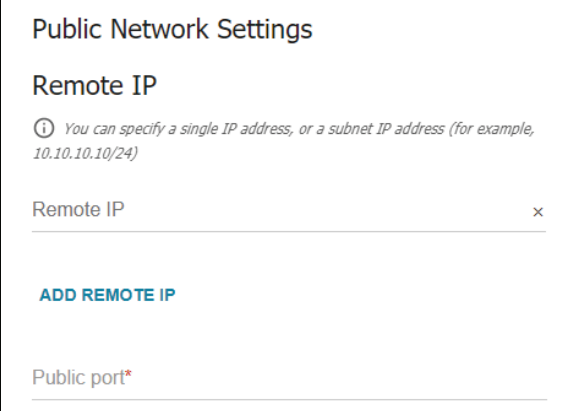
Remote IP   The IP address of the server from the external network.

Public port   A port of the router from which traffic is directed to the IP address specified in the **Private IP** field.

Public Network Settings

Remote IP

ⓘ *You can specify a single IP address, or a subnet IP address (for example, 10.10.10.10/24)*

Remote IP   ×

ADD REMOTE IP

Public port*
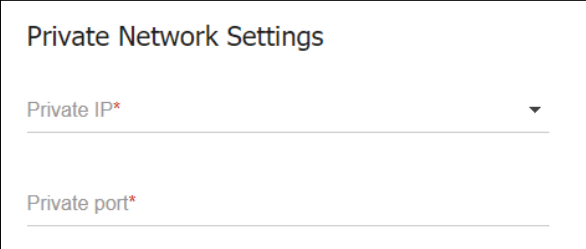
General Settings

Private IP   The IP address of the server from the local area network. To choose a device connected to the router's LAN at the moment, select the relevant value from the drop-down list (the field will be filled in automatically).

Private port   A port of the IP address specified in the **Private IP** field to which traffic is directed from the public port.

Private Network Settings

Private IP*   ▼

Private port*

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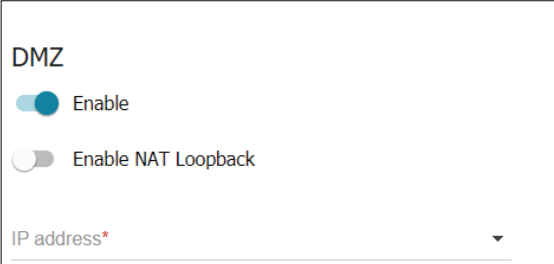
The Demilitarized Zone (DMZ) feature directly exposes the client to the Internet, and is not recommended in ordinary situations.

DMZ

Enable Toggle this switch to enable the DMZ feature.

Enable NAT Loopback Toggle this switch to enable NAT Loopback. This 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.

MAC Filter

MAC Filter

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

List of Exceptions Add MAC addresses to exempt from the filter.

Add Rule

Enable rule Choose whether to enable or disable the rule.

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

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

Name Indicates the hostname of the device to which the filter applies.

URL Filter

URL Filter

Enable	Toggle this switch to enable or disable web filtering.
Address filtering	Choose from the dropdown list whether you want to **Block Listed URLS** or **Block all URLs except listed.**
Client filtering	Choose from the dropdown list whether you want to filter **Devices from list** or **All but devices from list**.
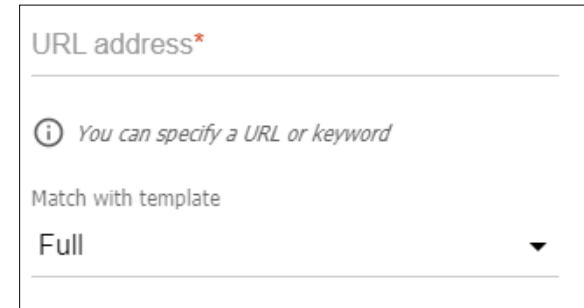
URL Filter

You can specify restrictions on access to certain web sites. Rules can be applied to those devices that are added to the list or to all but devices from the list.

Enable

Addresses

Address filtering

Block listed URLs

Clients

Client filtering

All but devices from list
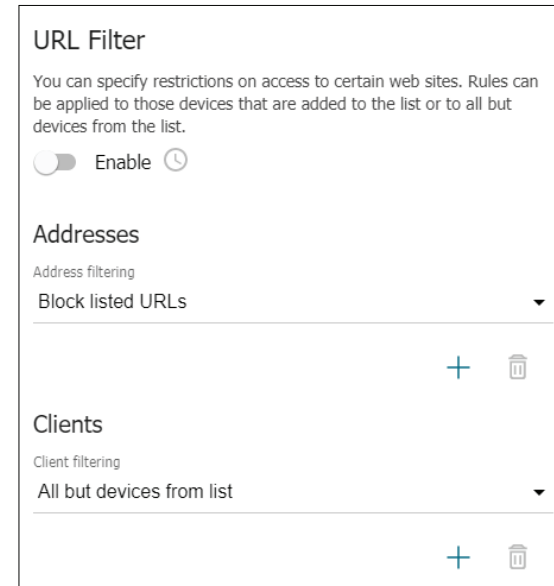
Filter

URL address	Enter the URL to filter.
Match with template	Specify whether to filter exact or partial matches.

Client

MAC address	The MAC address of the client device to filter.

System

This menu can be used to check and edit the router's system configuration (for instance, by upgrading the firmware or by changing the admin password).

Configuration

User

User	Username to login to router's configuration UI as the administrator. This cannot be changed.
New password	Specify new password. Password needs to be between 1 - 31 ASCII characters. Confirm password again below.

Miscellaneous

Language Choose your desired router UI language from the dropdown list.

Factory Click to reset the router to factory default settings.

Backup Click to save the current configuration to a file.

Restore Click to load a previously saved configuration file to the device.

Save Click to save the current settings.

Reboot Click to reboot the device.

Idle time Specify a period of inactivity (in minutes) after which the device will log you out.

Language

English ▾

Factory
Reset factory default settings

Backup
Save current configuration to a file

Restore
Load previously saved configuration to the device

Save
Save current settings

Reboot
Reboot device

Idle time (in minutes)*

5

ⓘ When the function "Stay signed in" is enabled, then users are not redirected to the login page despite the specified idle time.

Firmware Update

On this page, you can check for updates to the router's firmware and configure the interval at which the router will check for updates automatically.

Local Update

Restore factory defaults	Toggle this to reset the device to its factory settings after completing the next firmware update.
CHOOSE FILE	Click to select the firmware file to update.

Click on **UPDATE FIRMWARE** when ready.

Remote Update

Check for updates automatically	Toggle this to automatically check for online firmware updates, and download and install them if they are available.
Interval	Enter the interval at which the router should check for updates (in seconds).

Click **CHECK FOR UPDATES** to manually check for online firmware updates, or **APPLY SETTINGS** to change the router's settings without checking for updates.

Schedule

This feature allows you to schedule tasks (such as rebooting the router) to perform at a set time, or after a specified interval has passed.

To add a task, click the plus sign (**+**) next to **All Tasks**.

Auto Reboot

State   Off

REBOOT ON SCHEDULE

All Tasks   +
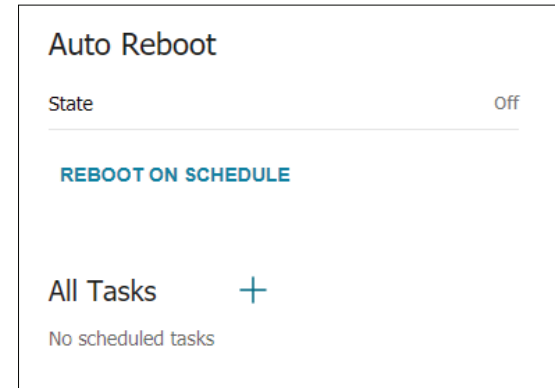
No scheduled tasks

Scheduling a Task

Perform task on schedule Toggle this to perform the specified task on the schedule specified below.

Simplified Mode

Interval of execution Specify how often the task should be performed.

Time The time of day (in hours and minutes) to perform the specified task.

Duration The length of time (measured in days, hours, minutes and seconds) to wait before executing the task again. Which fields are available depends on your selection in the **Interval of execution** drop-down menu.

Advanced Mode

Enabling Advanced Mode allows you to schedule tasks with more precision, by specifying the month, day of the month, and day of the week on which to perform a particular task.

○ Simplified mode

◉ Advanced mode

ⓘ *In the advanced mode you can specify more parameters for the schedule using the cron string format.*

Minutes (0-59)

0

Hours (0-23)

0

Day of month (1-31)

*

Month (1-12 or jan, feb, mar, etc)

*

Day of week (0-6 or sun, mon, tue, etc)

*

Log

On this page, you can set the system log options, and export and save a copy of the system log.

Logging Settings

Refresh Click to refresh log for new updates.

Export Click to export log as text file.

Logging Settings

Enable	Toggle this switch to enable/disable logging function.
Type	Choose the type of diagnostics to log from the drop-down list.
Level	Choose the level of diagnostics to log from the drop-down list.

Logging

You can set the system log options.

Enable

Type

Local

ⓘ *The system log is stored in the router's memory*

Level

Debugging messages

Ping

The Ping page allows you to manually check the availability of a host from the local or global network.

Ping

Host	The address of the host.
Count of packets	The number of packets to send.
IPv6	Toggle this switch to check through the IPv6 protocol.

Click **START** to begin the ping test or **CLEAR** to clear the results.

More Settings

Packet size   The number of data bytes to send.

Time to wait for a response   The time to wait for a response in seconds.

Click **OK** to save or **DEFAULT SETTINGS** to reset back to the default configuration.

Packet size (in bytes)*

56

ⓘ *Specifies the number of data bytes to be sent.*

Time to wait for a response (in seconds)*

3

ⓘ *The option affects only timeout in absence of any responses, otherwise ping waits for two RTTs.*

OK   DEFAULT SETTINGS

Traceroute

On this page, you can determine the route of data transfer to a host via the traceroute utility.

Ping

Host The address of the host.

IPv6 Toggle this switch to perform the check through the IPv6 protocol.

Click **START** to begin the traceroute test or **CLEAR** to clear the results.

Traceroute

You can determine the route of data transfer to a host via the traceroute utility.

Host*   IPv6

MORE SETTINGS

```
traceroute to google.com (216.58.200.46), 30 hops max, 38
byte packets
 1  172.17.6.253 (172.17.6.253)  1.276 ms  1.224 ms
 2  192.168.250.49 (192.168.250.49)  0.190 ms  0.172 ms
 3  61.220.144.254 (61.220.144.254)  5.358 ms  9.617 ms
 4  168.95.81.198 (168.95.81.198)  2.498 ms  1.259 ms
 5  220.128.26.94 (220.128.26.94)  1.948 ms  1.724 ms
 6  220.128.26.77 (220.128.26.77)  1.818 ms  1.585 ms
 7  72.14.218.142 (72.14.218.142)  4.422 ms  72.14.218.140
(72.14.218.140)  31.697 ms
```

START   CLEAR   CANCEL

Settings

Maximum TTL value   The maximum number of hops.

Number of probes   The number of probe packets per hop.

Wait time   The hop response time in seconds.

Click **OK** to save or **DEFAULT SETTINGS** to reset back to the default configuration.

Maximum TTL value*

30

ⓘ *The maximum number of hops*

Number of probes*

2

ⓘ *The number of probe packets to a hop*

Wait time (in seconds)*

3

ⓘ *Hop response time*

OK   DEFAULT SETTINGS

Telnet/SSH

This page allows you to enable or disable access to the device via Telnet and SSH.

Telnet/SSH

Enable Telnet	Toggle this switch to accept connections via Telnet.
Port	If the device is accepting Telnet connections, specify the port number for Telnet access.
Enable SSH	Toggle this switch to accept connections via SSH.
Port	If the device is accepting SSH connections, specify the port number for SSH access.
	Click **APPLY** when finished.

Telnet/SSH

You can enable or disable access to the device settings via TELNET and SSH from your LAN.

Enable Telnet

Port
23

Enable SSH

Port
22

System Time

On this page, you can set the system time and change the time zone.

System Time

Enable NTP	Toggle this to enable NTP synchronization.
Get NTP server addresses using DHCP	Toggle this to automatically get NTP server addresses using DHCP.
Run as a server for the local network	Toggle this to run as an NTP server for the local network.
System date	Displays device's current system date.
System Time	Displays router's current system time.
Synchronization	Indicates whether synchronization has been completed or not.

NTP Servers

This displays the default public time server. Click on the **x** to delete.

Click **ADD SERVER** to add a new public time server.

System Time

You can set up automatic synchronization of the system time with a time server on the Internet.

Enable NTP

Get NTP server addresses using DHCP

Run as a server for the local network

System date:
11.06.2020

System Time:
06:45

Synchronization:
Completed

NTP Servers
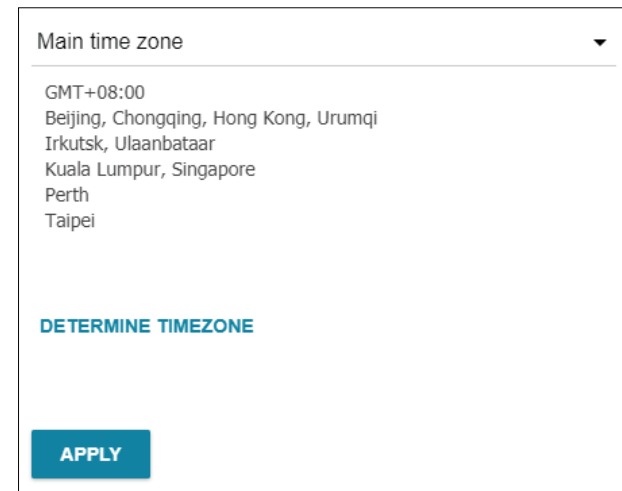
pool.ntp.org   ×

Example: pool.ntp.org   ×

ADD SERVER

Set Time Zone

Click **DETERMINE TIMEZONE** to automatically determine your time zone based on your device's location, or choose one manually using the dropdown menu. Click **APPLY** to save the setting to your router.

Main time zone

GMT+08:00
Beijing, Chongqing, Hong Kong, Urumqi
Irkutsk, Ulaanbataar
Kuala Lumpur, Singapore
Perth
Taipei

DETERMINE TIMEZONE

APPLY

Auto Provision

Auto Provision

Enable Auto Provision: Toggle this to enable Auto Provision. This setting is disabled by default.

Use BOOTP option: Toggle this to use the BOOTP option. This setting is disabled by default.

Autoconfiguration server address: Enter the address of the autoconfiguration server.

File name: Enter the name of the configuration file.

File check period: Enter the period (in seconds) at which the router should check for the file.

Protocol type: Select the protocol to use from the drop-down menu.

Status: The status of the Auto Provision check.

Auto Provision

⬜ Enable Auto Provision

⬜ Use BOOTP option

Autoconfiguration server address

File name

File check period (in seconds)
1800

Protocol type
TFTP ▼

Status:
No check has been run yet

CHECK STATUS

APPLY

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DWM-312W. 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:

  - Microsoft Internet Explorer® 7 or higher
  - Mozilla Firefox 3.5 or higher
  - Google™ Chrome 8 or higher
  - Apple Safari 4 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 rear 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 about 30 seconds to access the router. The default IP address is **192.168.0.1**. When logging in, leave the password box empty.

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, lets 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:

- Navigate to the Internet configuration page.

- 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.

Technical Specifications

Technical Specifications		
General		
Mobile Network Support	• LTE Cat. 4 Bands 1/3/5/7/8/20/38/40/41 • UMTS/HSPA 1/5/8, 850/900/2100 MHz	• GSM/GPRS/EDGE: 900/1800 MHz
Data Throughput	• LTE Throughput • Up to 150 Mbps down / 50 Mbps up	• HSPDA-DC up to 42 Mbps down / 5.76 Mbps up • EDGE up to 236.8 Kbps
Device Interfaces	• 1 x 10/100 Fast Ethernet WAN/LAN port • 1 x 10/100 Fast Ethernet LAN port • 1 x 5.5 mm DC input	• 3 x SMA antenna connectors: 2 LTE+1 Wi-Fi • Dual standard 2FF SIM slot • DI/DO/Grounding ports
Wi-Fi	• 802.11n/g/b • 1x1	• Operates on the 2.4 GHz band
Standards	• IEEE 802.3i	• IEEE 802.3u
Advanced Features	• IPSec VPN Client/Server modes • Firmware upgrades via FOTA	• Web-based UI
Software		
WAN Connection Types	• Mobile Internet • PPPoE • IPv6 PPPoE • PPPoE Dual Stack • Static IPv4 / Dynamic IPv4	• Static IPv6 / Dynamic IPv6 • PPPoE + Static IP (PPPoE Dual Access) • PPPoE + Dynamic IP (PPPoE Dual Access) • PPTP/L2TP + Static IP • PPTP/L2TP + Dynamic IP
Network Functions	• DHCP server/relay • Advanced configuration of built-in DHCP server • Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation • DNS relay • Dynamic DNS • Static IPv4/IPv6 routing • Dynamic routing via OSPFv2	• Support of BGP (multiple instances, RouteMap, AccessList, PrefixList) • Support of UPnP IGD • WAN ping respond • Support of SIP ALG • Support of RTSP • Autonegotiation of speed, duplex mode, and flow control/Manual speed and duplex mode setup for each Ethernet port

Wireless Security	• 802.11 128-bit AES encryption • MAC filter	• WPS (PBC/PIN)
Firewall Functions	• Network Address Translation (NAT) • Stateful Packet Inspection (SPI) • IP filter • IPv6 filter	• MAC filter • URL filter • DMZ • Virtual servers
VPN	• IPsec/PPTP/L2TP/PPPoE passthrough • L2TP over IPSec • PPTP/L2TP servers • PPTP/L2TP/GRE tunnels • IPsec tunnels	• Transport/Tunnel mode • IKEv1/IKEv2 support • DES encryption • NAT Traversal • Support of DPD (Keep-alive for VPN tunnels)

QoS	• Algorithms:
	  • Traffic marking (DSMARK)
	  • Weighted queues (HTB or WFQ)
	  • Ordinary queues (PRIO)
	  • Shaper (TBF)
		• SW QoS
		• Classifications

Advanced Wireless Functions	• Client functionality • WMM (Wi-Fi QoS) • Information on connected Wi-Fi clients • Advanced settings • Guest Wi-Fi / MBSSID support	• Periodic scanning of channels, automatic switching to least-loaded channel • Auto negotiation of channel bandwidth in accordance with environment conditions (20/40 coexistence)
LTE Module Functions	• Auto connection to available supported networks (4G/3G) • Auto configuration upon plugging in a SIM card • Enabling/disabling PIN code check	• Support for changing PIN code • Sending/receiving/reading/deleting SMS messages • Support of USSD requests
Management and Monitoring	• Local and remote access to settings through SSH/TELNET/WEB (HTTP/HTTPS) • Notification on connection problems and auto redirect to settings • Firmware update via web-based interface • Automatic notification on new firmware version • Saving/restoring configuration to/from file • Support of logging to remote host • Automatic synchronization of system time with NTP server and manual time/date setup	• Ping utility • Traceroute utility • SNMP agent (SNMPv2/v3) • FOTA • Automatic upload of configuration file from ISP's server (Auto Provision)

Physical		
LED Status Indicators	• Power • Internet Connectivity	• SIM Status • Signal Strength
Power	• 12 V / 1 A adapter	• Flexible input: DC 9V / 2A ~ 36V / 0.7A
Enclosure	• Corrosion-resistant zinc-plated steel	
Dimensions	• 134 x 76 x 32 mm (5.28 x 2.99 x 1.26 in)	• DIN Mount: 149 x 50 x 15 mm (5.87 x 1.97 x 0.55 in)
Weight	• 500 g (17.64 oz)	
Temperature	• Operating: -20 to 60 ˚C (-4 to 140 ˚F)	• Storage : -30 to 80 ˚C (-22 to 176 ˚F)
Humidity	• Operating: 10% to 90% non-condensing	• Storage: 5% to 95% non-condensing
Certifications	• RoHS	• CE
Order Information		
Part Number	*Description*	
DWM-312W	4G LTE M2M Router	

[1]Data rates are theoretical. Data transfer rate depends on network capacity, signal strength, and environmental factors.
[2] Available frequencies and speeds vary and may not be available in all regions.
[3] Default power adaptor operating temperature range limited to 0 to 40 ˚C (32 to 104 ˚F). An optional power adaptor supports 20 to 60 ˚C (-4 to 140 ˚F).
  Updated 2020/08/14

Regulatory Information

CE EMI Class A Warning

This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

European Community Declaration of Conformity:

Česky [Czech]	Tímto D-Link Corporation prohlašuje, že tento produkt, jeho příslušenství a software jsou v souladu se směrnicí 2014/53/EU. Celý text ES prohlášení o shodě vydaného EU a o firmwaru produktu lze stáhnout na stránkách k produktu www.dlink.com.
Dansk [Danish]	D-Link Corporation erklærer herved, at dette produkt, tilbehør og software er i overensstemmelse med direktiv 2014/53/EU. Den fulde tekst i EU-overensstemmelseserklæringen og produktfirmware kan wnloades fra produktsiden hos www.dlink.com.
Deutsch [German]	Hiermit erklärt die D-Link Corporation, dass dieses Produkt, das Zubehör und die Software der Richtlinie 2014/53/EU entsprechen. Der vollständige Text der Konformitätserklärung der Europäischen Gemeinschaft sowie die Firmware zum Produkt stehen Ihnen zum Herunterladen von der Produktseite im Internet auf www.dlink.com zur Verfügung.
Eesti [Estonian]	Käesolevaga kinnitab D-Link Corporation, et see toode, tarvikud ja tarkvara on kooskõlas direktiiviga 2014/53/EL. Euroopa Liidu vastavusdeklaratsiooni täistekst ja toote püsivara on allalaadimiseks saadaval tootelehel www.dlink.com.
English	Hereby, D-Link Corporation, declares that this product, accessories, and software are in compliance with directive 2014/53/EU. The full text of the EU Declaration of Conformity and product firmware are available for download from the product page at www.dlink.com
Español [Spanish]	Por la presente, D-Link Corporation declara que este producto, accesorios y software cumplen con las directivas 2014/53/UE. El texto completo de la declaración de conformidad de la UE y el firmware del producto están disponibles y se pueden descargar desde la página del producto en www.dlink.com.
Ελληνική [Greek]	Με την παρούσα, η D-Link Corporation δηλώνει ότι αυτό το προϊόν, τα αξεσουάρ και το λογισμικό συμμορφώνονται με την Οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης της ΕΕ και το υλικολογισμικό του προϊόντος είναι διαθέσιμα για λήψη από τη σελίδα του προϊόντος στην τοποθεσία www.dlink.com.

Français [French]	Par les présentes, D-Link Corporation déclare que ce produit, ces accessoires et ce logiciel sont conformes aux directives 2014/53/UE.Le texte complet de la déclaration de conformité de l'UE et le icroprogramme du produit sont disponibles au téléchargement sur la page des produits à www.dlink.com.
Italiano [Italian]	Con la presente, D-Link Corporation dichiara che questo prodotto, i relativi accessori e il software sono conformi alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE e il firmware del prodotto sono disponibili per il download dalla pagina del prodotto su www.dlink.com.
Latviski [Latvian]	Ar šo uzņēmums D-Link Corporation apliecina, ka šis produkts, piederumi un programmatūra atbilst direktīvai 2014/53/ES. ES atbilstības deklarācijas pilno tekstu un produkta aparātprogrammatūru var lejupielādēt attiecīgā produkta lapā vietnē www.dlink.com.
Lietuvių [Lithuanian]	Šiuo dokumentu „D-Link Corporation" pareiškia, kad šis gaminys, priedai ir programinė įranga atitinka direktyvą 2014/53/ES. Visą ES atitikties deklaracijos tekstą ir gaminio programinę aparatinę įrangą galima atsisiųsti iš gaminio puslapio adresu www.dlink.com.
Nederlands [Dutch]	Hierbij verklaart D-Link Corporation dat dit product, accessoires en software voldoen aan de richtlijnen 2014/53/EU. De volledige tekst van de EU conformiteitsverklaring en productfirmware is beschikbaar voor download van de productpagina op www.dlink.com.
Malti [Maltese]	Bil-preżenti, D-Link Corporation 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 www.dlink.com.
Magyar [Hungarian]	Ezennel a D-Link Corporation kijelenti, hogy a jelen termék, annak tartozékai és szoftvere megfelelnek a 2014/53/EU sz. rendeletek rendelkezéseinek. Az EU Megfelelőségi nyilatkozat teljes szövege és a termék firmware a termék oldaláról tölthető le a www.dlink.com címen.
Polski [Polish]	D-Link Corporation niniejszym oświadcza, że ten produkt, akcesoria oraz oprogramowanie są zgodne z dyrektywami 2014/53/EU. Pełen tekst deklaracji zgodności UE oraz oprogramowanie sprzętowe do produktu można pobrać na stronie produktu w witrynie www.dlink.com.
Português [Portuguese]	Desta forma, a D-Link Corporation declara que este produto, os acessórios e o software estão em conformidade com a diretiva 2014/53/UE. O texto completo da declaração de conformidade da UE e do firmware
Slovensko[Slovenian]	Podjetje D-Link Corporation s tem izjavlja, da so ta izdelek, dodatna oprema in programska oprema skladni z direktivami 2014/53/EU. Celotno besedilo izjave o skladnosti EU in vdelana programska oprema sta na voljo za prenos na strani izdelka na www.dlink.com.

Slovensky [Slovak]	Spoločnosť D-Link týmto vyhlasuje, že tento produkt, príslušenstvo a softvér sú v súlade so smernicou 214/53/EÚ. Úplné znenie vyhlásenia EÚ o zhode a firmvéri produktu sú k dispozícii na prevzatie zo stránky produktu www.dlink.com.
Suomi [Finnish]	D-Link Corporation täten vakuuttaa, että tämä tuote, lisävarusteet ja ohjelmisto ovat direktiivin 2014/53/EU vaatimusten mukaisia. Täydellinen EU-vaatimustenmukaisuusvakuutus samoin kuin tuotteen laiteohjelmisto ovat ladattavissa osoitteesta www.dlink.com.
Svenska[Swedish]	D-Link Corporation försäkrar härmed att denna produkt, tillbehör och programvara överensstämmer med direktiv 2014/53/EU. Hela texten med EU-försäkran om överensstämmelse och produkt-firmware kan hämtas från produktsidan på www.dlink.com.
Íslenska [Icelandic]	Hér með lýsir D-Link Corporation því yfir að þessi vara, fylgihlutir og hugbúnaður eru í samræmi við tilskipun 2014/53/EB. Sækja má ESB-samræmisyfirlýsinguna í heild sinni og fastbúnað vörunnar af vefsíðu vörunnar á www.dlink.com.
Norsk [Norwegian]	Herved erklærer D-Link Corporation at dette produktet, tilbehøret og programvaren er i samsvar med direktivet 2014/53/EU. Den fullstendige teksten i EU-erklæring om samsvar og produktets fastvare er tilgjengelig for nedlasting fra produktsiden på www.dlink.com.

Warning Statement:

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

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

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

Usage Notes:

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

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

- Der Betrieb dieses Geräts in der Europäischen Gemeinschaft bei Nutzung von Kanälen im 5,15-5,35 GHz Frequenzband ist ausschließlich auf Innenräume beschränkt, um das Interferenzpotential zu reduzieren.
- Bei diesem Gerät handelt es sich um 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 ohneeinen 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 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 uhet 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 be not be disposed of in household waste but sent for recycling. Please take it to a collection point designated by your local authorities once it has reached the end of its life, some will accept products for free. By recycling the product and its packaging in this manner you help to conserve the environment and protect human health.

D-Link and the Environment

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

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

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

DEUTSCH   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.**

FRANÇAIS   FR

Ce symbole apposé sur le produit ou son emballage signifie que, conformément aux lois et règlementations 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_2.

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

ESPAÑOL   ES

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

D-Link y el medio ambiente

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

D-Link recomienda apagar o desenchufar los productos D-Link cuando no se estén utilizando. Al hacerlo, contribuirá a ahorrar energía y a reducir las emisiones de CO_2.

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

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 CO2-emissies.

Breng een bezoek aan **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 CO2.

Aby dowiedzieć się więcej na temat produktów i opakowań mających wpływ na środowisko prosimy zapoznać się ze stroną Internetową **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, odneste jej prosím na sběrné místo určené místními úřady k tomuto účelu. Některá sběrná místa přijímají výrobky zdarma. Recyklací výrobku i obalu pomáháte chránit životní prostředí a lidské zdraví.

D-Link a životní prostředí

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

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

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

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 elkötelezettek vagyunk a műveleteink és termékeink környezetre gyakorolt hatásainak csökkentésére. Az ezen hatás csökkentése érdekében a D-Link a lehető leginkább környezetbarát termékeket tervez és gyárt azáltal, hogy újrahasznosítható, alacsony 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** 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 CO2-utslipp.

For mer informasjon angående våre miljøansvarlige produkter og forpakninger kan du gå til **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 CO2-udledningerne.

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

SUOMI

FI

Tämä symboli tuotteen pakkauksessa tarkoittaa, että paikallisten 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.

Suosittelemme, 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**.

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**.

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 meteriais recicláveis e não tóxicos tanto nos produtos como nas embalagens.

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

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