



DIR-842V2

AC1200 Wi-Fi Gigabit Router

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CHAPTER 1. INTRODUCTION

Contents and Audience

This manual describes the router DIR-842V2 and explains how to configure and operate it.

This manual is intended for users familiar with basic networking concepts, who create an in-home local area network, and system administrators, who install and configure networks in offices.

Conventions

Example	Description
text	The body text of the manual.
<i>Before You Begin</i>	A reference to a chapter or section of this manual.
<i>“Quick Installation Guide”</i>	A reference to a document.
Change	A name of a menu, menu item, control (field, checkbox, drop-down list, button, etc.).
192.168.0.1	Data that you should enter in the specified field.
 <u>Information</u>	An important note.

Document Structure

Chapter 1 describes the purpose and structure of the document.

Chapter 2 gives an overview of the router's hardware and software features, describes its appearance and the package contents.

Chapter 3 explains how to install the router DIR-842V2 and configure a PC in order to access its web-based interface.

Chapter 4 describes all pages of the web-based interface in detail.

Chapter 5 includes safety instructions and tips for networking.

Chapter 6 introduces abbreviations and acronyms most commonly used in User Manuals for D-Link customer premises equipment.

CHAPTER 2. OVERVIEW

General Information

The DIR-842V2 device is a wireless dual band gigabit router with 3G/LTE support. It provides a fast and simple way to create a wireless and wired network at home or in an office.

The DIR-842V2 device is a wireless dual band gigabit router with a built-in 4-port switch.

Also you are able to connect the wireless router DIR-842V2 to a cable or DSL modem or to a private Ethernet line and use a high-speed Internet connection to successfully fulfill a wide range of professional tasks. The built-in 4-port switch enables you to connect Ethernet-enabled computers, game consoles, and other devices to your network.

Using the DIR-842V2 device, you are able to quickly create a high-speed wireless network at home or in your office, which lets computers and mobile devices access the Internet virtually anywhere (within the operational range of your wireless network). Simultaneous activity of 2.4GHz band and 5GHz band allows performing a wide range of tasks. The router can operate as a base station for connecting wireless devices of the standards 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac (at the wireless connection rate up to 1167 Mbps¹).

The router supports multiple functions for the wireless interface: several security standards (WEP, WPA/WPA2/WPA3), MAC address filtering, WPS, WMM.

In addition, the device is equipped with a button for switching the Wi-Fi network off/on. If needed, for example, when you leave home, you can easily switch the router's WLAN by pressing the button, and devices connected to the LAN ports of the router will stay online.

Multi-user MIMO technology allows to distribute the router's resources to let multiple wireless clients use the Wi-Fi network efficiently, keeping high rates for HD media streaming, lag-free gaming, and fast transfer of large files.

Transmit Beamforming technology allows to flexibly change the antennas' radiation pattern and to redistribute the signal directly to wireless devices connected to the router.

¹ Up to 300Mbps for 2.4GHz and up to 867Mbps for 5GHz.

² Up to 6 devices.

Support of guest Wi-Fi network allows you to create a separate wireless network with individual security settings and maximum rate limitation. Devices connected to the guest network will be able to access the Internet, but will be isolated from the devices and resources of the router's LAN.

The wireless router DIR-842V2 includes a built-in firewall. The advanced security functions minimize threats of hacker attacks and prevent unwanted intrusions to your network.

The SSH protocol support provides more secure remote configuration and management of the router due to encryption of all transmitted traffic, including passwords.

In addition, the router supports IPsec and allows to create secure VPN tunnels. Support of the IKEv2 protocol allows to provide simplified message exchange and use asymmetric authentication engine upon configuration of an IPsec tunnel.

Built-in Yandex.DNS service protects against malicious and fraudulent web sites and helps to block access to adult content on children's devices.

Now the schedules are also implemented; they can be applied to the rules and settings of the firewall and used to reboot the router at the specified time or every specified time period and to enable/disable the wireless network and the Wi-Fi filter.

The new ad blocking function effectively blocks advertisements which appear during web surfing.

You can configure the settings of the wireless router DIR-842V2 via the user-friendly web-based interface (the interface is available in several languages).

The Setup Wizard allows you to quickly switch DIR-842V2 to one of the following modes: router (for connection to a wired or wireless ISP), access point, repeater, or client, and then configure all needed setting for operation in the selected mode in several simple steps.

Also DIR-842V2 supports configuration and management via mobile application for Android and iPhone smartphones.

You can simply update the firmware: the router itself finds approved firmware on D-Link update server and notifies when ready to install it.

Specifications*

Hardware	
Processor	<ul style="list-style-type: none">RTL8197FH-VG (1GHz)
RAM	<ul style="list-style-type: none">128MB, DDR2, built in processor
Flash	<ul style="list-style-type: none">128MB, SPI NAND
Interfaces	<ul style="list-style-type: none">10/100/1000BASE-T WAN port4 10/100/1000BASE-T LAN ports
LEDs	<ul style="list-style-type: none">PowerInternetWLAN 2.4GWLAN 5G
Buttons	<ul style="list-style-type: none">ON/OFF button to power on/power offRESET button to restore factory default settingsWPS button to connect mesh network devices, set up wireless connection, and enable/disable wireless network
Antenna	<ul style="list-style-type: none">Four external non-detachable antennas (5dBi gain)
MIMO	<ul style="list-style-type: none">2 x 2, MU-MIMO
Power connector	<ul style="list-style-type: none">Power input connector (DC)

Software	
WAN connection types	<ul style="list-style-type: none">Mobile InternetPPPoEIPv6 PPPoEPPPoE Dual StackStatic IPv4 / Dynamic IPv4Static IPv6 / Dynamic IPv6PPPoE + Static IP (PPPoE Dual Access)PPPoE + Dynamic IP (PPPoE Dual Access)PPTP/L2TP + Static IPPPTP/L2TP + Dynamic IP

* The device features are subject to change without notice. For the latest versions of the firmware and relevant documentation, visit <https://eu.dlink.com/>

Software	
Network functions	<ul style="list-style-type: none">· DHCP server/relay· Advanced configuration of built-in DHCP server· Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation· Automatic obtainment of LAN IP address (for access point/repeater/client modes)· DNS relay· Dynamic DNS· Static IPv4/IPv6 routing· IGMP/MLD Proxy· RIP· Support of UPnP IGD· Support of VLAN· WAN ping respond· Support of SIP ALG· Support of RTSP· WAN failover· Autonegotiation of speed, duplex mode, and flow control / Manual speed and duplex mode setup for each Ethernet port
Firewall functions	<ul style="list-style-type: none">· Network Address Translation (NAT)· Stateful Packet Inspection (SPI)· IPv4/IPv6 filter· MAC filter· Ad blocking function· DMZ· Virtual servers· Built-in Yandex.DNS web content filtering service
VPN	<ul style="list-style-type: none">· IPsec/PPTP/L2TP/PPPoE pass-through· PPTP/L2TP tunnels· L2TP over IPsec· IPsec tunnels <p>Transport/Tunnel mode IKEv1/IKEv2 support DES encryption NAT Traversal Support of DPD (Keep-alive for VPN tunnels)</p>

Software	
Management and monitoring	<ul style="list-style-type: none"> Local and remote access to settings through SSH/TELNET/WEB (HTTP/HTTPS) Multilingual web-based interface for configuration and management Support of D-Link Assistant application for Android and iPhone smartphones 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 Automatic synchronization of system time with NTP server and manual time/date setup Ping utility Traceroute utility TR-069 client Schedules for rules and settings of firewall, automatic reboot, and enabling/disabling wireless network and Wi-Fi filter

Wireless Module Parameters	
Standards	<ul style="list-style-type: none"> IEEE 802.11ac Wave 2 IEEE 802.11a/b/g/n IEEE 802.11k/v IEEE 802.11w
Frequency range <i>The frequency range depends upon the radio frequency regulations applied in your country</i>	<ul style="list-style-type: none"> 2400 ~ 2483.5MHz 5150 ~ 5350MHz 5650 ~ 5850MHz
Wireless connection security	<ul style="list-style-type: none"> WEP WPA/WPA2 (Personal/Enterprise) WPA3 (Personal) MAC filter WPS (PBC)
Advanced functions	<ul style="list-style-type: none"> Support of client mode WMM (Wi-Fi QoS) Information on connected Wi-Fi clients Advanced settings Guest Wi-Fi / support of MBSSID Rate limitation for wireless network/separate MAC addresses Periodic scan of channels, automatic switch to least loaded channel Support of 5GHz TX Beamforming Autonegotiation of channel bandwidth in accordance with environment conditions (20/40 Coexistence) Support of STBC
Wireless connection rate	<ul style="list-style-type: none"> IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54Mbps IEEE 802.11b: 1, 2, 5.5, and 11Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps IEEE 802.11n (2.4GHz/5GHz): from 6.5 to 300Mbps (MCS0–MCS15) IEEE 802.11ac (5GHz): from 6.5 to 867Mbps

Wireless Module Parameters

<p>Transmitter output power</p> <p><i>The maximum value of the transmitter output power depends upon the radio frequency regulations applied in your country</i></p>	<ul style="list-style-type: none"> 802.11a (typical at room temperature 25 °C) 15dBm at 6, 54Mbps 802.11g (typical at room temperature 25 °C) 15dBm at 6, 54Mbps 802.11n (typical at room temperature 25 °C) 2.4GHz 15dBm at MCS0, 7 5GHz 15dBm at MCS0, 7 802.11ac (typical at room temperature 25 °C) 15dBm at MCS0, 9
<p>Receiver sensitivity</p>	<ul style="list-style-type: none"> 802.11a (typical at PER < 10% (1000-byte PDUs) at room temperature 25 °C) -95dBm at 6Mbps -93dBm at 9Mbps -92dBm at 12Mbps -90dBm at 18Mbps -87dBm at 24Mbps -84dBm at 36Mbps -80dBm at 48Mbps -78dBm at 54Mbps 802.11b (typical at PER = 8% (1000-byte PDUs) at room temperature 25 °C) -90dBm at 1Mbps -92dBm at 2Mbps -93dBm at 5.5Mbps -96dBm at 11Mbps 802.11g (typical at PER < 10% (1000-byte PDUs) at room temperature 25 °C) -94dBm at 6Mbps -92dBm at 9Mbps -90dBm at 12Mbps -89dBm at 18Mbps -87dBm at 24Mbps -84dBm at 36Mbps -80dBm at 48Mbps -77dBm at 54Mbps 802.11n (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C) 2.4GHz, HT20 -95dBm at MCS0 -91dBm at MCS1 -88dBm at MCS2 -86dBm at MCS3 -82dBm at MCS4 -79dBm at MCS5 -77dBm at MCS6 -75dBm at MCS7 2.4GHz, HT40 -92dBm at MCS0 -89dBm at MCS1 -86dBm at MCS2 -83dBm at MCS3 -80dBm at MCS4 -77dBm at MCS5 -74dBm at MCS6 -72dBm at MCS7

Wireless Module Parameters

	<p>5GHz, HT20</p> <ul style="list-style-type: none"> -95dBm at MCS0 -93dBm at MCS1 -90dBm at MCS2 -87dBm at MCS3 -83dBm at MCS4 -79dBm at MCS5 -77dBm at MCS6 -75dBm at MCS7 <p>5GHz, HT40</p> <ul style="list-style-type: none"> -92dBm at MCS0 -89dBm at MCS1 -86dBm at MCS2 -83dBm at MCS3 -80dBm at MCS4 -76dBm at MCS5 -74dBm at MCS6 -72dBm at MCS7 <p>· 802.11ac (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)</p> <p>VHT20</p> <ul style="list-style-type: none"> -95dBm at MCS0 -92dBm at MCS1 -90dBm at MCS2 -86dBm at MCS3 -83dBm at MCS4 -79dBm at MCS5 -77dBm at MCS6 -75dBm at MCS7 -71dBm at MCS8 <p>VHT40</p> <ul style="list-style-type: none"> -92dBm at MCS0 -89dBm at MCS1 -87dBm at MCS2 -84dBm at MCS3 -80dBm at MCS4 -76dBm at MCS5 -74dBm at MCS6 -72dBm at MCS7 -68dBm at MCS8 -66dBm at MCS9 <p>VHT80</p> <ul style="list-style-type: none"> -89dBm at MCS0 -86dBm at MCS1 -83dBm at MCS2 -80dBm at MCS3 -77dBm at MCS4 -73dBm at MCS5 -71dBm at MCS6 -69dBm at MCS7 -66dBm at MCS8 -64dBm at MCS9
Modulation schemes	<ul style="list-style-type: none"> · 802.11a: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11b: DQPSK, DBPSK, DSSS, CCK · 802.11g: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11n: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11ac: BPSK, QPSK, 16QAM, 64QAM, up to 256QAM with OFDM

Physical Parameters	
Dimensions (L x W x H)	· 181 x 132.5 x 47.71 mm (7.13 x 5.22 x 1.88 in)
Weight	· 304.8 g (0.67 lb)

Operating Environment	
Power	· Output: 12V DC, 1.5A
Temperature	· Operating: from 0 to 40 °C · Storage: from -20 to 65 °C
Humidity	· Operating: from 10% to 90% (non-condensing) · Storage: from 5% to 95% (non-condensing)

Product Appearance

Front Panel



Figure 1. Front panel view.

LED	Mode	Description
Power	<i>Solid blue</i>	The router is powered on.
	<i>No light</i>	The router is powered off.
Internet	<i>Solid blue</i>	The default wired WAN connection is on.
	<i>Slow blinking blue</i>	The firmware is being updated.
	<i>Fast blinking blue</i>	The device is in the emergency mode. Restore the factory default settings via the hardware RESET button.

LED	Mode	Description
	<i>No light</i>	<ul style="list-style-type: none">• The default wired WAN connection is off, or• there are no WAN connections created.
WLAN 2.4G WLAN 5G	<i>Fast blinking blue</i>	Data transfer through the Wi-Fi network of the relevant band.
	<i>Slow blinking blue</i>	When attempting to connect mesh network devices or add a wireless device via the WPS function, the LEDs are blinking one at a time.

Back Panel



Figure 2. Back panel view.

Name	Description
RESET	A button to restore the factory defaults. To restore the factory defaults, push the button (with the device turned on), hold it for 10 seconds, and then release the button.
WPS	A button to connect mesh network devices or set up wireless connection (the WPS function). To connect mesh network devices or use the WPS function: with the device turned on, push and release the button. To disable the router's wireless network: with the device turned on, push the button, hold it for 10 seconds, and release.
LAN 1-4	4 Ethernet ports to connect computers or network devices.

Name	Description
WAN	A port to connect to a cable or DSL modem or to a private Ethernet line (it is recommended to use the cable included in the delivery package).
12V=1.5A	Power connector.
ON/OFF	A button to turn the router on/off.

The device is also equipped with four external non-detachable Wi-Fi antennas.

Delivery Package

The following should be included:

- Router DIR-842V2
- Power adapter DC 12V/1.5A
- Ethernet cable
- “***Quick Installation Guide***” (brochure).

The “***User Manual***” and “***Quick Installation Guide***” documents are available on D-Link website (see <https://eu.dlink.com/>)



Using a power supply with a different voltage rating than the one included will cause damage and void the warranty for this product.

CHAPTER 3. INSTALLATION AND CONNECTION

Before You Begin

Please, read this manual prior to installing the device. Make sure that you have all the necessary information and equipment.

Computer or Mobile Device

Configuration of the wireless dual band gigabit router with a built-in 4-port switch DIR-842V2 (hereinafter referred to as “the router”) is performed via the built-in web-based interface. The web-based interface is available from any operating system that supports a web browser.

PC Web Browser

The following PC web browsers are recommended:

- Apple Safari 8 and later
- Google Chrome 48 and later
- Microsoft Internet Explorer 10 and later
- Microsoft Edge 20.10240 and later
- Mozilla Firefox 44 and later
- Opera 35 and later.

For successful operation, JavaScript should be enabled on the web browser. Make sure that JavaScript has not been disabled by other software (such as virus protection or web user security packages) running on your computer.

Wired or Wireless NIC (Ethernet or Wi-Fi Adapter)

Any computer that uses the router should be equipped with an Ethernet or Wi-Fi adapter (NIC). If your computer is not equipped with such a device, install an Ethernet or Wi-Fi adapter prior to using the router.

Wireless Connection

Wireless workstations from your network should be equipped with a wireless 802.11a, b, g, n, or ac NIC (Wi-Fi adapter). In addition, you should specify the values of SSID, channel number and security settings defined in the web-based interface of the router for all these wireless workstations.

Connecting to PC

PC with Ethernet Adapter

1. Connect an Ethernet cable between any of LAN ports located on the back panel of the router and the Ethernet port of your PC.
2. Connect the power cord to the power connector port on the back panel of the router, then plug the power adapter into an electrical outlet or power strip.
3. Turn on the router by pressing the **ON/OFF** button on its back panel.

Then make sure that your PC is configured to obtain an IP address automatically (as DHCP client).

Obtaining IP Address Automatically (OS Windows 7)

1. Click the **Start** button and proceed to the **Control Panel** window.
2. Select the **Network and Sharing Center** section. (If the Control Panel has the category view (the **Category** value is selected from the **View by** drop-down list in the top right corner of the window), choose the **View network status and tasks** line under the **Network and Internet** section.)

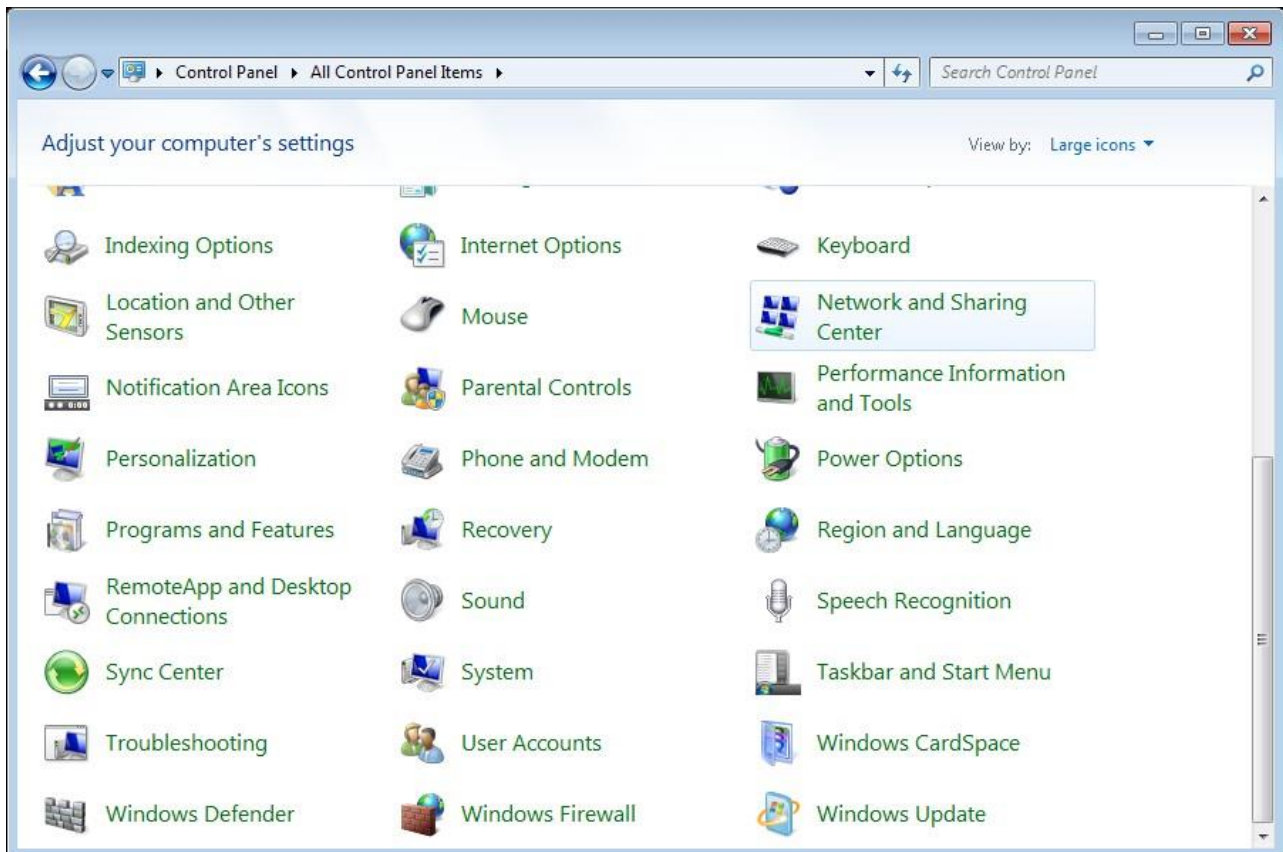


Figure 3. The **Control Panel** window.

3. In the menu located on the left part of the window, select the **Change adapter settings** line.

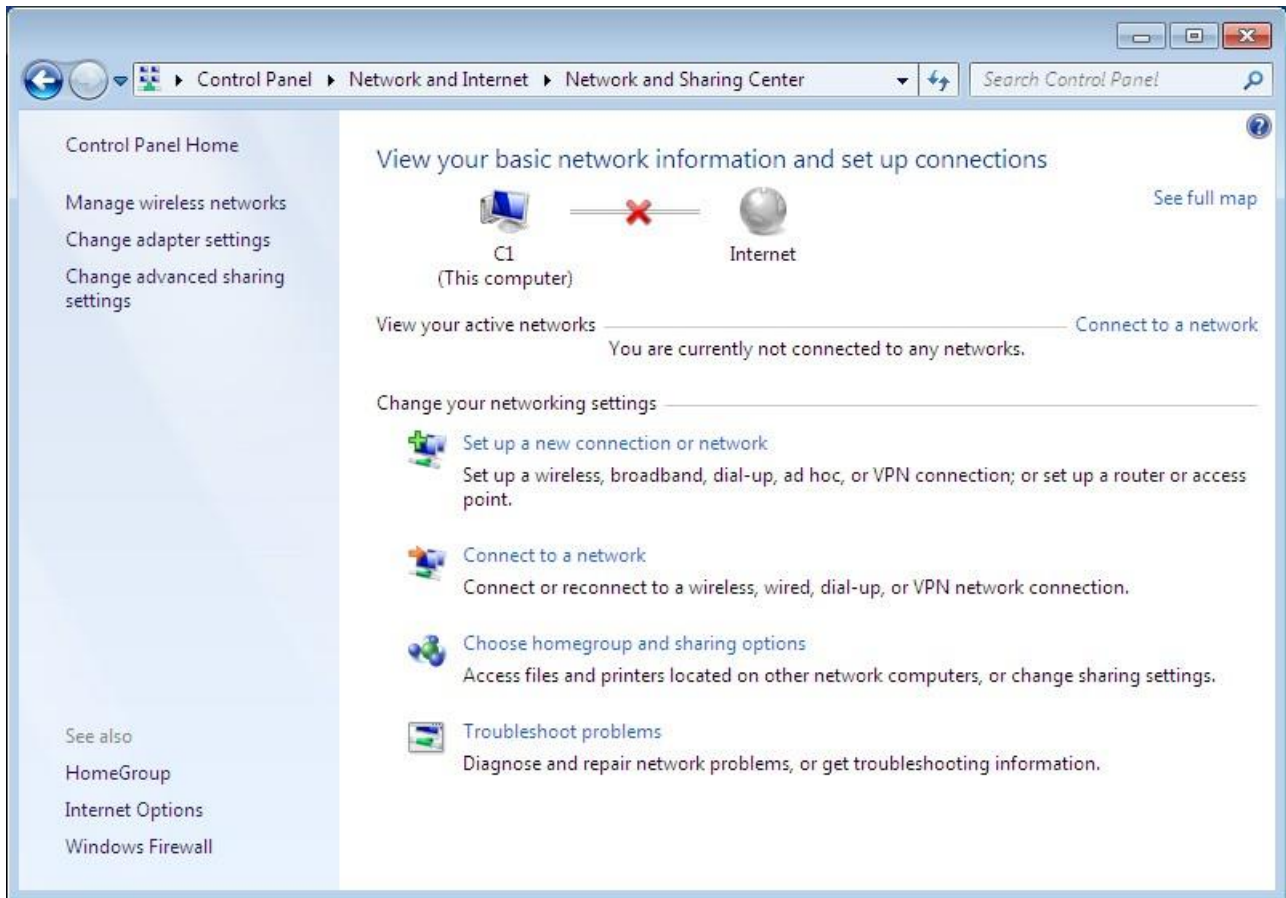


Figure 4. The **Network and Sharing Center** window.

4. In the opened window, right-click the relevant **Local Area Connection** icon and select the **Properties** line in the menu displayed.

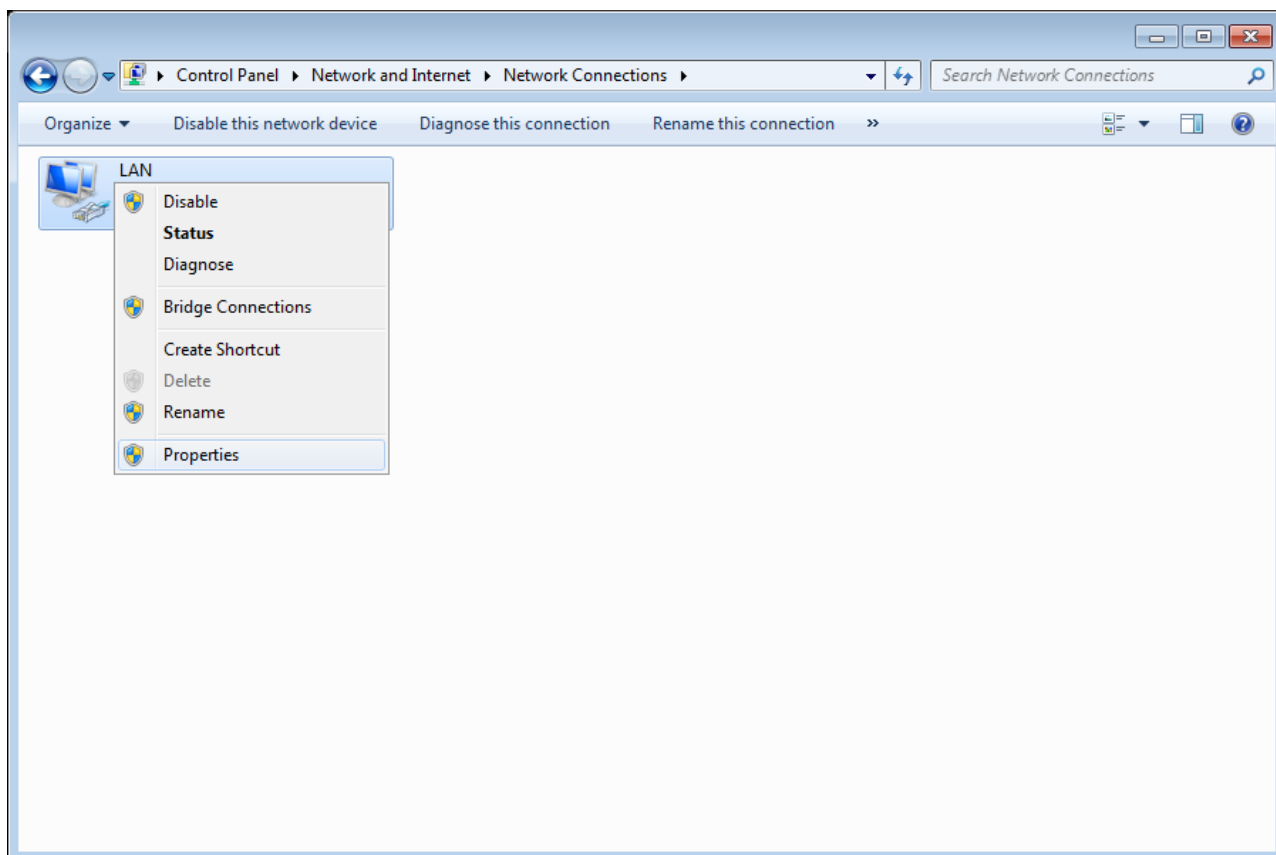


Figure 5. The **Network Connections** window.

5. In the **Local Area Connection Properties** window, on the **Networking** tab, select the **Internet Protocol Version 4 (TCP/IPv4)** line. Click the **Properties** button.

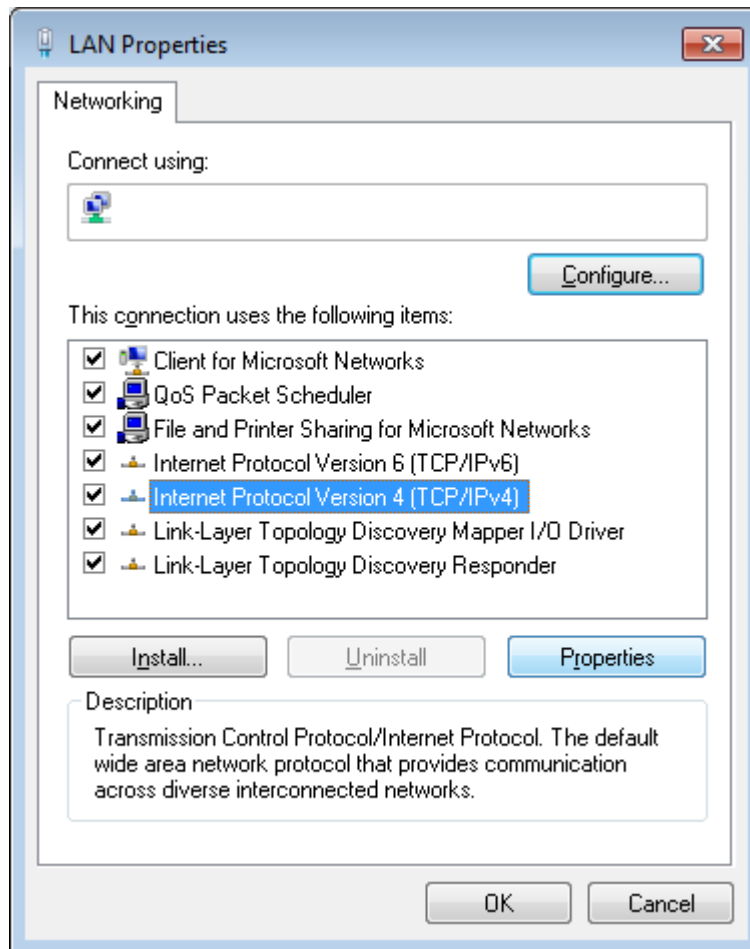


Figure 6. The **Local Area Connection Properties** window.

6. Make sure that the **Obtain an IP address automatically** and **Obtain DNS server address automatically** choices of the radio buttons are selected. Click the **OK** button.

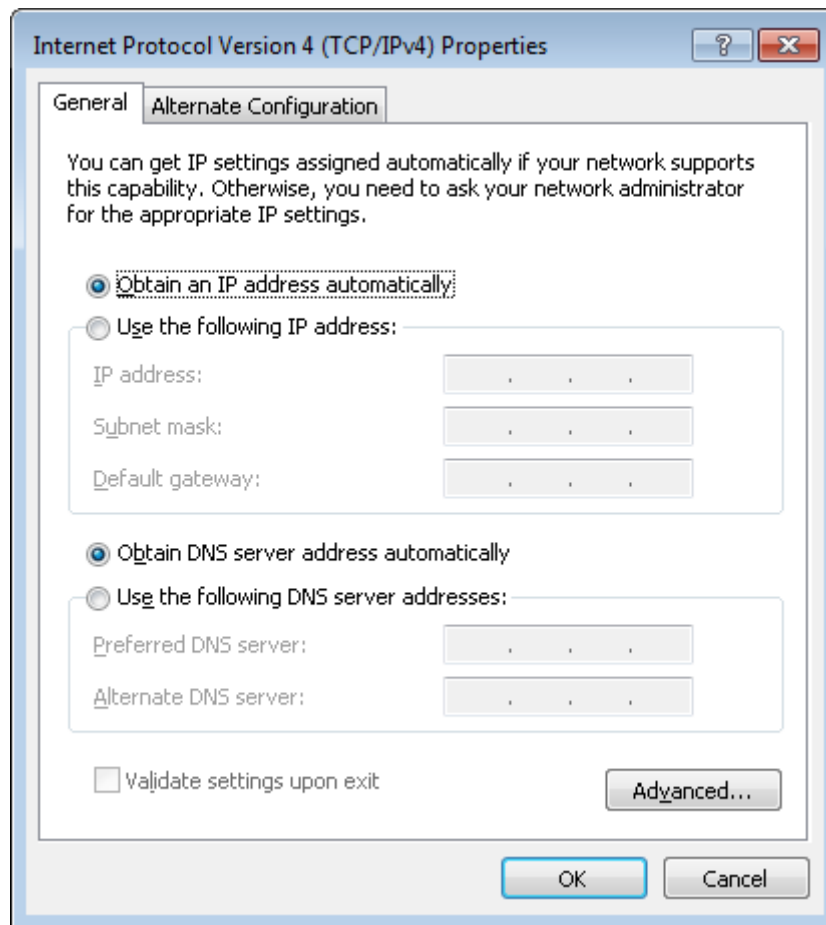


Figure 7. The **Internet Protocol Version 4 (TCP/IPv4) Properties** window.

7. Click the **OK** button in the connection properties window.

Obtaining IP Address Automatically (OS Windows 10)

1. Click the **Start** button and proceed to the **Settings** window.
2. Select the **Network & Internet** section.

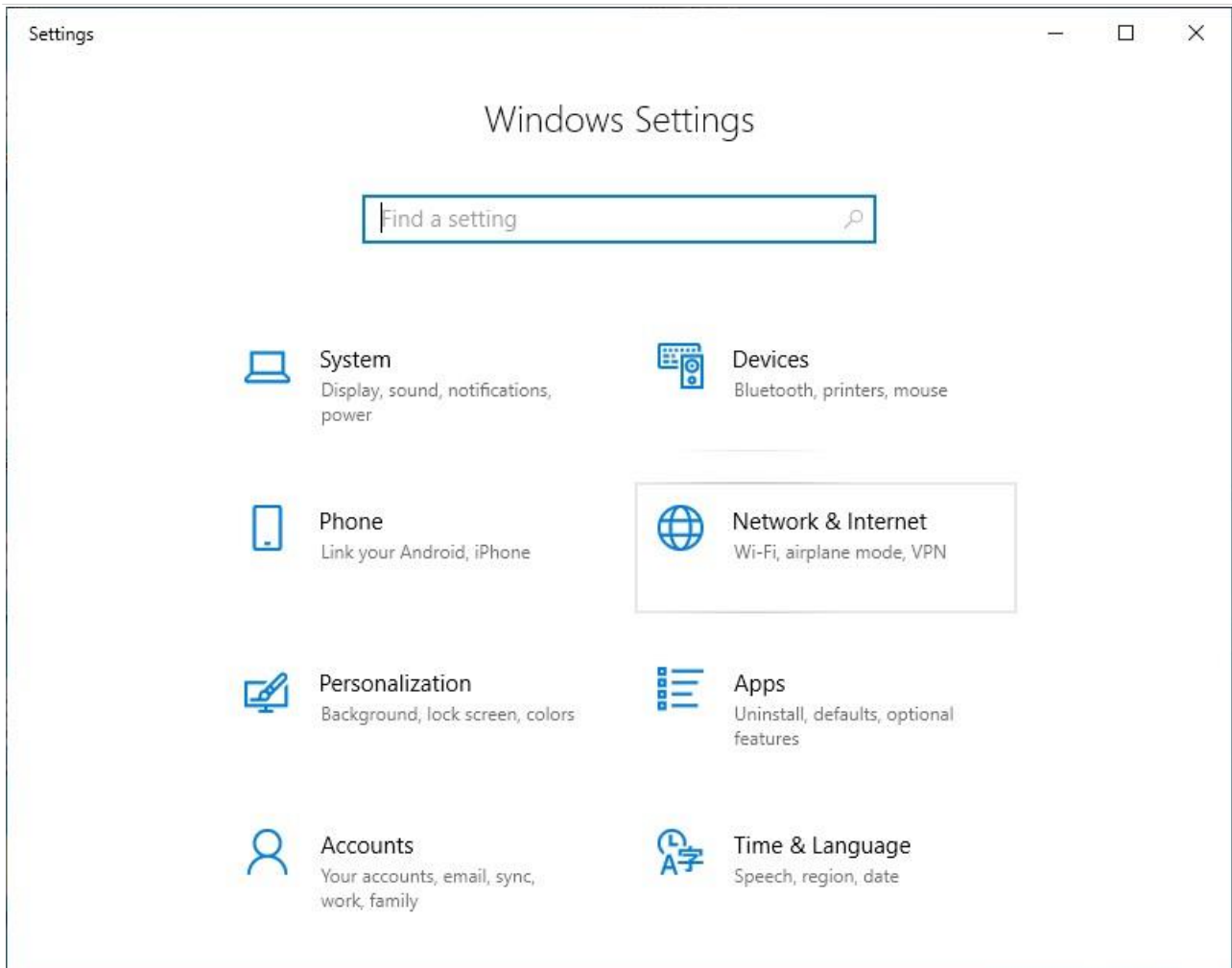


Figure 8. The **Windows Settings** window.

3. In the **Change your network settings** section, select the **Change adapter options** line.

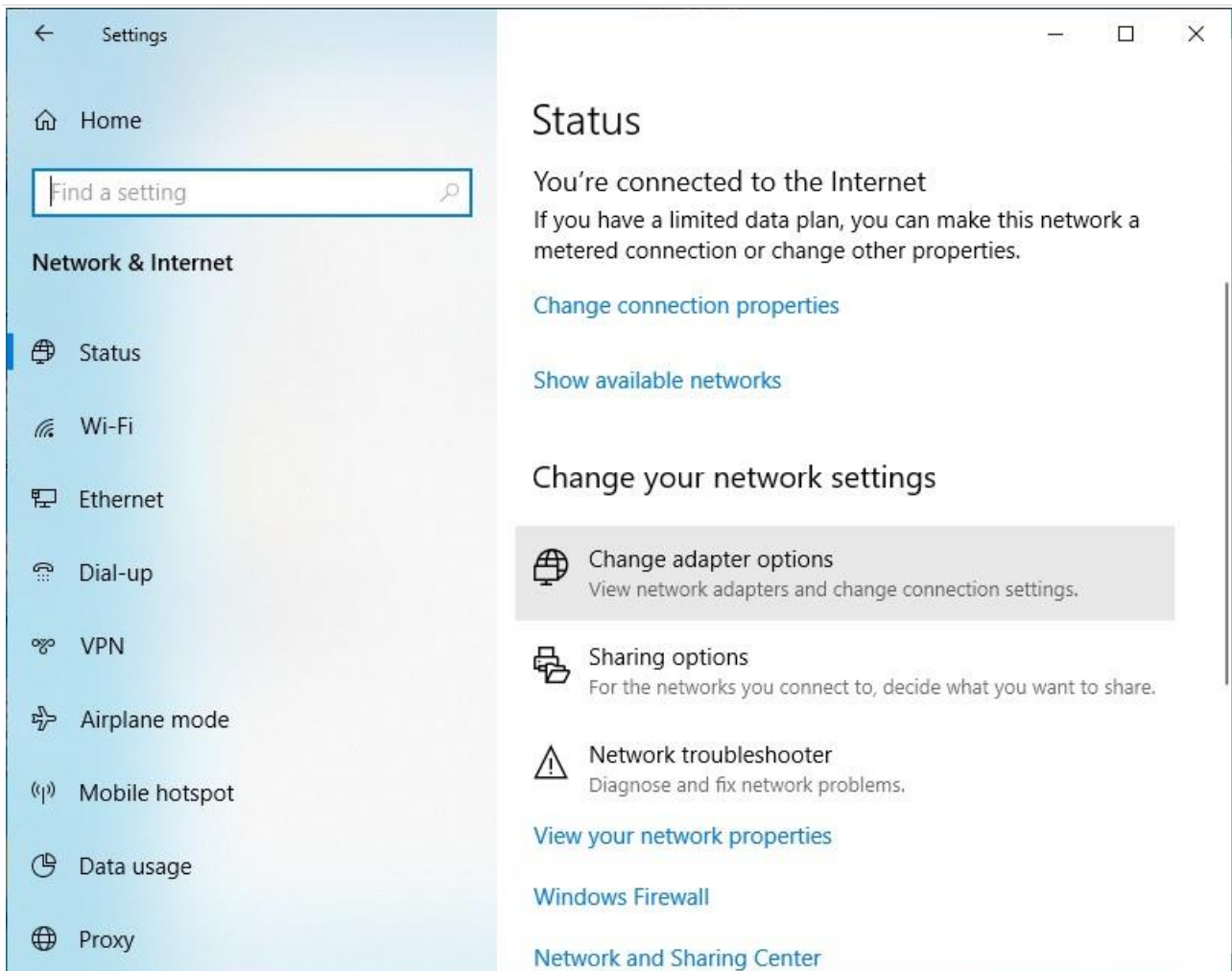


Figure 9. The **Network & Internet** window.

4. In the opened window, right-click the relevant **Local Area Connection** icon and select the **Properties** line in the menu displayed.

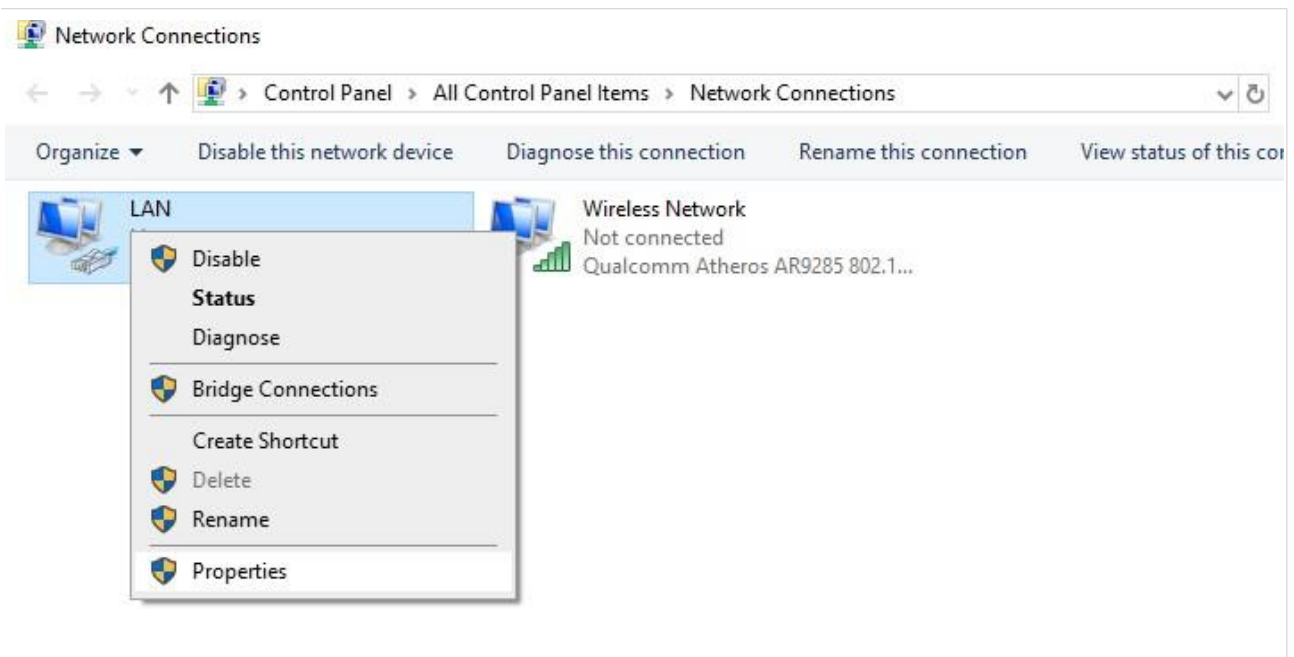


Figure 10. The **Network Connections** window.

5. In the **Local Area Connection Properties** window, on the **Networking** tab, select the **Internet Protocol Version 4 (TCP/IPv4)** line. Click the **Properties** button.

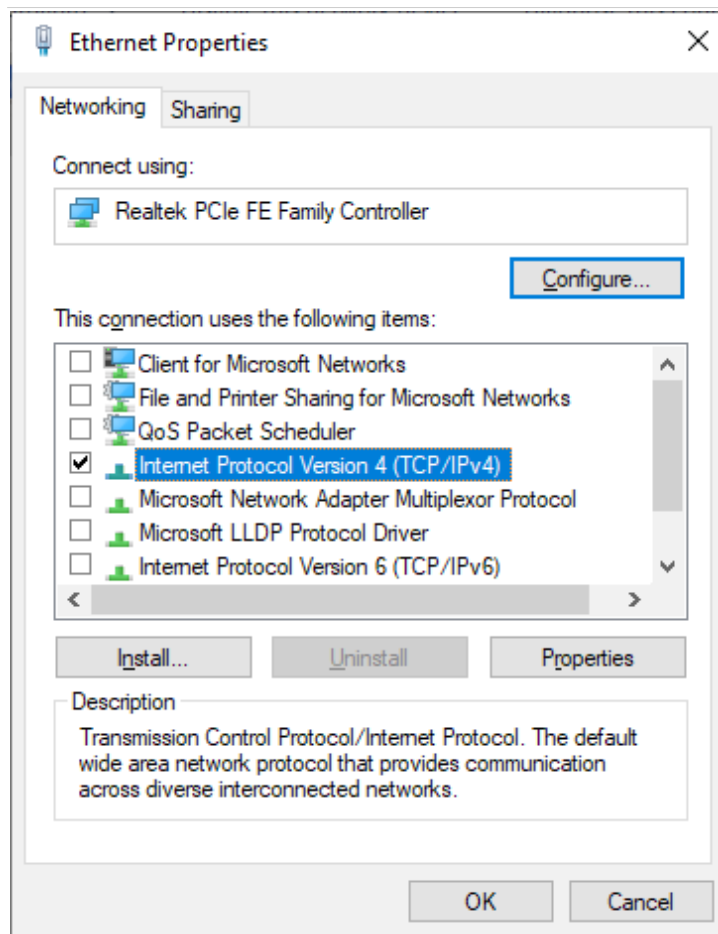


Figure 11. The local area connection properties window.

6. Make sure that the **Obtain an IP address automatically** and **Obtain DNS server address automatically** choices of the radio buttons are selected. Click the **OK** button.

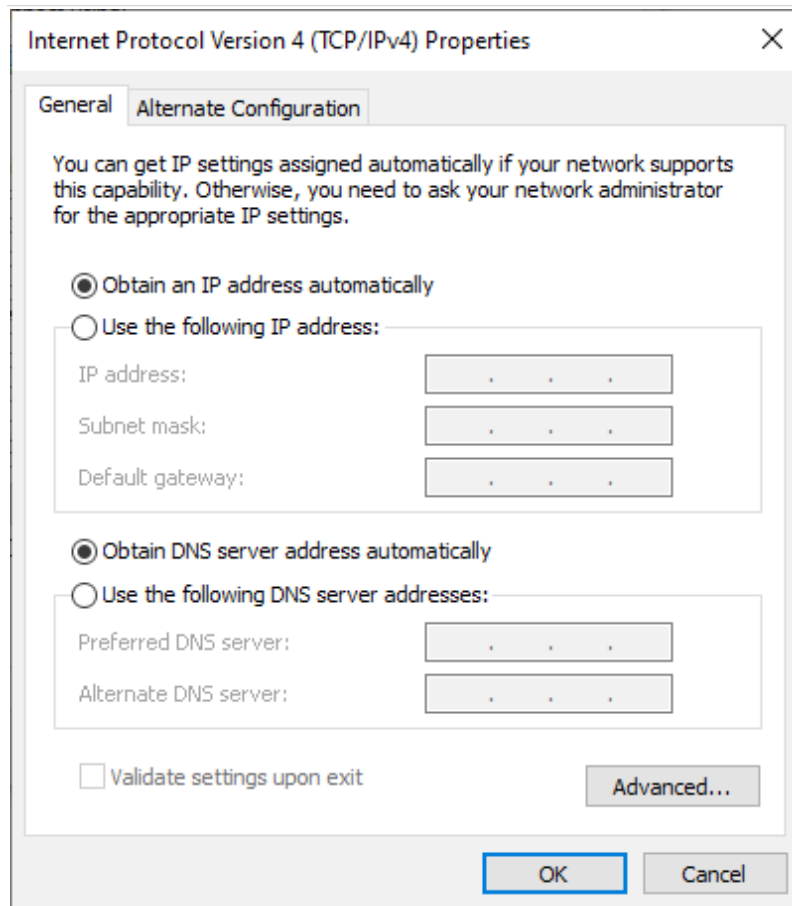


Figure 12. The **Internet Protocol Version 4 (TCP/IPv4) Properties** window.

7. Click the **Close** button in the connection properties window.

Obtaining IP Address Automatically and Connecting to Wireless Network (OS Windows 7)

1. Click the **Start** button and proceed to the **Control Panel** window.
2. Select the **Network and Sharing Center** section. (If the Control Panel has the category view (the **Category** value is selected from the **View by** drop-down list in the top right corner of the window), choose the **View network status and tasks** line under the **Network and Internet** section.)

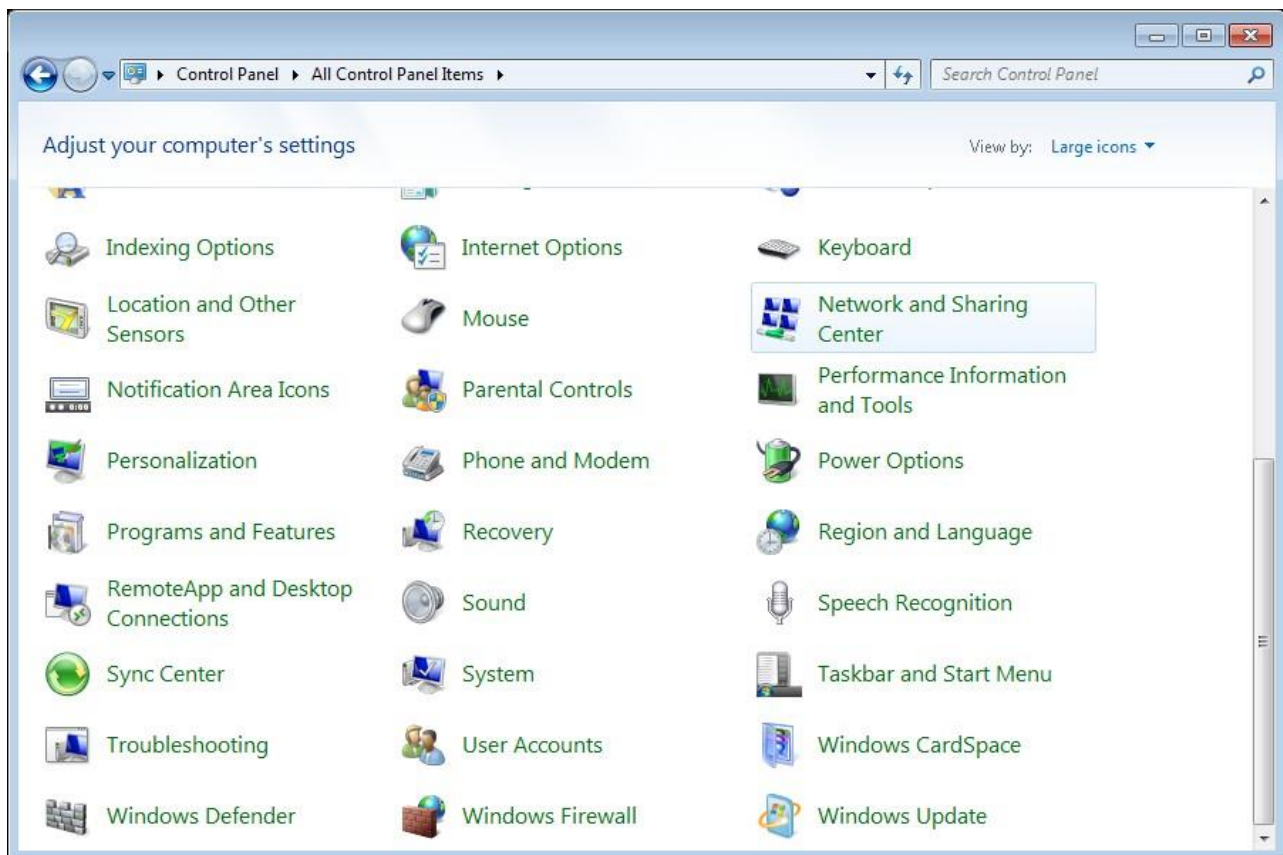


Figure 13. The **Control Panel** window.

3. In the menu located on the left part of the window, select the **Change adapter settings** line.
4. In the opened window, right-click the relevant **Wireless Network Connection** icon. Make sure that your Wi-Fi adapter is on, then select the **Properties** line in the menu displayed.
5. In the **Wireless Network Connection Properties** window, on the **Networking** tab, select the **Internet Protocol Version 4 (TCP/IPv4)** line. Click the **Properties** button.

6. Make sure that the **Obtain an IP address automatically** and **Obtain DNS server address automatically** choices of the radio buttons are selected. Click the **OK** button.

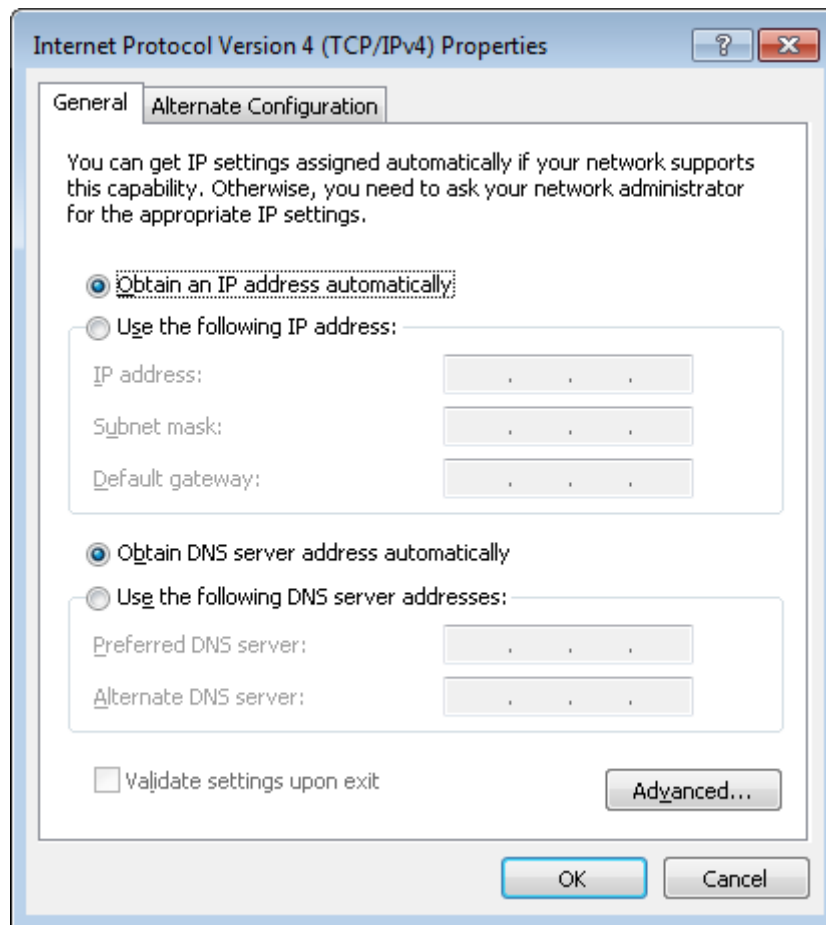


Figure 14. The **Internet Protocol Version 4 (TCP/IPv4) Properties** window.

7. Click the **OK** button in the connection properties window.
8. To open the list of available wireless networks, select the icon of the wireless network connection and click the **Connect To** button or left-click the network icon in the notification area located on the right side of the taskbar.

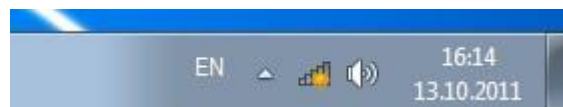


Figure 15. The notification area of the taskbar.

9. In the opened **Wireless Network Connection** window, select the wireless network **DIR-842V2** (for operating in the 2.4GHz band) or **DIR-842V2-5G** (for operating in the 5GHz band) and click the **Connect** button.

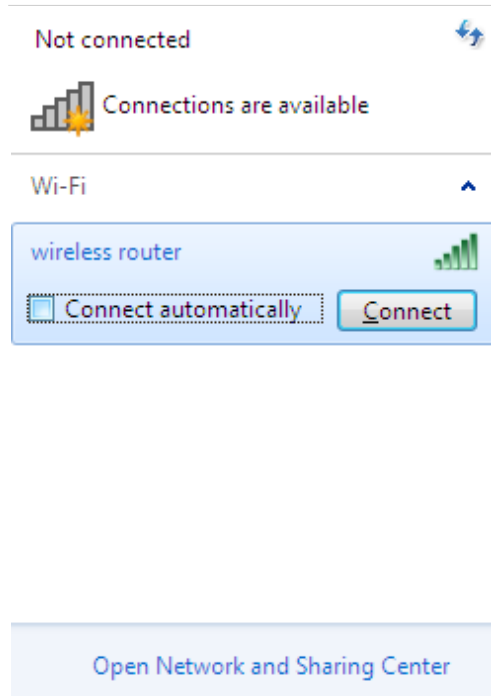


Figure 16. The list of available networks.

10. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) in the **Security key** field and click the **OK** button.
11. Wait for about 20-30 seconds. After the connection is established, the network icon will be displayed as the signal level scale.

! If you perform initial configuration of the router via Wi-Fi connection, note that immediately after changing the wireless default settings of the router you will need to reconfigure the wireless connection using the newly specified settings.

Obtaining IP Address Automatically and Connecting to Wireless Network (OS Windows 10)

1. Click the **Start** button and proceed to the **Settings** window.
2. Select the **Network & Internet** section.

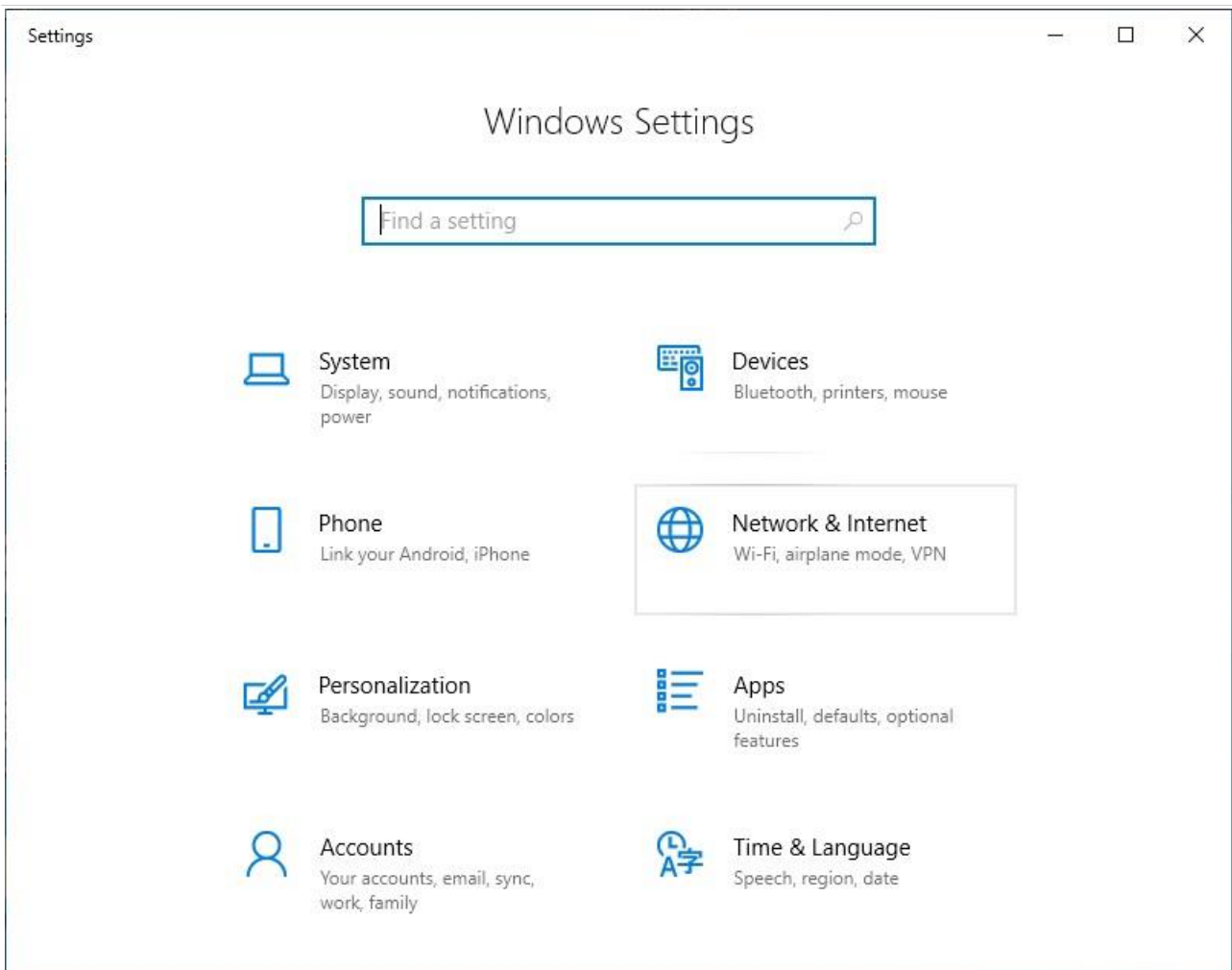


Figure 17. The **Windows Settings** window.

3. In the **Change your network settings** section, select the **Change adapter options** line.
4. In the opened window, right-click the relevant **Wireless Network Connection** icon. Make sure that your Wi-Fi adapter is on, then select the **Properties** line in the menu displayed.
5. In the **Wireless Network Connection Properties** window, on the **Networking** tab, select the **Internet Protocol Version 4 (TCP/IPv4)** line. Click the **Properties** button.

6. Make sure that the **Obtain an IP address automatically** and **Obtain DNS server address automatically** choices of the radio buttons are selected. Click the **OK** button.

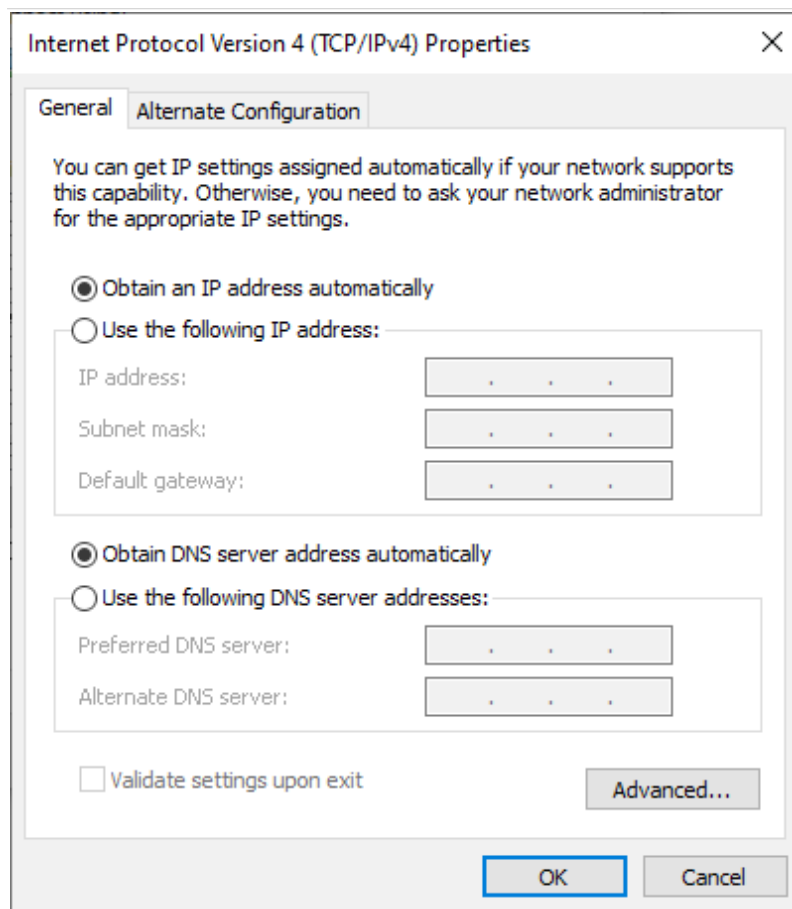


Figure 18. The **Internet Protocol Version 4 (TCP/IPv4) Properties** window.

7. Click the **Close** button in the connection properties window.
8. To open the list of available wireless networks, select the icon of the wireless network connection and click the **Connect To** button or left-click the network icon in the notification area located on the right side of the taskbar.



Figure 19. The notification area of the taskbar.

9. In the opened **Wireless Network Connection** window, select the wireless network **DIR-842V2** (for operating in the 2.4GHz band) or **DIR-842V2-5G** (for operating in the 5GHz band) and click the **Connect** button.

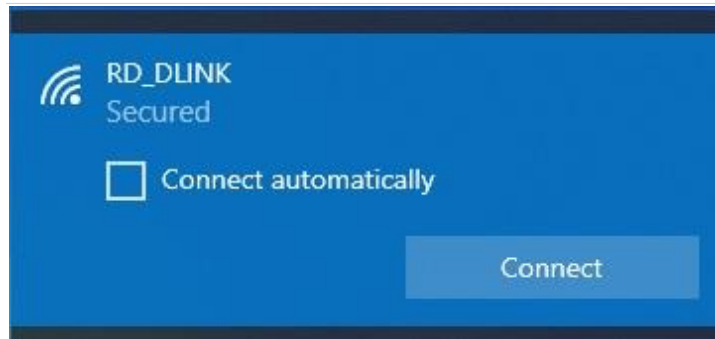


Figure 20. The list of available networks.

10. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) in the **Security key** field and click the **Next** button.
11. Allow or forbid your PC to be discoverable by other devices on this network (**Yes / No**).



Figure 21. PC discovery settings.

12. Wait for about 20-30 seconds. After the connection is established, the network icon will be displayed as a dot with curved lines indicating the signal level.

! If you perform initial configuration of the router via Wi-Fi connection, note that immediately after changing the wireless default settings of the router you will need to reconfigure the wireless connection using the newly specified settings.

Connecting to Web-based Interface

When you have configured your computer, you can access the web-based interface and configure needed parameters (create a WAN connection, change the parameters of the wireless network, specify the settings of the firewall, etc.).

! For security reasons, DIR-842V2 with default settings cannot connect to the Internet. To get started, please set your own password used to access the web-based interface and, if needed, configure other settings recommended by your ISP.

Start a web browser (see the **Before You Begin** section, page 20). In the address bar of the web browser, enter the domain name of the router (by default, **dlinkrouter.local**) with a dot at the end and press the **Enter** key. Also you can enter the IP address of the device (by default, **192.168.0.1**).



Figure 22. Connecting to the web-based interface of the DIR-842V2 device.

! If the error “The page cannot be displayed” (or “Unable to display the page”/“Could not connect to remote server”) occurs upon connecting to the web-based interface of the router, make sure that you have properly connected the router to your computer.

If the device has not been configured previously or the default settings have been restored, after access to the web-based interface the Setup Wizard opens (see the **Setup Wizard** section, page 48).

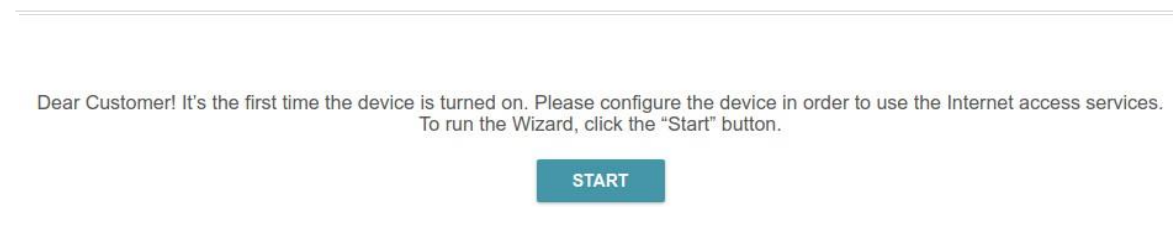
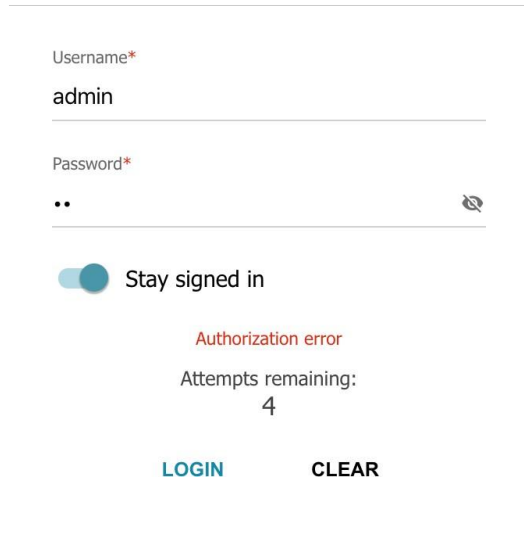


Figure 23. The page for running the Setup Wizard.

If you configured the device previously, after access to the web-based interface the login page opens. Enter the username (**admin**) in the **Username** field and the password you specified in the



Password field, then click the **LOGIN** button.

Figure 24. The login page.

In order not to log out, move the **Stay signed in** switch to the right. After closing the web browser or rebooting the device, you need to enter the username and the password again.

If you enter a wrong password several times, the web-based interface will be blocked for a while. Please wait for one minute and reenter the password you specified.

Web-based Interface Structure

Home Page

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

The page displays whether or not the router is currently connected to the Internet. If it is disconnected, click the sign **Click to repair** to go to the **Settings / Internet / WAN** page (for the description of the page, see the **WAN** section, page 76), or click **Internet disconnected** to run the Setup Wizard (for the description of the Wizard, see the **Setup Wizard** section, page 48).

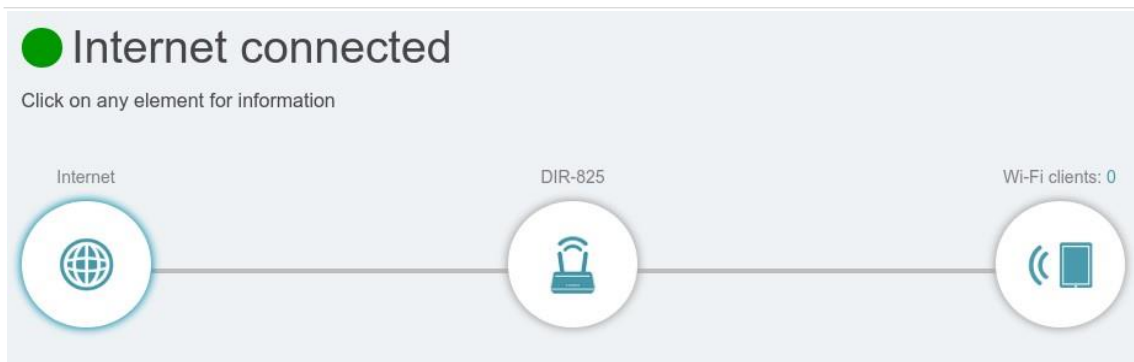


Figure 25. The **Home** page. The device is connected to the Internet.

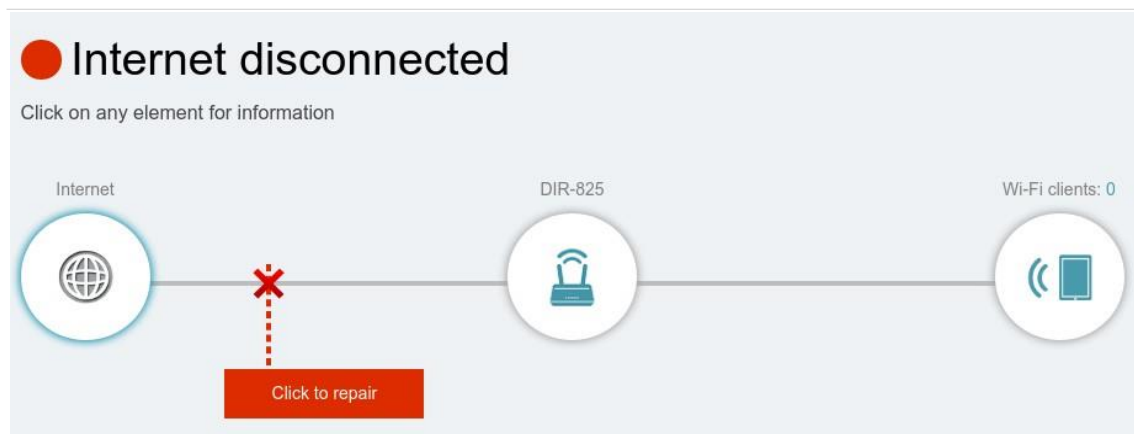


Figure 26. The **Home** page. The device is not connected to the Internet.

Internet Section

Click the **Internet** icon to view more details about your Internet connection.

Internet connected
Click on any element for information

Internet DIR-825 Wi-Fi clients: 0

Internet IPv4 IPv6

Connection type	Dynamic IPv4	MAC address	00:13:95:f7:7e:ba
Status	Connected	IP address	192.168.155.91
Uptime	10 min.	Subnet mask	255.255.255.0
		Default gateway	192.168.155.15
		Primary DNS	192.168.161.140
		Secondary DNS	8.8.4.4

[Go to settings](#) ➔

Figure 27. The **Home** page. The **Internet** section.

Click **IPv4** or **IPv6** to display details of the IPv4 connection and IPv6 connection respectively.

To reconfigure the Internet settings, click **Go to setting**. Upon that the **Settings / Internet / WAN** page opens (for the description of the page, see the **WAN** section, page 76).

DIR-842V2 Section

Click the **DIR-842V2** icon to view details about the router and its wireless settings.

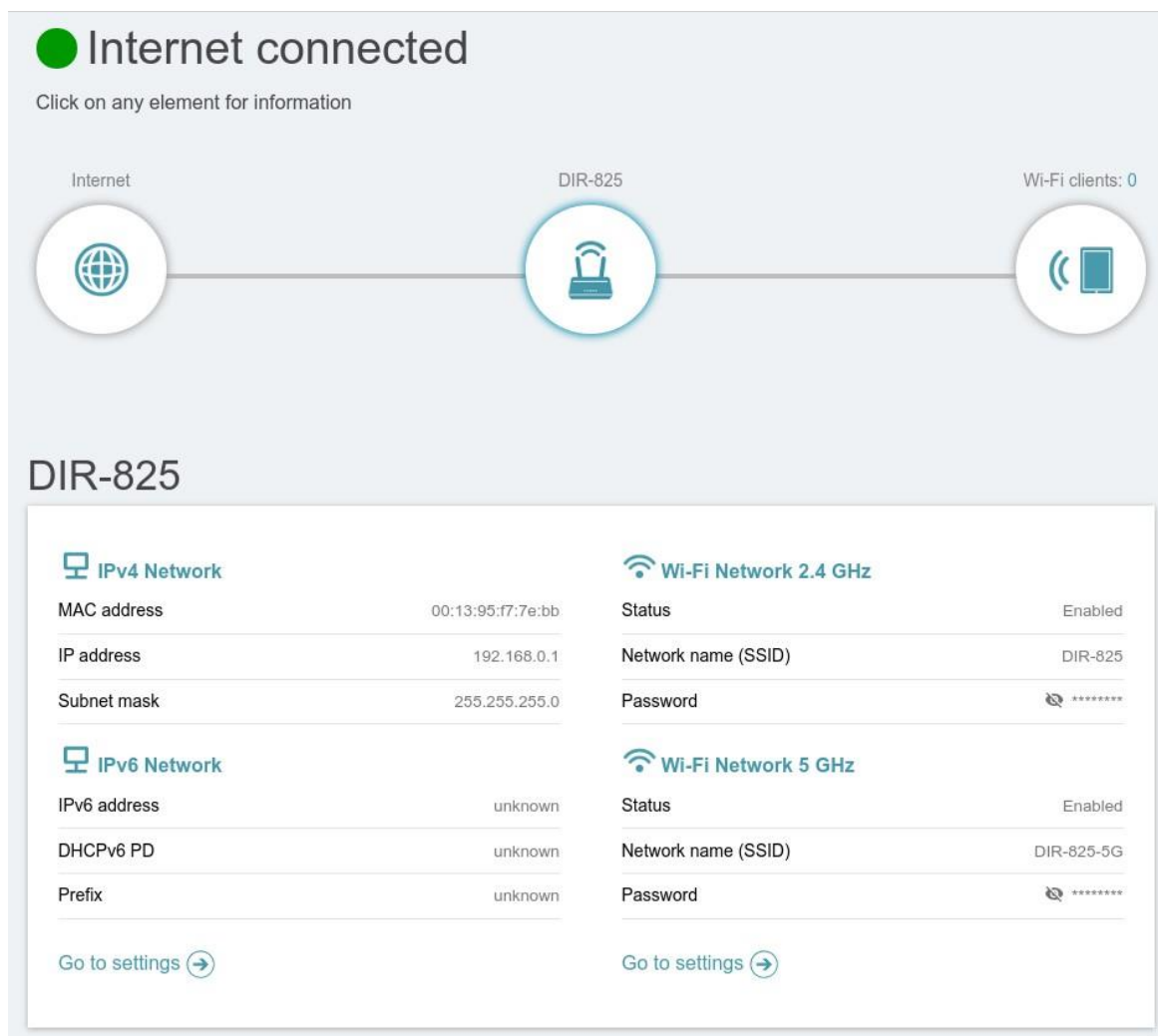


Figure 28. The **Home** page. The **DIR-842V2** section.

Here you can see the router's current Wi-Fi network name in the 2.4GHz and 5GHz bands, the password (click **Show** (🔍) to display it), as well as the router's MAC address, IPv4 address, and IPv6 address.

To reconfigure the network settings, either click **Go to settings** on the lower left, or click **Settings** (at the top of the page) and then **Network** on the menu that appears (for the description of the page, see the *Settings / Network* section, page 124).

To reconfigure the wireless settings, either click **Go to settings** on the lower right, or click **Settings** (at the top of the page) and then **Wireless Network** on the menu that appears (for the description of the page, see the *Settings / Wireless network* section, page 114).

Wi-Fi Clients Section

Click the **Wi-Fi clients** icon to view details about wireless clients connected to the router.

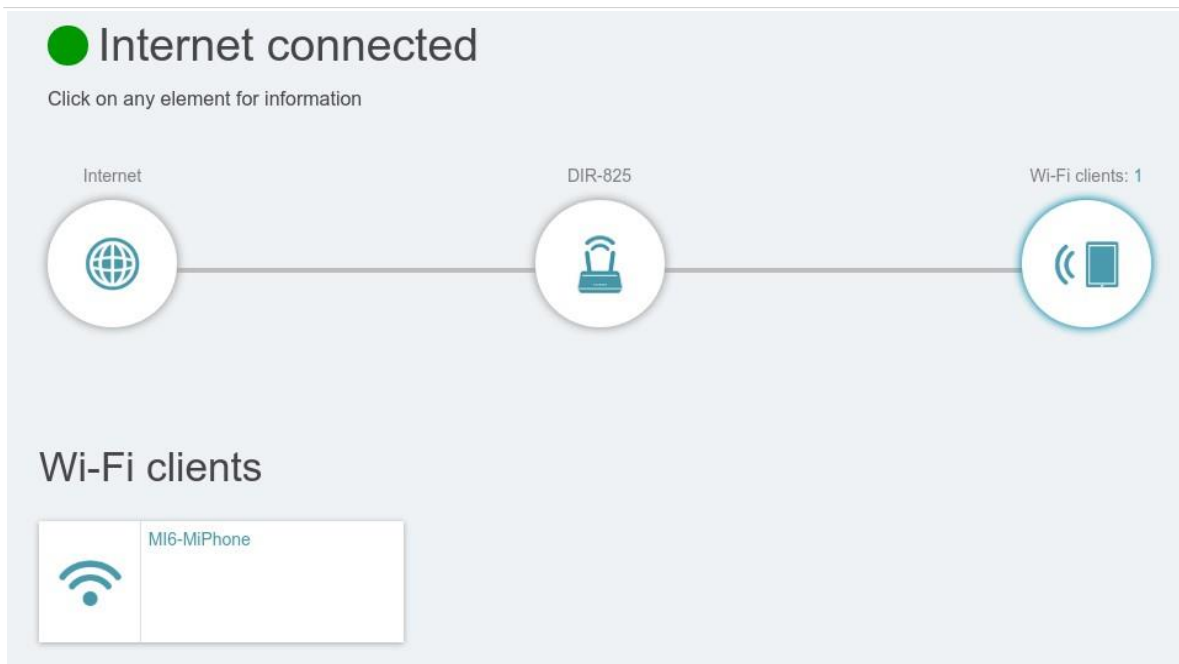



Figure 29. The **Home** page. The **Wi-Fi clients** section.

Here you can see all wireless clients currently connected to the router. Such devices are marked by the **Connected** icon ().

Menu Sections

To configure the router use the menu bar in the top part of the page.

The **Settings** section provides you with the most essential settings.

On the **Setup Wizard** page you can run the Setup Wizard. The Wizard allows you to configure the router for operation in the needed mode and specify all parameters necessary for getting started (for the description of the Wizard, see the *Setup Wizard* section, page 48).

On the **Internet / WAN** page you can create a connection to the Internet or reconfigure existing connections (for the description of the page, see the *WAN* section, page 76).

On the **WAN Failover** page you can enable and configure the WAN backup function (for the description of the page, see the *Settings / WAN Failover* section, page 111).

On the **Wireless network** page you can configure the basic and additional wireless networks (for the description of the page, see the *Settings / Wireless network* section, page 114).

On the **Network** page you can configure basic parameters of the LAN interface of the router (for the description of the page, see the *Settings / Network* section, page 124).

The pages of the **Functions / Firewall** subsection are designed for configuring the firewall of the router (for the description of the pages, see the *Functions / Firewall* section, page 153).

The pages of the **Functions / Wi-Fi** subsection are designed for specifying all other settings of the router's wireless network (for the description of the pages, see the *Functions / Wi-Fi* section, page 162).

The pages of the **Functions / Advanced** subsection are designed for configuring additional parameters of the router (for the description of the pages, see the *Functions / Advanced* section, page 182).

The pages of the **Management** section provide functions for managing the internal system of the router (for the description of the pages, see the *Management* section, page 209). And the pages of the **Management / Statistics** subsection display data on the current state of the router (for the description of the pages, see the *Statistics* section, page 229).

Notifications

The router's web-based interface displays notifications in the top right part of the page.



Figure 30. The web-based interface notifications.

Click the icon displaying the number of notifications to view the complete list and click the relevant button.

CHAPTER 4. CONFIGURING VIA WEB-BASED INTERFACE

Setup Wizard

To start the Setup Wizard, go to the **Settings / Setup Wizard** section. On the opened page, click the **OK** button and wait until the factory default settings are restored.

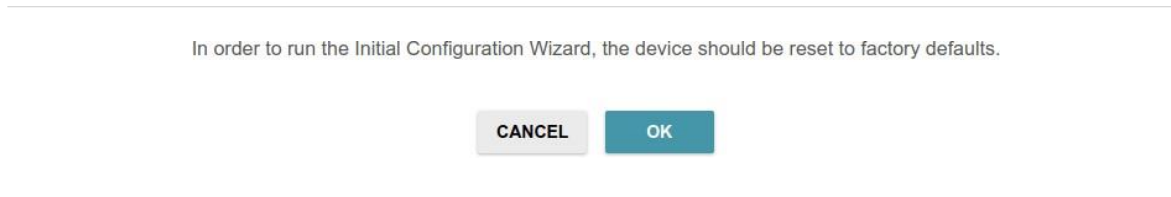


Figure 31. Restoring the default settings in the Wizard.

If you perform initial configuration of the router via Wi-Fi connection, please make sure that you are connected to the wireless network of DIR-842V2 (see the WLAN name (SSID) on the barcode label on the bottom panel of the device) and click the **NEXT** button.

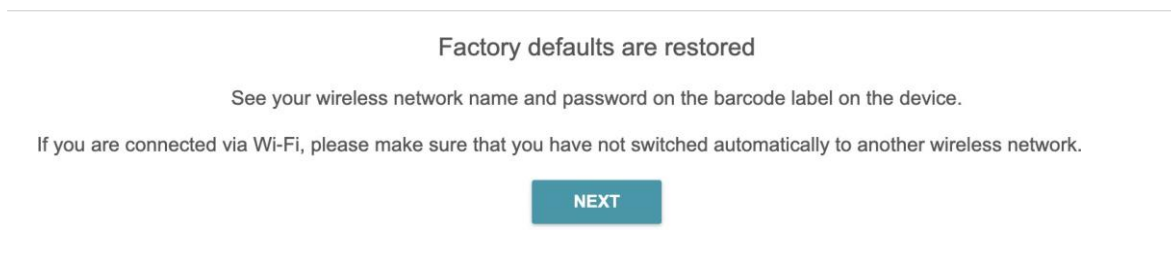


Figure 32. Checking connection to the wireless network.

Click the **START** button.

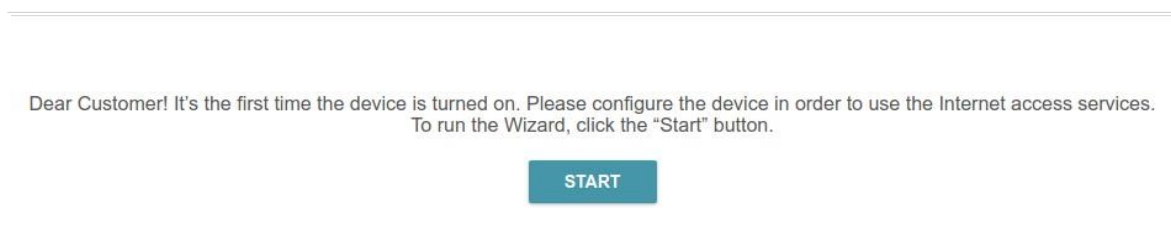


Figure 33. Starting the Wizard.

On the opened page, click **YES** in order to leave the current language of the web-based interface or click **NO** to select another language.



Figure 34. Selecting a language.

You can finish the Wizard earlier and go to the menu of the web-based interface. To do this, click the **ADVANCED SETTINGS** button. On the opened page, change the default settings: specify the administrator password in the **User's interface password** and **Password confirmation** fields and the name of the wireless network in the 2.4GHz and 5GHz bands in the **Network name 2.4 GHz (SSID)** and **Network name 5 GHz (SSID)** fields correspondingly. Then click the **APPLY** button.

A screenshot of the "Defaults" configuration page in a web-based interface. The page has a title "Defaults" and a subtitle "In order to start up, please change several default settings." Below the subtitle are four input fields: "User's interface password*" with a password icon, "Password confirmation*" with a password icon, "Network name 2.4 GHz (SSID)*" with the text "DIR-XXX", and "Network name 5 GHz (SSID)*" with the text "DIR-XXX-5G". Below the input fields are two buttons: a light gray button labeled "< BACK" and a teal button labeled "APPLY".

Figure 35. Changing the default settings.

To continue the configuration of the router via the Wizard, click the **CONTINUE** button.

Selecting Operation Mode

Select the needed operation mode and click the **NEXT** button.

Router

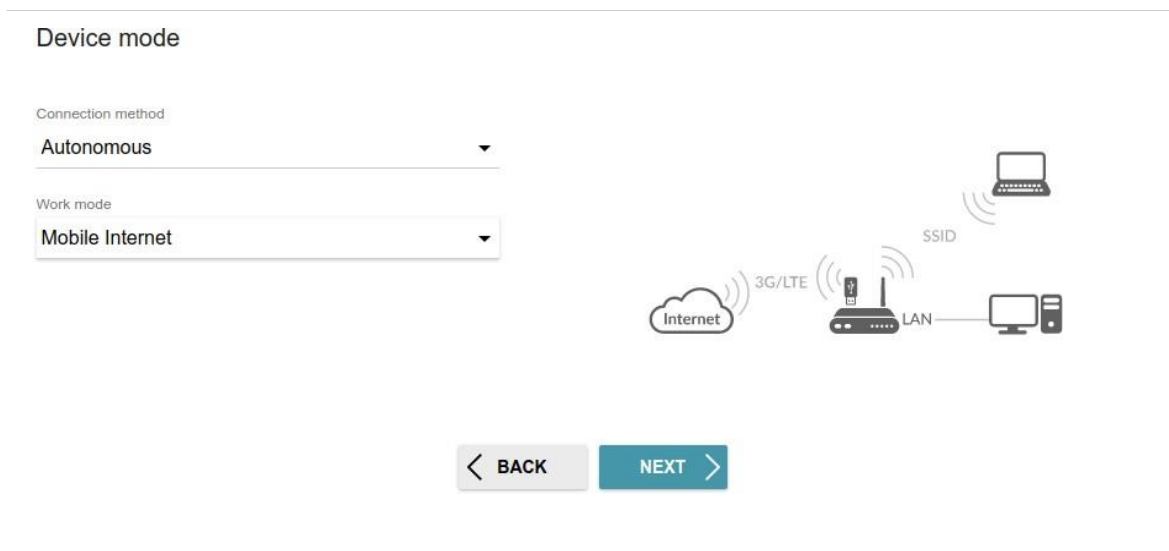
In order to connect your device to a wired ISP, on the **Device mode** page, from the **Connection method** list, select the **Autonomous** value. Then from the **Work mode** list select the **Router** value. In this mode you can configure a WAN connection, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, configure LAN ports to connect an STB or VoIP phone, and set your own password for access to the web-based interface of the device.



The screenshot shows the 'Device mode' configuration page. It has two dropdown menus: 'Connection method' with 'Autonomous' selected, and 'Work mode' with 'Router' selected. To the right is a diagram of a router connected to the Internet via WAN, and to a laptop and desktop PC via LAN and SSID. At the bottom are 'BACK' and 'NEXT' buttons.

Figure 36. Selecting an operation mode. The **Router** mode.

In order to connect your device to the network of a 3G or LTE operator, on the **Device mode** page, from the **Connection method** list, select the **Autonomous** value. Then from the **Work mode** list select the **Mobile Internet** value. In this mode you can configure a 3G/LTE WAN connection, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.



The screenshot shows the 'Device mode' configuration page. It has two dropdown menus: 'Connection method' with 'Autonomous' selected, and 'Work mode' with 'Mobile Internet' selected. To the right is a diagram of a router connected to the Internet via 3G/LTE, and to a laptop and desktop PC via LAN and SSID. At the bottom are 'BACK' and 'NEXT' buttons.

Figure 37. Selecting an operation mode. The **Mobile Internet** mode.

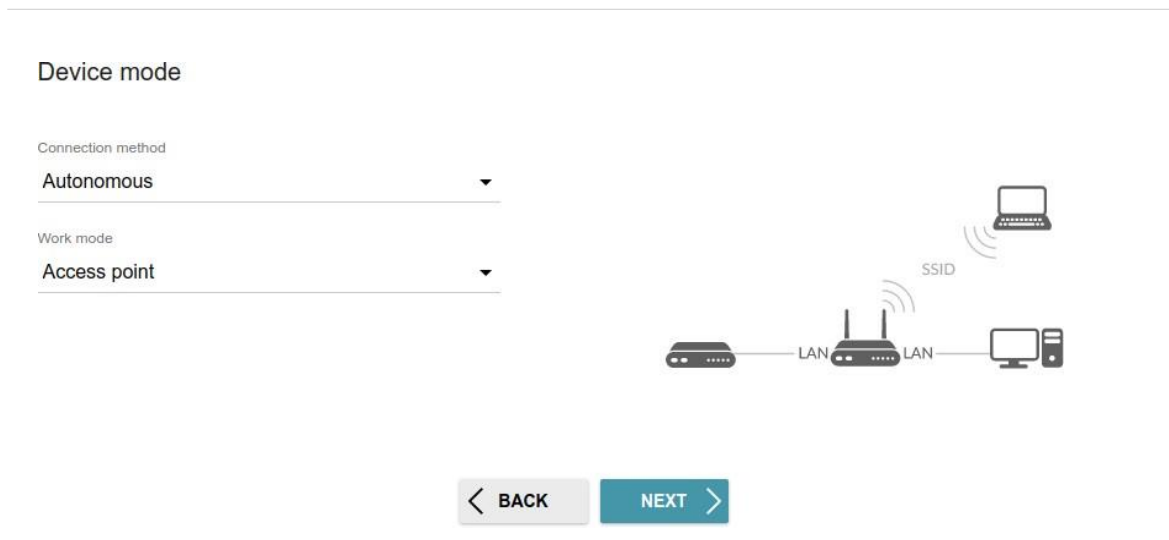
In order to connect your device to a wireless ISP (WISP), on the **Device mode** page, from the **Connection method** list, select the **Autonomous** value. Then from the **Work mode** list select the **WISP Repeater** value. In this mode you can connect your device to another access point, configure a WAN connection, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.

The screenshot shows the 'Device mode' configuration page. It features two dropdown menus: 'Connection method' with 'Autonomous' selected, and 'Work mode' with 'WISP Repeater' selected. To the right of these menus is a diagram illustrating the WISP Repeater setup. The diagram shows an 'Internet' cloud connected to a router via 'SSID'. The router is also connected to a laptop via 'SSID_Ext' and to a desktop computer via 'LAN'. At the bottom of the page are two buttons: a grey 'BACK' button with a left arrow and a blue 'NEXT' button with a right arrow.

Figure 38. Selecting an operation mode. The **WISP Repeater** mode.

Access Point or Repeater

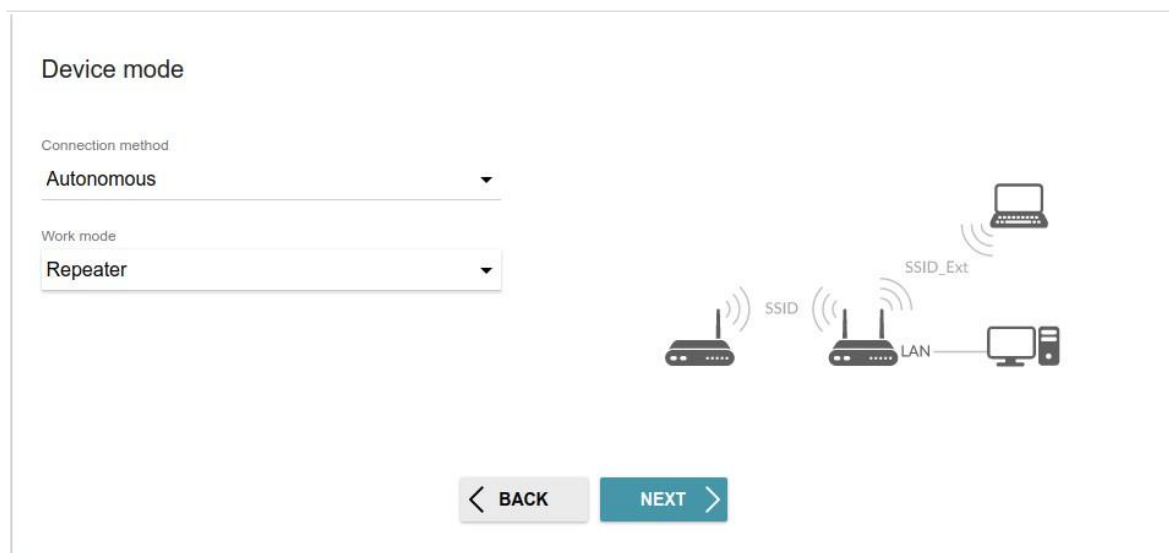
In order to connect your device to a wired router for adding a wireless network to the existing local network, on the **Device mode** page, from the **Connection method** list, select the **Autonomous** value. Then from the **Work mode** list select the **Access point** value. In this mode you can change the LAN IP address, set your own settings for the wireless network in the 2.4GHz and 5GHz bands and set your own password for access to the web-based interface of the device.



The screenshot shows the 'Device mode' configuration page. On the left, there are two dropdown menus: 'Connection method' with 'Autonomous' selected, and 'Work mode' with 'Access point' selected. To the right of these menus is a diagram illustrating the Access point mode: a central router is connected via LAN to a wired router on the left and a computer on the right. The central router also has a wireless signal labeled 'SSID' connecting to a laptop. At the bottom, there are 'BACK' and 'NEXT' navigation buttons.

Figure 39. Selecting an operation mode. The **Access point** mode.

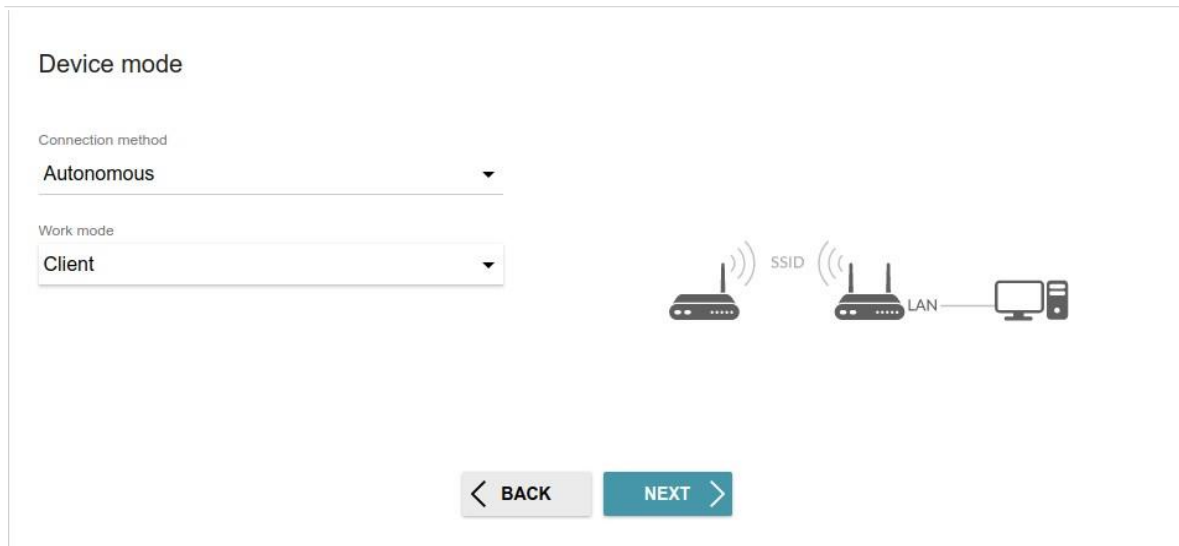
In order to connect your device to a wireless router for extending the range of the existing wireless network, on the **Device mode** page, from the **Connection method** list, select the **Autonomous** value. Then from the **Work mode** list select the **Repeater** value. In this mode you can change the LAN IP address, connect your device to another access point, set your own settings for the wireless network in the 2.4GHz and 5GHz bands, and set your own password for access to the web-based interface of the device.



The screenshot shows the 'Device mode' configuration page. On the left, there are two dropdown menus: 'Connection method' with 'Autonomous' selected, and 'Work mode' with 'Repeater' selected. To the right of these menus is a diagram illustrating the Repeater mode: a central router is connected via LAN to a computer on the right. The central router has two wireless signals: 'SSID' connecting to a laptop on the left, and 'SSID_Ext' connecting to another router on the left. At the bottom, there are 'BACK' and 'NEXT' navigation buttons.

Figure 40. Selecting an operation mode. The **Repeater** mode.

In order to let wired PCs connected to your device access the network of a wireless router, on the **Device mode** page, from the **Connection method** list, select the **Autonomous** value. Then from the **Work mode** list select the **Client** value. In this mode you can change the LAN IP address, connect your device to another access point and set your own password for access to the web-based interface of the device.



The screenshot displays the 'Device mode' configuration interface. It features two dropdown menus: 'Connection method' with 'Autonomous' selected, and 'Work mode' with 'Client' selected. To the right of these menus is a diagram illustrating the network setup: two wireless routers are connected via SSID, and the second router is connected to a computer via its LAN port. At the bottom of the interface are two buttons: a grey 'BACK' button with a left arrow and a blue 'NEXT' button with a right arrow.

Figure 41. Selecting an operation mode. The **Client** mode.

When the operation mode is selected, click the **NEXT** button.

Changing LAN IPv4 Address

This configuration step is available for the **Access point**, **Repeater**, and **Client** modes.

1. Select the **Automatic obtainment of IPv4 address** to let DIR-842V2 automatically obtain the LAN IPv4 address.
2. In the **Hostname** field, you should specify a domain name of the router using which you can access the web-based interface after finishing the Wizard. Enter a new domain name of the router ending with **.local** or leave the value suggested by the router.



In order to access the web-based interface using the domain name, in the address bar of the web browser, enter the name of the router with a dot at the end.

If you want to manually assign the LAN IPv4 address for DIR-842V2, do not select the **Automatic obtainment of IPv4 address** checkbox and fill in the **IP address**, **Subnet mask**, **DNS IP address**, **Hostname** fields and, if needed, the **Gateway IP address** field. Make sure that the assigned address does not coincide with the LAN IPv4 address of the router to which your device connects.

LAN

☐ Automatic obtainment of IPv4 address

Automatic obtainment of IPv4 address sufficiently protects against use of the same addresses in one LAN. In order to avoid IPv4 address conflicts, static IPv4 addresses of LAN devices should not coincide with addresses from the address range assigned by an upper-level router (or a local DHCP server).

IP address*

192.168.0.1

Subnet mask*

255.255.255.0

Gateway IP address

DNS IP address*

8.8.8.8

Hostname*

dlinkap7eba.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, dlinkap12ab.local./)

< BACK NEXT >

Figure 48. The page for changing the LAN IPv4 address.


3. Click the **NEXT** button to continue or click the **BACK** button to return to the previous page.

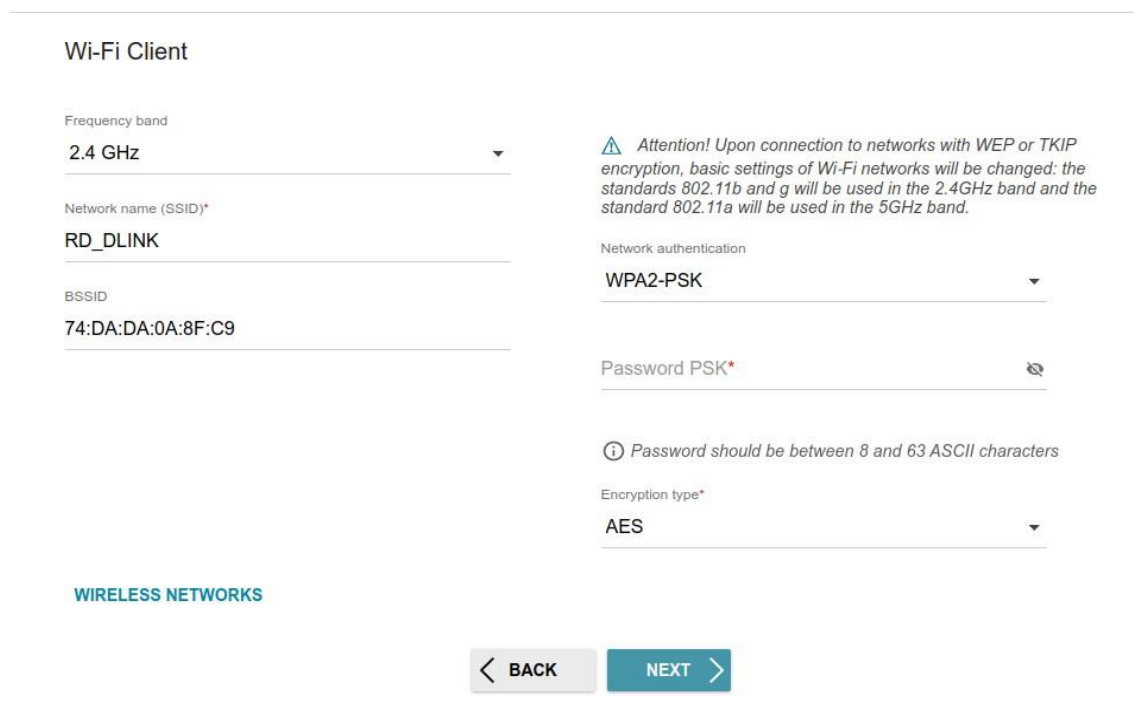
Wi-Fi Client

This configuration step is available for the **WISP Repeater**, **Repeater**, and **Client** modes.

1. On the **Wi-Fi Client** page, click the **WIRELESS NETWORKS** button and select the network to which you want to connect in the opened window. When you select a network, the **Network name (SSID)** and **BSSID** fields are filled in automatically.

If you cannot find the needed network in the list, click the **UPDATE LIST** icon ().

2. If a password is needed to connect to the selected network, fill in the relevant field. Click the **Show** icon () to display the entered password.



Wi-Fi Client

Frequency band
2.4 GHz

Network name (SSID)*
RD_DLINK

BSSID
74:DA:DA:0A:8F:C9

⚠ Attention! Upon connection to networks with WEP or TKIP encryption, basic settings of Wi-Fi networks will be changed: the standards 802.11b and g will be used in the 2.4GHz band and the standard 802.11a will be used in the 5GHz band.

Network authentication
WPA2-PSK

Password PSK*

ⓘ Password should be between 8 and 63 ASCII characters

Encryption type*
AES

WIRELESS NETWORKS


< BACK NEXT >

Figure 49. The page for configuring the Wi-Fi client.


If you connect to a hidden network, select the band where the hidden network operates from the **Frequency band** list and enter the network name in the **Network name (SSID)** field. Then select a needed value from the **Network authentication** list and then, if needed, enter the password in the relevant field.

When the **Open** or **WEP** authentication type is selected, the following settings are displayed on the page:

Parameter	Description
Enable encryption WEP	<p>For Open authentication type only.</p> <p>The checkbox activating WEP encryption. When the checkbox is selected, the Default key ID drop-down list, the Encryption key WEP as HEX checkbox, and four Encryption key fields are displayed on the page.</p>

Parameter	Description
Default key ID	The number of the key (from first to fourth) which will be used for WEP encryption.
Encryption key WEP as HEX	Select the checkbox to set a hexadecimal number as a key for encryption.
Encryption key (1-4)	Keys for WEP encryption. The router uses the key selected from the Default key ID drop-down list. It is required to specify all the fields. Click the Show icon () to display the entered key.

When the **WPA-PSK**, **WPA2-PSK**, **WPA-PSK/WPA2-PSK mixed**, **WPA3-SAE**, or **WPA2-PSK/WPA3-SAE mixed** authentication type is selected, the following fields are displayed:

Parameter	Description
Password PSK	A password for WPA encryption. Click the Show icon () to display the entered password.
Encryption type	An encryption method: TKIP , AES , or TKIP+AES . <i>TKIP and TKIP+AES encryption types are not available for WPA3-SAE and WPA2-PSK/WPA3-SAE mixed authentication types.</i>

- Click the **NEXT** button to continue or click the **BACK** button to return to the previous page.

Configuring Wired WAN Connection

This configuration step is available for the **Router** and **WISP Repeater** modes.



You should configure your WAN connection in accordance with data provided by your Internet service provider (ISP). Make sure that you have obtained all necessary information prior to configuring your connection. Otherwise contact your ISP.

1. On the **Internet connection type** page, click the **SCAN** button (available only for the **Router** mode) to automatically specify the connection type used by your ISP or manually select the needed value from the **Connection type** list.
2. Specify the settings necessary for the connection of the selected type.
3. If your ISP uses MAC address binding, select the **Clone MAC address of your device** checkbox (available only for the **Router** mode).
4. If the Internet access is provided via a VLAN channel, select the **Use VLAN** checkbox and fill in the **VLAN ID** field (available only for the **Router** mode).
5. Click the **NEXT** button to continue or click the **BACK** button to return to the previous page.

Static IPv4 Connection

Internet connection type

Connection type
Static IPv4

ⓘ A connection of this type allows you to use a fixed IP address provided by your ISP.

SCAN

Network scan for connection type and parameters detection

IP address*

Subnet mask*

Gateway IP address*

DNS IP address*

☐ Clone MAC address of your device
ⓘ In some ISP's networks, it is required to register a certain MAC address in order to get access to the Internet.

☐ Use VLAN
ⓘ Select the checkbox if the Internet access is provided via a VLAN channel.

☒ Use IGMP
ⓘ Internet Group Management Protocol is designed to manage multicast traffic in IP-based networks.

☐ Ping

☒ Enable automatic creation of Mobile Internet connection

< BACK

NEXT >

Figure 50. The page for configuring Static IPv4 WAN connection.

Fill in the following fields: **IP address**, **Subnet mask**, **Gateway IP address**, and **DNS IP address**.

Static IPv6 Connection

Internet connection type

Connection type
Static IPv6

A connection of this type allows you to use a fixed IP address provided by your ISP.

SCAN

Network scan for connection type and parameters detection

IP address*

Prefix*

Gateway IP address*

DNS IP address*

☐ Clone MAC address of your device
In some ISP's networks, it is required to register a certain MAC address in order to get access to the Internet.

☐ Use VLAN
Select the checkbox if the Internet access is provided via a VLAN channel.

☐ Ping

☒ Enable automatic creation of Mobile Internet connection

< BACK

NEXT >

Figure 51. The page for configuring Static IPv6 WAN connection.

Fill in the following fields: **IP address**, **Prefix**, **Gateway IP address**, and **DNS IP address**.

PPPoE, IPv6 PPPoE, PPPoE Dual Stack, PPPoE + Dynamic IP (PPPoE Dual Access) Connections

Internet connection type

Connection type

PPPoE

A connection of this type requires a user name and password.

SCAN

Network scan for connection type and parameters detection

☐

Without authorization

Username*

Password*

Service name

☐

Clone MAC address of your device

In some ISP's networks, it is required to register a certain MAC address in order to get access to the Internet.

☐

Use VLAN

Select the checkbox if the Internet access is provided via a VLAN channel.

☐

Ping

☒


Enable automatic creation of Mobile Internet connection

<

BACK

NEXT>

Figure 52. The page for configuring PPPoE WAN connection.

In the **Username** field enter the login and in the **Password** field enter the password provided by your ISP. Click the **Show** icon () to display the entered password. If authorization is not required, select the **Without authorization** checkbox.

PPPoE + Static IP (PPPoE Dual Access) Connection

The screenshot shows a web-based configuration interface for a WAN connection. The title is "Internet connection type". Below it, a dropdown menu labeled "Connection type" is set to "PPPoE + Static IP (PPPoE Dual Access)". A note below the dropdown states: "A connection of this type requires a user name, password, and a fixed IP address provided by your ISP." There is a "SCAN" button. Below the button, it says "Network scan for connection type and parameters detection". There is a checkbox labeled "Without authorization". Below this are several input fields: "Username*", "Password*" (with a show/hide icon), "Service name", "IP address*", "Subnet mask*", "Gateway IP address*", and "DNS IP address*".

Internet connection type

Connection type
PPPoE + Static IP (PPPoE Dual Access) ▼


① A connection of this type requires a user name, password, and a fixed IP address provided by your ISP.

SCAN

Network scan for connection type and parameters detection

☐ Without authorization

Username*

Password* 

Service name


IP address*

Subnet mask*

Gateway IP address*

DNS IP address*

Figure 53. The page for configuring PPPoE + Static IP (PPPoE Dual Access) WAN connection.

In the **Username** field enter the login and in the **Password** field enter the password provided by your ISP. Click the **Show** icon () to display the entered password. If authorization is not required, select the **Without authorization** checkbox.

Also fill in the following fields: **IP address**, **Subnet mask**, **Gateway IP address**, and **DNS IP address**.

PPTP + Dynamic IP or L2TP + Dynamic IP Connection

The screenshot shows the 'Internet connection type' configuration page. At the top, the 'Connection type' dropdown is set to 'PPTP + Dynamic IP'. Below this is an information icon and text stating 'PPTP and L2TP are methods for implementing virtual private networks.' A 'SCAN' button is present, followed by the text 'Network scan for connection type and parameters detection'. There is a checkbox for 'Without authorization'. The 'Username*' and 'Password*' fields are empty, with a 'Show' icon (an eye with a slash) next to the password field. The 'VPN server address*' field is also empty. Below these fields are several checkboxes: 'Clone MAC address of your device', 'Use VLAN', 'Use IGMP' (which is checked), 'Ping', and 'Enable automatic creation of Mobile Internet connection' (which is checked). Information icons and explanatory text are provided for 'Use VLAN' and 'Use IGMP'. At the bottom, there are 'BACK' and 'NEXT' navigation buttons.

Internet connection type

Connection type

PPTP + Dynamic IP


ⓘ PPTP and L2TP are methods for implementing virtual private networks.

SCAN

Network scan for connection type and parameters detection

☐ Without authorization

Username*

Password* 

VPN server address*

☐ Clone MAC address of your device

ⓘ In some ISP's networks, it is required to register a certain MAC address in order to get access to the Internet.

☐ Use VLAN

ⓘ Select the checkbox if the Internet access is provided via a VLAN channel.

☒ Use IGMP


ⓘ Internet Group Management Protocol is designed to manage multicast traffic in IP-based networks.

☐ Ping

☒ Enable automatic creation of Mobile Internet connection

[< BACK](#) [NEXT >](#)

Figure 54. The page for configuring PPTP + Dynamic IP WAN connection.


In the **Username** field enter the login and in the **Password** field enter the password provided by your ISP. Click the **Show** icon () to display the entered password. If authorization is not required, select the **Without authorization** checkbox.

In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server.

PPTP + Static IP or L2TP + Static IP Connection

The screenshot shows a web-based configuration interface for setting up a PPTP + Static IP WAN connection. The page is titled "Internet connection type". Below the title, there is a "Connection type" dropdown menu with "PPTP + Static IP" selected. A note below the dropdown states: "PPTP and L2TP are methods for implementing virtual private networks." Below this note is a "SCAN" button. Under the button, it says "Network scan for connection type and parameters detection". There is a checkbox labeled "Without authorization". Below the checkbox are several input fields, each with a red asterisk indicating it is required: "Username", "Password" (with a "Show" icon), "VPN server address", "IP address", "Subnet mask", "Gateway IP address", and "DNS IP address".

Figure 55. The page for configuring PPTP + Static IP WAN connection.

In the **Username** field enter the login and in the **Password** field enter the password provided by your ISP. Click the **Show** icon () to display the entered password. If authorization is not required, select the **Without authorization** checkbox.

In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server.

Also fill in the following fields: **IP address**, **Subnet mask**, **Gateway IP address**, and **DNS IP address**.

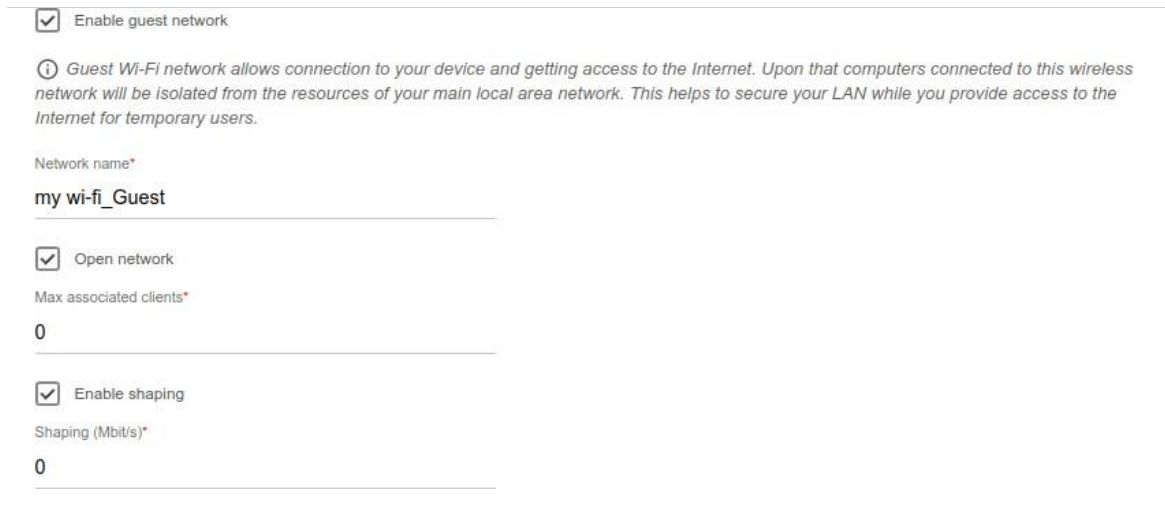
Configuring Wireless Network

This configuration step is available for the **Mobile Internet**, **Router**, **Access point**, **WISP Repeater**, and **Repeater** modes.

1. On the **Wireless Network 2.4 GHz** page, in the **Network name** field, specify your own name for the wireless network in the 2.4GHz band or leave the value suggested by the router.
2. In the **Password** field, specify your own password for access to the wireless network or leave the value suggested by the router (WPS PIN of the device, see the barcode label).
3. If the router is used as a Wi-Fi client, you can specify the same parameters of the wireless network as specified for the network to which you are connecting. To do this, click the **USE** button (available for the **WISP Repeater** and **Repeater** modes only).
4. You can restore the parameters of the wireless network specified before resetting to factory defaults. To do this, click the **RESTORE** button.

Figure 56. The page for configuring the wireless network.

5. If you want to create an additional wireless network isolated from your LAN in the 2.4GHz band, select the **Enable guest network** checkbox (available for the **Router** and **WISP Repeater** modes only).



☒ Enable guest network

① Guest Wi-Fi network allows connection to your device and getting access to the Internet. Upon that computers connected to this wireless network will be isolated from the resources of your main local area network. This helps to secure your LAN while you provide access to the Internet for temporary users.

Network name*

my wi-fi_Guest

☒ Open network

Max associated clients*

0

☒ Enable shaping

Shaping (Mbit/s)*

0

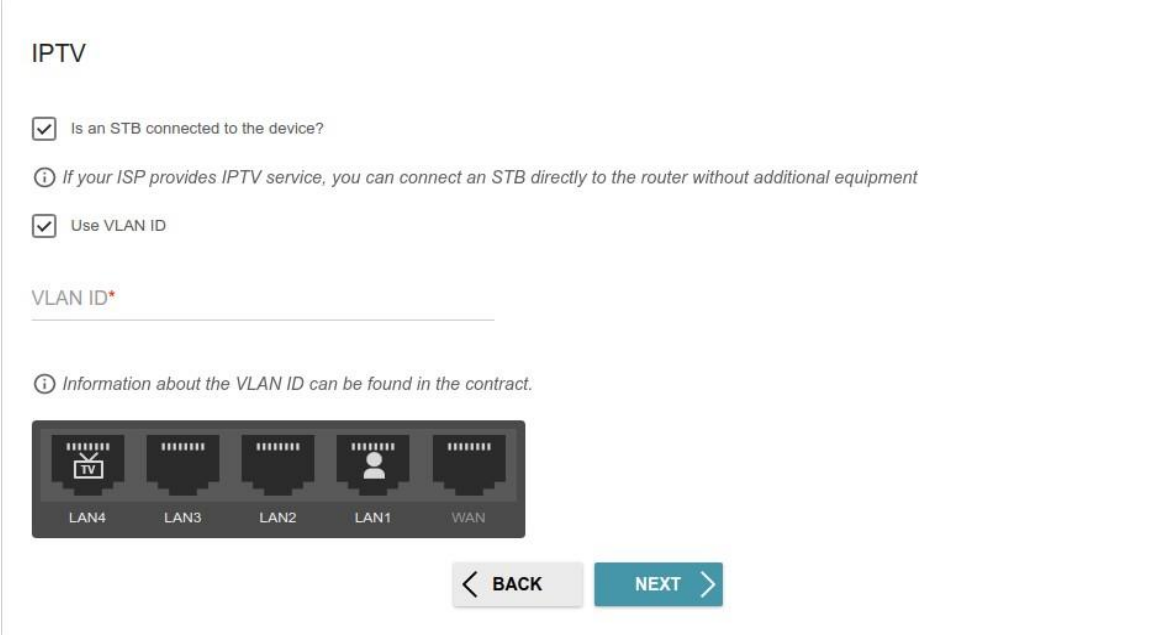
Figure 57. The page for configuring the wireless network.

6. In the **Network name** field, specify your own name for the guest wireless network or leave the value suggested by the router.
7. If you want to create a password for access to the guest wireless network, deselect the **Open network** checkbox and fill in the **Password** field.
8. If you want to limit the bandwidth of the guest wireless network, select the **Enable shaping** checkbox and fill in the **Shaping** field.
9. Click the **NEXT** button to continue or click the **BACK** button to specify other settings.
10. On the **Wireless Network 5 GHz** page, specify needed settings for the wireless network in the 5GHz band and click the **NEXT** button.

Configuring LAN Ports for IPTV/VoIP

This configuration step is available for the **Router** mode.

1. On the **IPTV** page, select the **Is an STB connected to the device** checkbox.

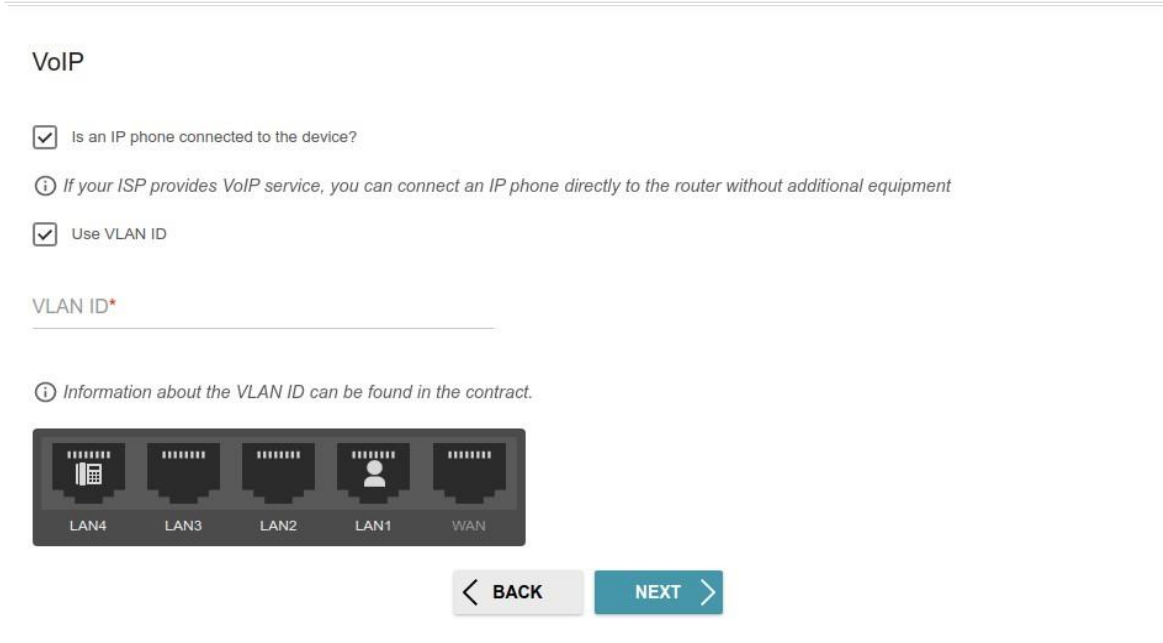


The screenshot shows the 'IPTV' configuration page. At the top, the title 'IPTV' is displayed. Below it, there are two checked checkboxes: 'Is an STB connected to the device?' and 'Use VLAN ID'. A note below the first checkbox states: 'If your ISP provides IPTV service, you can connect an STB directly to the router without additional equipment'. Below the second checkbox, there is a text input field labeled 'VLAN ID*'. A note below the input field states: 'Information about the VLAN ID can be found in the contract.' At the bottom of the page, there is a diagram of the router's ports: LAN4, LAN3, LAN2, LAN1, and WAN. LAN4 is highlighted with a TV icon, indicating it is selected for the STB connection. Below the diagram are two buttons: 'BACK' and 'NEXT'.

Figure 58. The page for selecting a LAN port to connect an IPTV set-top box.

2. Select a free LAN port for connecting your set-top box.
3. If the IPTV service is provided via a VLAN channel, select the **Use VLAN ID** checkbox and fill in the **VLAN ID** field.
4. Click the **NEXT** button to continue or click the **BACK** button to specify other settings.

5. On the **VoIP** page, select the **Is an IP phone connected to the device** checkbox.



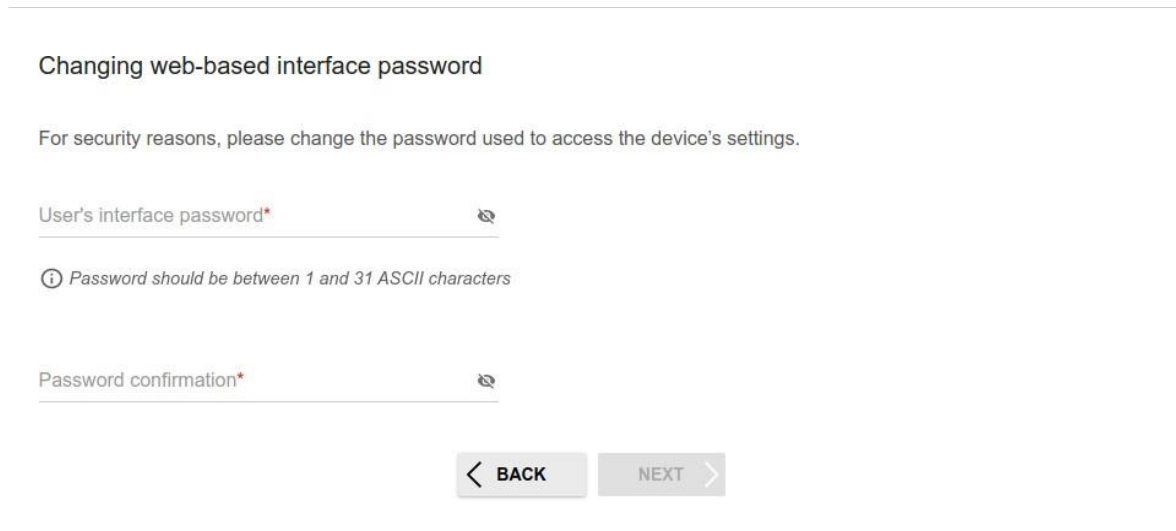
The screenshot shows the 'VoIP' configuration page. At the top, the title 'VoIP' is displayed. Below it, there are two checked checkboxes: 'Is an IP phone connected to the device?' and 'Use VLAN ID'. A note below the first checkbox states: 'If your ISP provides VoIP service, you can connect an IP phone directly to the router without additional equipment'. Below the second checkbox, there is a 'VLAN ID*' field with a red asterisk indicating it is required. A note below this field states: 'Information about the VLAN ID can be found in the contract.' At the bottom of the page, there is a diagram of the router's ports: LAN4, LAN3, LAN2, LAN1, and WAN. LAN1 is highlighted with a person icon, indicating it is selected for the IP phone connection. Below the diagram are two buttons: 'BACK' and 'NEXT'.

Figure 59. The page for selecting a LAN port to connect an VoIP phone.

6. Select a free LAN port for connecting your IP phone.
7. If the VoIP service is provided via a VLAN channel, select the **Use VLAN ID** checkbox and fill in the **VLAN ID** field.
8. Click the **NEXT** button to continue or click the **BACK** button to specify other settings.


Changing Web-based Interface Password


On this page, you should change the default administrator password. To do this, enter a new password in the **User's interface password** and **Password confirmation** fields. You may set any password except **admin**. Use digits, Latin letters (uppercase and/or lowercase), and other characters






Changing web-based interface password

For security reasons, please change the password used to access the device's settings.

User's interface password* 

 Password should be between 1 and 31 ASCII characters

Password confirmation* 

 BACK NEXT 

available in the US keyboard layout.¹⁰

Figure 60. The page for changing the web-based interface password.



Remember or write down the new password for the administrator account. In case of losing the new password, you can access the settings of the router only after restoring the factory default settings via the hardware **RESET** button. This procedure wipes out all settings that you have configured for your router.

Click the **NEXT** button to continue or click the **BACK** button to return to the previous page.

On the next page, check all specified settings.

Also you can save a text file with parameters set by the Wizard to your PC. To do this, click the **SAVE CONFIGURATION FILE** button and follow the dialog box appeared.

To finish the Wizard, click the **APPLY** button. The router will apply settings and reboot. Click the **BACK** button to specify other settings.

¹⁰ 0-9, A-Z, a-z, space, !"#\$%&'()*+,-./:;<=>?@[\\]^_`{|}~.

If the Wizard has configured a WAN connection, after clicking the **APPLY** button, the page for checking the Internet availability opens.

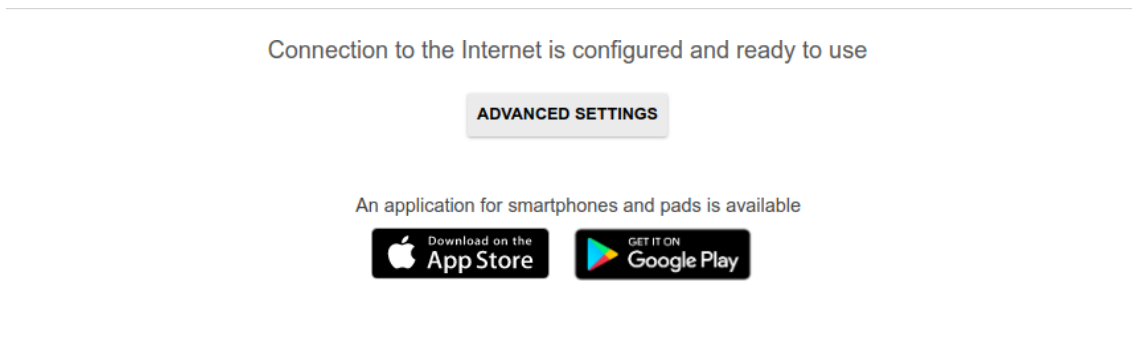


Figure 61. Checking the Internet availability.

If problems appeared when connecting to the Internet, click the **CHECK AGAIN** button to recheck the state of the WAN connection.

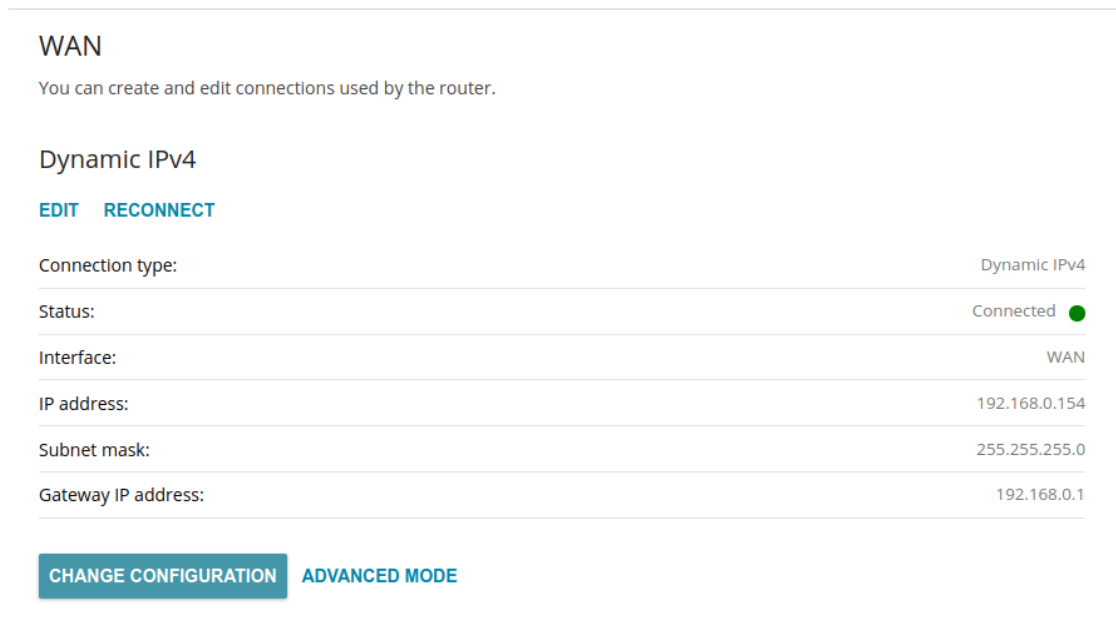
If problems of connection have not been solved, contact the technical support of your ISP (as a rule, the technical support phone is provided with the agreement) or the D-Link technical support.

To specify other settings, click the **ADVANCED SETTINGS** button. After clicking the **ADVANCED SETTINGS** button, the **Home** page opens (see the *Home Page* section, page 42).

Settings / Internet

WAN

On the **Settings / Internet / WAN** page, you can create and edit connections used by the router. By default, a **Dynamic IPv4** connection is configured in the system. It is assigned to the **WAN** port of the router.



The screenshot shows the WAN configuration page in simplified mode. At the top, it says 'WAN' and 'You can create and edit connections used by the router.' Below this, a 'Dynamic IPv4' connection is listed with 'EDIT' and 'RECONNECT' buttons. A table displays the connection details: Connection type (Dynamic IPv4), Status (Connected with a green dot), Interface (WAN), IP address (192.168.0.154), Subnet mask (255.255.255.0), and Gateway IP address (192.168.0.1). At the bottom, there are two buttons: 'CHANGE CONFIGURATION' and 'ADVANCED MODE'.

WAN	
You can create and edit connections used by the router.	
Dynamic IPv4	
EDIT RECONNECT	
Connection type:	Dynamic IPv4
Status:	Connected ●
Interface:	WAN
IP address:	192.168.0.154
Subnet mask:	255.255.255.0
Gateway IP address:	192.168.0.1
CHANGE CONFIGURATION ADVANCED MODE	

Figure 62. The **Settings / Internet / WAN** page. The simplified mode.

To edit an existing connection, click the **EDIT** button. Change the needed parameters and click the **APPLY** button.

To disconnect a connection and establish it again, click the **RECONNECT** button.

To remove an existing connection and create a new one, click the **CHANGE CONFIGURATION** button. Upon that the connection creation page opens.

To create several WAN connections, go to the advanced mode. To do this, click the **ADVANCED MODE** button.

! When connections of some types are created, the **Settings / Internet / WAN** page is automatically displayed in the advanced mode.

WAN

You can create and edit connections used by the router.

Default Gateway IPv4
The specified connection will be used by default.

Default Gateway IPv6
No IPv6 connection created.

☒ WAN

IGMP/MLD
On the **IGMP/MLD** page you can allow the router to use IGMP and MLD and configure their settings.

Connections List RECONNECT +

<input type="checkbox"/>	Name	Connection type	Interface	Status
<input type="checkbox"/>	WAN	Dynamic IPv4	WAN	Connected

SIMPLIFIED MODE

Figure 63. The **Settings / Internet / WAN** page. The advanced mode.

To create a new connection, click the **ADD** button () in the **Connections List** section. Upon that the connection creation page opens.

To edit an existing connection, in the **Connections List** section, left-click the relevant line in the table. Change the needed parameters and click the **APPLY** button.

To disconnect a connection and establish it again, select the checkbox located to the left of the relevant line in the table and click the **RECONNECT** button.

To remove a connection, in the **Connections List** section, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

To allow multicast traffic (e.g. streaming video) for a connection, click the **IGMP/MLD** link (for the description of the page, see the **IGMP/MLD** section, page 206).

To use one of existing WAN connections as the default IPv4 or IPv6 connection, in the **Default Gateway** section, select the choice of the radio button which corresponds to this connection.

To return to the simplified mode, click the **SIMPLIFIED MODE** button (the button is unavailable if several WAN connections are created).

Creating Dynamic IPv4 or Static IPv4 WAN Connection

On the connection creation page, in the **General Settings** section, select the relevant value from the **Connection type** drop-down list and specify the needed values.

General Settings

Connection type
Static IPv4

Interface
WAN

Connection name*
statip_21

☒ Enable connection

☒ NAT

(i) The network address translation function. It is recommended not to disable unless your ISP requires it.

☐ Ping

(i) WAN Ping Respond allows the device to respond to ping requests from the external network.

☐ RIP

☐ ARP Proxy

Figure 64. The page for creating a new **Static IPv4** connection. The **General Settings** section.

Parameter	Description
General Settings	
Interface	A physical or virtual WAN interface to which the new connection will be assigned.
Connection name	A name for the connection for easier identification.
Enable connection	Move the switch to the right to enable the connection. Move the switch to the left to disable the connection.
NAT	If the switch is moved to the right, the network address translation function is enabled. Do not disable the function unless your ISP requires this.
Ping	If the switch is moved to the right, the router responds to ping requests from the external network through this connection. For security reasons, it is recommended to disable this function.
RIP	Move the switch to the right to allow using RIP for this connection.

Ethernet

MAC address*

58:D5:6E:9B:02:AA

☐

Clone MAC address of your NIC
(00:13:46:62:2F:4C)

RESTORE DEFAULT MAC ADDRESS

MTU*

1500

Figure 65. The page for creating a new **Static IPv4** connection. The **Ethernet** section.

Parameter	Description
Ethernet	
MAC address	<p>A MAC address assigned to the interface. This parameter is mandatory if your ISP uses MAC address binding. In the field, enter the MAC address registered by your ISP upon concluding the agreement.</p> <p>To set the MAC address of the network interface card (of the computer that is being used to configure the router at the moment) as the MAC address of the WAN interface, move the Clone MAC address of your NIC switch to the right. When the switch is moved to the right, the field is unavailable for editing.</p> <p>To set the router's MAC address, click the RESTORE DEFAULT MAC ADDRESS button (the button is available when the switch is moved to the right).</p>
MTU	The maximum size of units transmitted by the interface.

IPv4

IP address*

192.168.155.100

Subnet mask*

255.255.255.0

Gateway IP address*

192.168.155.15

Primary DNS*

192.168.161.140

Secondary DNS

8.8.4.4

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

Figure 66. The page for creating a new **Static IPv4** connection. The **IPv4** section.

Parameter	Description
IPv4	
<i>For Static IPv4 type</i>	
IP address	Enter an IP address for this WAN connection.
Subnet mask	Enter a subnet mask for this WAN connection.
Gateway IP address	Enter an IP address of the gateway used by this WAN connection.
Primary DNS / Secondary DNS	Enter addresses of the primary and secondary DNS servers in the relevant fields.
<i>For Dynamic IPv4 type</i>	
Obtain DNS server addresses automatically	Move the switch to the right to configure automatic assignment of DNS server addresses. Upon that the Primary DNS and Secondary DNS fields are not available for editing.
Primary DNS / Secondary DNS	Enter addresses of the primary and secondary DNS servers in the relevant fields.
Vendor ID	The identifier of your ISP. <i>Optional.</i>
Hostname	A name of the router specified by your ISP. <i>Optional.</i>

When all needed settings are configured, click the **APPLY** button.

Creating Dynamic IPv6 or Static IPv6 WAN Connection

On the connection creation page, in the **General Settings** section, select the relevant value from the **Connection type** drop-down list and specify the needed values.

General Settings

Connection type
Static IPv6

Interface
WAN

Connection name*
statip6_42

☒ Enable connection

☐ NATv6
ⓘ The network address translation function. It is recommended not to disable unless your ISP requires it.

☐ Ping
ⓘ WAN Ping Respond allows the device to respond to ping requests from the external network.

☐ RIPng

☐ ARP Proxy

Figure 67. The page for creating a new **Static IPv6** connection. The **General Settings** section.

Parameter	Description
General Settings	
Interface	A physical or virtual WAN interface to which the new connection will be assigned.
Connection name	A name for the connection for easier identification.
Enable connection	Move the switch to the right to enable the connection. Move the switch to the left to disable the connection.
NATv6	If the switch is moved to the right, the network address translation function for IPv6 is enabled. Do not disable the function unless your ISP requires this.
Ping	If the switch is moved to the right, the router responds to ping requests from the external network through this connection. For security reasons, it is recommended to disable this function.

Parameter	Description
RIPng	Move the switch to the right to allow using RIPng for this connection.
	<div> <div>Ethernet</div> <div> <div>MAC address*</div> <div>58:D5:6E:9B:02:AA</div> </div> <div> <div> <input type="checkbox"/> </div> <div> Clone MAC address of your NIC (00:13:46:62:2F:4C) </div> </div> <div>RESTORE DEFAULT MAC ADDRESS</div> <div> <div>MTU*</div> <div>1500</div> </div> </div>

Figure 68. The page for creating a new **Static IPv6** connection. The **Ethernet** section.

Parameter	Description
Ethernet	
MAC address	<p>A MAC address assigned to the interface. This parameter is mandatory if your ISP uses MAC address binding. In the field, enter the MAC address registered by your ISP upon concluding the agreement.</p> <p>To set the MAC address of the network interface card (of the computer that is being used to configure the router at the moment) as the MAC address of the WAN interface, move the Clone MAC address of your NIC switch to the right. When the switch is moved to the right, the field is unavailable for editing.</p> <p>To set the router's MAC address, click the RESTORE DEFAULT MAC ADDRESS button (the button is available when the switch is moved to the right).</p>
MTU	The maximum size of units transmitted by the interface.

IPv6

IPv6 address*

Prefix*

Gateway IPv6 address*

Primary IPv6 DNS server*

Secondary IPv6 DNS server

Figure 69. The page for creating a new **Static IPv6** connection. The **IPv6** section.

Parameter	Description
IPv6	
<i>For Static IPv6 type</i>	
IPv6 address	Enter an IPv6 address for this WAN connection.
Prefix	The length of the subnet prefix. The value 64 is used usually.
Gateway IPv6 address	Enter an IPv6 address of the gateway used by this WAN connection.
Primary IPv6 DNS server / Secondary IPv6 DNS server	Enter addresses of the primary and secondary IPv6 DNS servers in the relevant fields.
<i>For Dynamic IPv6 type</i>	
Get IPv6	Select a method for IPv6 address assignment from the drop-down list or leave the Automatically value.
Enable prefix delegation	Move the switch to the right if it is necessary that the router requests a prefix to configure IPv6 addresses for the local network from a delegating router.
Obtain DNS server addresses automatically	Move the switch to the right to configure automatic assignment of IPv6 DNS server addresses. Upon that the Primary IPv6 DNS server and Secondary IPv6 DNS server fields are not available for editing.

Parameter	Description
Primary IPv6 DNS server / Secondary IPv6 DNS server	Enter addresses of the primary and secondary IPv6 DNS servers in the relevant fields.

When all needed settings are configured, click the **APPLY** button.

Creating PPPoE WAN Connection

On the connection creation page, in the **General Settings** section, select the relevant value from the **Connection type** drop-down list and specify the needed values.

General Settings

Connection type
PPPoE

Interface
WAN

Connection name*
pppoe_22

☒ Enable connection

☒ NAT
① The network address translation function. It is recommended not to disable unless your ISP requires it.

☐ Ping
① WAN Ping Respond allows the device to respond to ping requests from the external network.

☐ RIP

☐ ARP Proxy

Figure 70. The page for creating a new **PPPoE** connection. The **General Settings** section.

Parameter	Description
General Settings	
Interface	A physical or virtual WAN interface to which the new connection will be assigned.
Connection name	A name for the connection for easier identification.
Enable connection	Move the switch to the right to enable the connection. Move the switch to the left to disable the connection.
NAT	If the switch is moved to the right, the network address translation function is enabled. Do not disable the function unless your ISP requires this.
Ping	If the switch is moved to the right, the router responds to ping requests from the external network through this connection. For security reasons, it is recommended to disable this function.
RIP	Move the switch to the right to allow using RIP for this connection.

Ethernet

MAC address*

58:D5:6E:9B:02:AA

☐

Clone MAC address of your NIC
(00:13:46:62:2F:4C)

RESTORE DEFAULT MAC ADDRESS

MTU*

1500

Figure 71. The page for creating a new **PPPoE** connection. The **Ethernet** section.

Parameter	Description
Ethernet	
MAC address	<p>A MAC address assigned to the interface. This parameter is mandatory if your ISP uses MAC address binding. In the field, enter the MAC address registered by your ISP upon concluding the agreement.</p> <p>To set the MAC address of the network interface card (of the computer that is being used to configure the router at the moment) as the MAC address of the WAN interface, move the Clone MAC address of your NIC switch to the right. When the switch is moved to the right, the field is unavailable for editing.</p> <p>To set the router's MAC address, click the RESTORE DEFAULT MAC ADDRESS button (the button is available when the switch is moved to the right).</p>
MTU	The maximum size of units transmitted by the interface.

PPP

☐ Without authorization

Username*

Password*

Service name

MTU*

Encryption protocol

No encryption

Authentication protocol

AUTO

☒ Keep Alive

LCP interval*

LCP fails*


☐ Dial on demand

Maximum idle time (in seconds)

Static IP address

☐ PPP debug

Figure 72. The page for creating a new **PPPoE** connection. The **PPP** section.

Parameter	Description
PPP	
Without authorization	Move the switch to the right if you don't need to enter a username and password to access the Internet.
Username	A username (login) to access the Internet.
Password	A password to access the Internet. Click the Show icon () to display the entered password.
Service name	The name of the PPPoE authentication server.

Parameter	Description
MTU	The maximum size of units transmitted by the interface.
Encryption protocol	<p>Select a method of MPPE encryption.</p> <ul style="list-style-type: none">• No encryption: MPPE encryption is not applied.• MPPE 40 128 bit: MPPE encryption with a 40-bit or 128-bit key is applied.• MPPE 40 bit: MPPE encryption with a 40-bit key is applied.• MPPE 128 bit: MPPE encryption with a 128-bit key is applied. <p>MPPE encryption can be applied only if the MS-CHAP or MS-CHAPV2 value is selected from the Authentication protocol drop-down list.</p>
Authentication protocol	Select a required authentication method from the drop-down list or leave the AUTO value.
Keep Alive	Move the switch to the right if you want the router to keep you connected to your ISP even when the connection has been inactive for a specified period of time. If the switch is moved to the right, the LCP interval and LCP fails fields are available. Specify the required values.
Dial on demand	Move the switch to the right if you want the router to establish connection to the Internet on demand. In the Maximum idle time field, specify a period of inactivity (in seconds) after which the connection should be terminated.
Static IP address	Fill in the field if you want to use a static IP address to access the Internet.
PPP debug	Move the switch to the right if you want to log all data on PPP connection debugging.

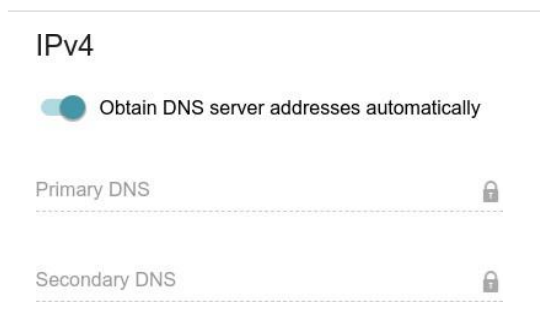


Figure 73. The page for creating a new **PPPoE** connection. The **IPv4** section.

Parameter	Description
IPv4	
Obtain DNS server addresses automatically	Move the switch to the right to configure automatic assignment of DNS server addresses. Upon that the Primary DNS and Secondary DNS fields are not available for editing.
Primary DNS / Secondary DNS	Enter addresses of the primary and secondary DNS servers in the relevant fields.

When all needed settings are configured, click the **APPLY** button. In the simplified mode, after clicking the button, the window for creating an additional connection opens.

If your ISP offers access to local services (e.g. audio and video resources), click the **CREATE CONNECTION** button. On the page displayed, specify the parameters for the connection of the Dynamic IPv4 or Static IPv4 type and click the **APPLY** button.

If you do not need to create an additional connection, click the **SKIP** button. In this case, the **Settings / Internet / WAN** page opens.

Creating PPTP, L2TP, or L2TP over IPsec WAN Connection

On the connection creation page, in the **General Settings** section, select the relevant value from the **Connection type** drop-down list and specify the needed values.

General Settings

Connection type
PPTP

Connection name*
pptp_46

☒ Enable connection

☒ NAT

ⓘ The network address translation function. It is recommended not to disable unless your ISP requires it.

☐ Ping

ⓘ WAN Ping Respond allows the device to respond to ping requests from the external network.

Figure 74. The page for creating a new **PPTP** connection. The **General Settings** section.

Parameter	Description
General Settings	
Connection name	A name for the connection for easier identification.
Enable connection	Move the switch to the right to enable the connection. Move the switch to the left to disable the connection.
NAT	If the switch is moved to the right, the network address translation function is enabled. Do not disable the function unless your ISP requires this.
Ping	If the switch is moved to the right, the router responds to ping requests from the external network through this connection. For security reasons, it is recommended to disable this function.

PPP

☐ Without authorization

Username*

Password*

VPN server address*

MTU*
1456

Encryption protocol
No encryption

Authentication protocol
AUTO

☒ Keep Alive

LCP interval*
30

LCP fails*
3

☐ Dial on demand

Maximum idle time (in seconds)

Static IP address

☐ PPP debug

Figure 75. The page for creating a new **PPTP** connection. The **PPP** section.

Parameter	Description
PPP	
Without authorization	Move the switch to the right if you don't need to enter a username and password to access the Internet.
Username	A username (login) to access the Internet.
Password	A password to access the Internet. Click the Show icon () to display the entered password.
VPN server address	The IP or URL address of the PPTP or L2TP authentication server.
MTU	The maximum size of units transmitted by the interface.


Parameter	Description
Encryption protocol	<p>Select a method of MPPE encryption.</p> <ul style="list-style-type: none">• No encryption: MPPE encryption is not applied.• MPPE 40 128 bit: MPPE encryption with a 40-bit or 128-bit key is applied.• MPPE 40 bit: MPPE encryption with a 40-bit key is applied.• MPPE 128 bit: MPPE encryption with a 128-bit key is applied. <p>MPPE encryption can be applied only if the MS-CHAP, MS-CHAPV2, or AUTO value is selected from the Authentication protocol drop-down list.</p>
Authentication protocol	<p>Select a required authentication method from the drop-down list or leave the AUTO value.</p>
Keep Alive	<p>Move the switch to the right if you want the router to keep you connected to your ISP even when the connection has been inactive for a specified period of time. If the switch is moved to the right, the LCP interval and LCP fails fields are available. Specify the required values.</p>
Dial on demand	<p>Move the switch to the right if you want the router to establish connection to the Internet on demand. In the Maximum idle time field, specify a period of inactivity (in seconds) after which the connection should be terminated.</p>
Static IP address	<p>Fill in the field if you want to use a static IP address to access the Internet.</p>
PPP debug	<p>Move the switch to the right if you want to log all data on PPP connection debugging.</p>

Figure 76. The page for creating a new **PPTP** connection. The **IPv4** section.

Parameter	Description
IPv4	
Obtain DNS server addresses automatically	Move the switch to the right to configure automatic assignment of DNS server addresses. Upon that the Primary DNS and Secondary DNS fields are not available for editing.
Primary DNS / Secondary DNS	Enter addresses of the primary and secondary DNS servers in the relevant fields.

Figure 77. The page for creating a new **L2TP over IPsec** connection. The **IPsec** section.

! Setting for both parties which establish the tunnel should be the same.

Parameter	Description
IPsec (for the L2TP over IPsec type)	
Pre-shared key	A key for mutual authentication of the parties. Click the Show icon () to display the entered key.

Parameter	Description
Enable PFS	Move the switch to the right to enable the PFS option (<i>Perfect Forward Secrecy</i>). If the switch is moved to the right, a new encryption key exchange will be used upon establishing the IPsec tunnel. This option enhances the security level of data transfer, but increases the load on DIR-842V2.
Specify connection port	Move the switch to the right to change the port used for data exchange with the other party enter the needed value in the Port filed displayed. By default, the value 1701 is specified.

When all needed settings are configured, click the **APPLY** button.

After clicking the button, the window for additional configuration of the connection opens.

If you want to use this WAN connection to access the Internet, select the **to the Internet** choice of the radio button. Then select the existing connection which will be used to access the PPTP/L2TP server or click the **CREATE CONNECTION** button.

If you have already configured the connection to the Internet and you want to use this WAN connection only to connect to the virtual private network, select the **to the virtual private network** choice of the radio button.

Click the **CONTINUE** button.

After creating a connection of the L2TP over IPsec type, on the **Functions / Advanced / IPsec** page, in the **Status** section, the current state of the IPsec tunnel is displayed.

Creating PPPoE IPv6 or PPPoE Dual Stack WAN Connection

On the connection creation page, in the **General Settings** section, select the relevant value from the **Connection type** drop-down list and specify the needed values.

General Settings

Connection type
PPPoE IPv6

Interface
WAN

Connection name*
pppoev6_48

☒ Enable connection

☐ NATv6

ⓘ The network address translation function. It is recommended not to disable unless your ISP requires it.

☐ Ping

ⓘ WAN Ping Respond allows the device to respond to ping requests from the external network.

☐ RIPng

☐ ARP Proxy

Figure 78. The page for creating a new **PPPoE IPv6** connection. The **General Settings** section.

Parameter	Description
General Settings	
Interface	A physical or virtual WAN interface to which the new connection will be assigned.
Connection name	A name for the connection for easier identification.
Enable connection	Move the switch to the right to enable the connection. Move the switch to the left to disable the connection.
NAT	<i>For the PPPoE Dual Stack type only.</i> If the switch is moved to the right, the network address translation function for IPv4 is enabled. Do not disable the function unless your ISP requires this.
NATv6	If the switch is moved to the right, the network address translation function for IPv6 is enabled. Do not disable the function unless your ISP requires this.

Parameter	Description
Ping	If the switch is moved to the right, the router responds to ping requests from the external network through this connection. For security reasons, it is recommended to disable this function.
RIP	<i>For the PPPoE Dual Stack type only.</i> Move the switch to the right to allow using RIP for this connection.
RIPng	Move the switch to the right to allow using RIPng for this connection.
	<div> <div>Ethernet</div> <div> <div>MAC address*</div> <div>58:D5:6E:9B:02:AA</div> </div> <div> <div><input type="checkbox"/></div> <div>Clone MAC address of your NIC (00:13:46:62:2F:4C)</div> </div> <div>RESTORE DEFAULT MAC ADDRESS</div> <div> <div>MTU*</div> <div>1500</div> </div> </div>

Figure 79. The page for creating a new **PPPoE IPv6** connection. The **Ethernet** section.

Parameter	Description
Ethernet	
MAC address	<p>A MAC address assigned to the interface. This parameter is mandatory if your ISP uses MAC address binding. In the field, enter the MAC address registered by your ISP upon concluding the agreement.</p> <p>To set the MAC address of the network interface card (of the computer that is being used to configure the router at the moment) as the MAC address of the WAN interface, move the Clone MAC address of your NIC switch to the right. When the switch is moved to the right, the field is unavailable for editing.</p> <p>To set the router's MAC address, click the RESTORE DEFAULT MAC ADDRESS button (the button is available when the switch is moved to the right).</p>
MTU	The maximum size of units transmitted by the interface.

PPP

☐ Without authorization

Username*

Password*

Service name

MTU*
1492

Encryption protocol
No encryption

Authentication protocol
AUTO

☒ Keep Alive


LCP interval*
30

LCP fails*
3

Static IP address

☐ PPP debug

Figure 80. The page for creating a new **PPPoE IPv6** connection. The **PPP** section.

Parameter	Description
PPP	
Without authorization	Move the switch to the right if you don't need to enter a username and password to access the Internet.
Username	A username (login) to access the Internet.
Password	A password to access the Internet. Click the Show icon () to display the entered password.
Service name	The name of the PPPoE authentication server.
MTU	The maximum size of units transmitted by the interface.

Parameter	Description
Encryption protocol	<p>Select a method of MPPE encryption.</p> <ul style="list-style-type: none">• No encryption: MPPE encryption is not applied.• MPPE 40 128 bit: MPPE encryption with a 40-bit or 128-bit key is applied.• MPPE 40 bit: MPPE encryption with a 40-bit key is applied.• MPPE 128 bit: MPPE encryption with a 128-bit key is applied. <p>MPPE encryption can be applied only if the MS-CHAP, MS-CHAPV2, or AUTO value is selected from the Authentication protocol drop-down list.</p>
Authentication protocol	<p>Select a required authentication method from the drop-down list or leave the AUTO value.</p>
Keep Alive	<p>Move the switch to the right if you want the router to keep you connected to your ISP even when the connection has been inactive for a specified period of time. If the switch is moved to the right, the LCP interval and LCP fails fields are available. Specify the required values.</p>
Static IP address	<p>Fill in the field if you want to use a static IP address to access the Internet.</p>
PPP debug	<p>Move the switch to the right if you want to log all data on PPP connection debugging.</p>

IPv4

☒ Obtain DNS server addresses automatically

Primary DNS

Secondary DNS

Figure 81. The page for creating a new **PPPoE Pv6** connection. The **IPv4** section.

Parameter	Description
IPv4 (for the <i>PPPoE Dual Stack</i> type)	
Obtain DNS server addresses automatically	Move the switch to the right to configure automatic assignment of DNS server addresses. Upon that the Primary DNS and Secondary DNS fields are not available for editing.
Primary DNS / Secondary DNS	Enter addresses of the primary and secondary DNS servers in the relevant fields.

IPv6

Get IPv6
Automatically

☒ Enable prefix delegation

☒ Obtain DNS server addresses automatically

Primary IPv6 DNS server

Secondary IPv6 DNS server

Figure 82. The page for creating a new **PPPoE Pv6** connection. The **IP** section.

Parameter	Description
IPv6	
Get IPv6	Select a method for IPv6 address assignment from the drop-down list or leave the Automatically value.
Enable prefix delegation	Move the switch to the right if it is necessary that the router requests a prefix to configure IPv6 addresses for the local network from a delegating router.

Parameter	Description
Obtain DNS server addresses automatically	Move the switch to the right to configure automatic assignment of IPv6 DNS server addresses. Upon that the Primary IPv6 DNS server and Secondary IPv6 DNS server fields are not available for editing.
Primary IPv6 DNS server / Secondary IPv6 DNS server	Enter addresses of the primary and secondary IPv6 DNS servers in the relevant fields.

When all needed settings are configured, click the **APPLY** button.

VLAN

On the **Settings / Internet / VLAN** page, you can edit existing and create new virtual networks (VLAN), e.g., for distinguishing traffic or specifying additional WAN interfaces.

By default, 2 VLANs are created in the router's system:

- **LAN:** For the LAN interface, it includes LAN ports and Wi-Fi networks. You cannot delete this VLAN.
- **WAN:** For the WAN interface; it includes the **WAN** port. You can edit or delete this VLAN.

VLAN List + 🗑️				
<input type="checkbox"/>	VLAN ID	Name	Tagged Ports	Untagged ports
<input type="checkbox"/>	-	LAN	-	DIR-XXX, DIR-XXX-5G, LAN4, LAN3, LAN2, LAN1
<input type="checkbox"/>	-	WAN	-	WAN

Figure 87. The **Settings / Internet / VLAN** page.

In order to add untagged LAN ports or available Wi-Fi networks to an existing or new VLAN, first you need to exclude them from the **LAN** network on this page. To do this, select the **LAN** line. On the opened page, from the **Type** drop-down list of the element corresponding to the relevant LAN port or Wi-Fi network, select the **Excluded** value and click the **APPLY** button.

To create a new VLAN, click the **ADD** button ().

VLAN

Name*

The number of characters should not exceed 32

VLAN ID*

QoS*

0

Interface

If the "Create Interface" function is disabled, the VLAN operates in the bridge mode and packets passing through it are not tracked.

☐ Create interface

Ports

LAN4
Type
Tagged

LAN3
Type
Excluded

LAN2
Type
Excluded

LAN1
Type
Excluded

WAN
Type
Excluded

Wireless interfaces

DIR-XXX
Type
Excluded

DIR-XXX-5G
Type
Excluded

APPLY

Figure 88. The page for adding a VLAN.


You can specify the following parameters:

Parameter	Description
Name	A name for the VLAN for easier identification.
VLAN ID	An identifier of the VLAN.
QoS	A priority tag for the transmitted traffic.
Create interface	<p>Move the switch to the right to create an interface that can be used for creating WAN connections.</p> <p>Move the switch to the left for the VLAN to work in the bridge mode. This mode is mostly used to connect IPTV set-top boxes.</p>

Parameter	Description
Ports	<p>Select a type for each port included in the VLAN.</p> <ul style="list-style-type: none">• Untagged: Untagged traffic will be transmitted through the specified port.• Tagged: Tagged traffic will be transmitted through the specified port. If at least one port of this type is included to the VLAN, it is required to fill in the VLAN ID and QoS fields. <p>Leave the Excluded value for the ports not included in the VLAN.</p>
Wireless interfaces	<p>Select the Untagged value for each Wi-Fi interface included in the</p> <p>Leave the Excluded value for the Wi-Fi interfaces not included in the VLAN.</p>

Click the **APPLY** button.

To edit an existing VLAN, select the relevant line in the table. On the page displayed, change the parameters and click the **APPLY** button.

To remove an existing VLAN, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

DNS

On the **Settings / Internet / DNS** page, you can add DNS servers to the system.

The screenshot shows the 'DNS' configuration page. At the top, there's a title 'DNS' and a descriptive paragraph: 'DNS servers are used to determine the IP address from the name of a server in Intranets or the Internet. You can specify the addresses of DNS servers manually or configure the router to obtain DNS servers addresses automatically from your ISP upon installing a connection.'

Below this, there are two columns for 'IPv4' and 'IPv6'. Each column has a 'Manual' toggle (currently off) and a 'Default gateway' toggle (currently on). Under each column, there is an 'Interface' dropdown menu. For IPv4, the selected interface is 'dynip_53'. For IPv6, the interface is empty.

Further down is the 'Name Servers' section, with a sub-header 'Name Servers' and a description 'Designed to be used by the local network clients.' Below this, there are two input fields for IPv4 addresses: '1.1.1.1' and '1.0.0.1', each with a lock icon. An 'ADD SERVER' button is located below these fields.

Next is the 'Reserve Servers' section, with a description 'Designed to be used by the router when the addresses specified manually or obtained automatically are unavailable.' Below this, there are two columns for 'IPv4' and 'IPv6', each with an 'ADD SERVER' button.

At the bottom left, there is an 'APPLY' button.

Figure 89. The **Settings / Internet / DNS** page.

DNS servers are used to determine the IP address from the name of a server in Intranets or the Internet (as a rule, they are specified by an ISP or assigned by a network administrator).

You can specify the addresses of DNS servers manually on this page or configure the router to obtain DNS servers addresses automatically from your ISP upon installing a connection. Also here you can specify addresses of reserve DNS servers which the router can use if the addresses specified manually or obtained automatically are unavailable.



When you use the built-in DHCP server, the network parameters (including DNS servers) are distributed to clients automatically.

Specify needed settings for IPv4 in the **IPv4** section and for IPv6 in the **IPv6** section.

If you want to configure automatic obtainment of DNS servers addresses, move the **Manual** switch to the left. Then move the **Default gateway** switch to the left and from the **Interface** drop-down list select a WAN connection which will be used to obtain addresses of DNS servers automatically. If you want the router to use the default WAN connection to obtain addresses of DNS servers, move the **Default gateway** switch to the right.

To specify a DNS server manually, move the **Manual** switch to the right. In the **Name Servers** section of the relevant IP version, click the **ADD SERVER** button, and in the line displayed, enter an IP address of the DNS server.

To specify a reserve DNS server, in the **Reserve Servers** section of the relevant IP version, click the **ADD SERVER** button, and in the line displayed, enter an IP address of the DNS server.

To remove a DNS server from the page, click the **Delete** icon (✕) in the line of the address.

When all needed settings are configured, click the **APPLY** button.

Settings / WAN Failover

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

WAN Failover

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, your device activates the backup connection; and when the main channel is recovered, the device switches to it and disconnects the reserve one.

☒ Enable

Connections IPv4

The list of available connections on order of priority.

Connection	Check with ping
pppoe_92	On
dynip_53	On

Check with ping

Interval between checks (in seconds)*

30

Waiting for response (in seconds)*

1

Number of attempts*

3

Number of ping requests to the specified hosts

Hosts

8.8.8.8	x
77.88.55.55	x
94.100.180.200	x

[ADD HOST](#)

APPLY

Figure 90. The **Settings / WAN Failover** page.

To activate the backup function, create several WAN connections. After that go to the **Settings / WAN Failover** page, move the **Enable** switch to the right.

In the **Connections IPv4** section, the existing IPv4 connections are displayed in order of their priority. The first connection on the list serves as the main connection, the others are backup connections.

To change the priority of a connection, left-click the relevant line in the table.

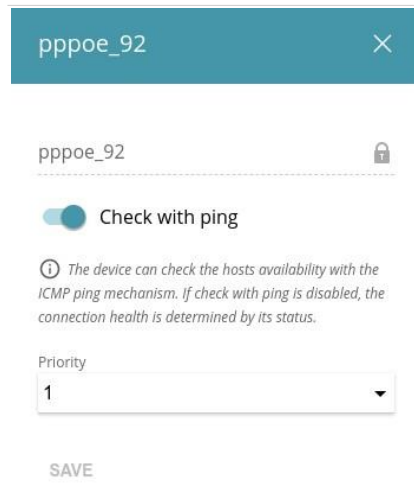


Figure 91. The window for changing the priority of a connection.

In the opened window, specify the needed parameters.

Parameter	Description
Check with ping	Move the switch to the right to let the router use ICMP ping mechanism for checking the connection. Move the switch to the left to let the router check only the status of the connection (may be useful for unstable connections).
Priority	The priority level of the connection. Level 1 is for the main connection, the others are backup connections. Select the required value from the drop-down list.

After specifying the needed parameters, click the **SAVE** button.

In the **Check with ping** section, specify settings of checking the connection using ICMP ping mechanism.

Parameter	Description
Check with ping	
Interval between checks	<p>A time period (in seconds) between regular checks of the hosts' availability. By default, the value 30 is specified. The value of this field should not be higher than product of Waiting for response and Number of attempts fields values.</p> <p>Several ping requests are sent to check the hosts. After a successful attempt the router keeps using the main connection. After several failed attempts the next connection from the list is enabled.</p>
Waiting for response	<p>A time period (in seconds) allocated for a response to one ping request.</p>
Number of attempts	<p>A number of failed attempts to check the health of a connection after which the next connection from the list is enabled.</p>
Hosts	<p>External IP addresses that the router will check for availability via ICMP ping mechanism.</p> <p>Click the ADD HOST button, and in the line displayed, enter an IP address or leave values suggested by the router.</p> <p>To remove an IP address from the list, click the Delete icon (✕) in the line of the address.</p>

When all needed settings are configured, click the **APPLY** button.

Settings / Wireless network

On the **Settings / Wireless network** page, you can change basic parameters for the wireless interface of the router and configure the basic and additional wireless networks. To configure the 2.4GHz band or 5GHz band, go to the relevant tab.

The screenshot shows the 'Basic Settings' tab for the 2.4 GHz wireless network. The interface is divided into two main sections: 'Basic Settings' on the left and 'Wi-Fi Network' on the right. The 'Basic Settings' section includes a toggle for 'Enable Wireless' (checked), a dropdown for 'Wireless mode' (set to '802.11 B/G/N mixed'), a toggle for 'Select channel automatically' (checked), a note about channel selection, a toggle for 'Enable additional channels' (checked), a note about channel selection, a dropdown for 'Channel' (set to 'auto (channel 13)'), a toggle for 'Enable periodic scanning' (unchecked), a note about periodic scanning, and a dropdown for 'Scanning period (in seconds)' (set to '900'). The 'Wi-Fi Network' section includes a text field for 'Network name (SSID)*' (set to 'DIR-XXX'), a toggle for 'Hide SSID' (unchecked), a note about hidden SSID, a text field for 'BSSID' (set to '58:d5:6e:9b:02:ad'), a text field for 'Max associated clients*' (set to '0'), a toggle for 'Enable shaping' (unchecked), a toggle for 'Broadcast wireless network' (checked), a note about broadcast, and a toggle for 'Clients isolation' (unchecked), with a note about blocking traffic.

2.4 GHz 5 GHz

Basic Settings

You can change basic parameters for the wireless interface of the device.

☒ Enable Wireless

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

Channel
auto (channel 13)

☐ Enable periodic scanning

The device will periodically check the channels load and switch to the least loaded one

Scanning period (in seconds)
900

Wi-Fi Network

Network name (SSID)*
DIR-XXX

☐ 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
58:d5:6e:9b:02:ad

Max associated clients*
0

☐ Enable shaping

☒ 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

Figure 92. Basic settings of the wireless LAN.

In the **Basic Settings** section, the following parameters are available:

Parameter	Description
Enable Wireless	<p>To enable Wi-Fi connection, move the switch to the right. To disable Wi-Fi connection, move the switch to the left. To enable/disable Wi-Fi connection on a schedule, click the Set schedule button (🕒). In the opened window, you can create a new schedule (see the Schedule section, page 225) or use the existing one. Existing schedules are displayed in the Interval of execution drop-down list in the simplified mode.</p> <p>To enable Wi-Fi connection at the time specified in the schedule and disable it at the other time, select the Enable wireless connection value from the Action drop-down list and click the SAVE button.</p> <p>To disable Wi-Fi connection at the time specified in the schedule and enable it at the other time, select the Disable wireless connection value from the Action drop-down list and click the SAVE button.</p> <p>To change or delete the schedule, click the Edit schedule button (🕒). In the opened window, change the parameters and click the SAVE button or click the DELETE FROM SCHEDULE button.</p>
Wireless mode	Operating mode of the wireless network of the router. This parameter defines standards of the devices that will be able to use your wireless network. Select a value from the drop-down list.
Select channel automatically	Move the switch to the right to let the router itself choose the channel with the least interference.
Enable additional channels	If the switch is moved to the left, the device automatically selects one of available standard channels. To use additional channels (the 12th and 13th – in the 2.4 GHz band, the 100th and higher – in the 5 GHz band), move the switch to the right.
Channel	The wireless channel number. Left-click to open the window for selecting a channel (the action is available, when the Select channel automatically switch is moved to the left).
Enable periodic scanning	Move the switch to the right to let the router search for a free channel in certain periods of time. When the switch is moved to the right, the Scanning period field is available for editing.

Parameter	Description
Scanning period	Specify a period of time (in seconds) after which the router rescans channels.

When you have configured the parameters, click the **APPLY** button.

To edit the settings of the basic wireless network, in the **Wi-Fi Network** section, change the needed parameters and click the **APPLY** button.

Also you can create an additional wireless network. To do this, click the **ADD WI-FI NETWORK** button. On the opened page, specify the relevant parameters.

Wi-Fi Network

Network name (SSID)*
DIR-XXX.2

☐ Hide SSID

(i) 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

Max associated clients*
0

☐ Enable shaping

☒ Broadcast wireless network

(i) 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

(i) Block traffic between devices connected to the access point

☐ Enable guest network

(i) Enable the guest network in order to isolate Wi-Fi clients from the LAN network

APPLY

Security Settings

Network authentication
WPA2-PSK

Password PSK*
.....

(i) Password should be between 8 and 63 ASCII characters


Encryption type*
AES

Group key update interval (in seconds)*
3600

802.11w (Protected Management Frames)
Disabled

Figure 93. Creating a wireless network.

Parameter	Description
Wi-Fi Network	
Network name (SSID)	A name for the wireless network.

Parameter	Description
Hide SSID	If the switch is moved to the right, other users cannot see your Wi-Fi network. It is recommended not to hide the network in order to simplify initial configuration of the wireless network.
BSSID	The unique identifier for this wireless network. You cannot change the value of this parameter, it is determined in the device's internal settings. The field is displayed in the settings of the existing wireless network.
Max Associated Clients	The maximum number of devices connected to the wireless network. When the value 0 is specified, the device does not limit the number of connected clients.
Enable shaping	<p>Move the switch to the right to limit the maximum bandwidth of the wireless network. In the Shaping field displayed, specify the maximum value of speed (Mbit/s).</p> <p>Move the switch to the left not to limit the maximum bandwidth.</p>
Broadcast wireless network	<p>If the wireless network broadcasting is disabled, devices cannot connect to the wireless network. Upon that DIR-842V2 can connect to another access point as a wireless client.</p> <p>To enable/disable broadcasting on a schedule, click the Set schedule button (). In the opened window, you can create a new schedule (see the Schedule section, page 225) or use the existing one. Existing schedules are displayed in the Interval of execution drop-down list in the simplified mode.</p> <p>To enable broadcasting at the time specified in the schedule and disable it at the other time, select the Enable wireless network broadcasting value from the Action drop-down list and click the SAVE button. When the wireless connection is disabled, the device will not be able to enable broadcasting of this wireless network on schedule.</p> <p>To disable broadcasting at the time specified in the schedule and enable it at the other time, select the Disable wireless network broadcasting value from the Action drop-down list and click the SAVE button.</p>

Parameter	Description
	To change or delete the schedule, click the Edit schedule button (🕒). In the opened window, change the parameters and click the SAVE button or click the DELETE FROM SCHEDULE button. If you created an additional network, you can configure, change or delete a schedule for each network. To do this, click the button in the line of the network.
Clients isolation	Move the switch to the right to forbid wireless clients of this wireless network to communicate to each other.
Enable guest network	This function is available for the additional network. Move the switch to the right if you want the devices connected to the additional network to be isolated from the devices and resources of the router's LAN.

In the **Security Settings** section, you can change security settings of the wireless network.

By default, the **WPA2-PSK** network authentication type of the wireless network is specified. WPS PIN from the barcode label is used as the network key.

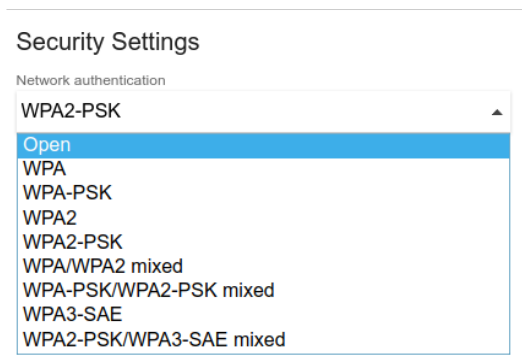


Figure 94. Network authentication types supported by the router.

The router supports the following authentication types:

Authentication type	Description
Open	Open authentication (with WEP encryption for wireless network modes not supporting 802.11n or 802.11ac devices).
WEP	Authentication with a shared key with WEP encryption. This authentication type is not available when a mode supporting 802.11n or 802.11ac devices is selected from the Wireless mode drop-down list on the Settings / Wireless Network page.
WPA	WPA-based authentication using a RADIUS server.
WPA-PSK	WPA-based authentication using a PSK.
WPA2	WPA2-based authentication using a RADIUS server.

Authentication type	Description
WPA2-PSK	WPA2-based authentication using a PSK.
WPA/WPA2 mixed	A mixed type of authentication. When this value is selected, devices using the WPA authentication type and devices using the WPA2 authentication type can connect to the wireless network.
WPA-PSK/WPA2-PSK mixed	A mixed type of authentication. When this value is selected, devices using the WPA-PSK authentication type and devices using the WPA2-PSK authentication type can connect to the wireless network.
WPA3-SAE	WPA3-based authentication using a PSK and SAE method.
WPA2-PSK/WPA3-SAE mixed	A mixed type of authentication. When this value is selected, devices using the WPA2-PSK authentication type and devices using the WPA3-SAE authentication type can connect to the wireless network.



The **WPA**, **WPA2**, and **WPA/WPA2 mixed** authentication types require a RADIUS server.

When the **Open** or **WEP** value is selected, the following settings are displayed on the page (unavailable for the wireless network operating modes which support the standard 802.11n or 802.11ac):

Security Settings

Network authentication
Open

☒ Enable encryption WEP

Default key ID
1

It is recommended to use the first key by default to ensure compatibility with many devices.

☐ Encryption key WEP as HEX

Length of WEP key should be 5 or 13 characters.

Encryption key 1*

Encryption key 2*

Encryption key 3*

Encryption key 4*

Figure 95. The **Open** value is selected from the **Network authentication** drop-down list.

Parameter	Description
Enable encryption WEP	For Open authentication type only. To activate WEP encryption, move the switch to the right. Upon that the Default key ID drop-down list, the Encryption key WEP as HEX switch, and four Encryption key fields are displayed on the page.
Default key ID	The number of the key (from first to fourth) which will be used for WEP encryption.
Encryption key WEP as HEX	Move the switch to the right to set a hexadecimal number as a key for encryption.
Encryption key (1-4)	Keys for WEP encryption. The router uses the key selected from the Default key ID drop-down list. It is required to specify all the fields. Click the Show icon () to display the entered key.

When the **WPA-PSK**, **WPA2-PSK**, **WPA-PSK/WPA2-PSK mixed**, **WPA3-SAE**, or **WPA2-PSK/WPA3-SEA mixed** value is selected, the following fields are displayed on the page:

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

802.11w (Protected Management Frames)

Disabled

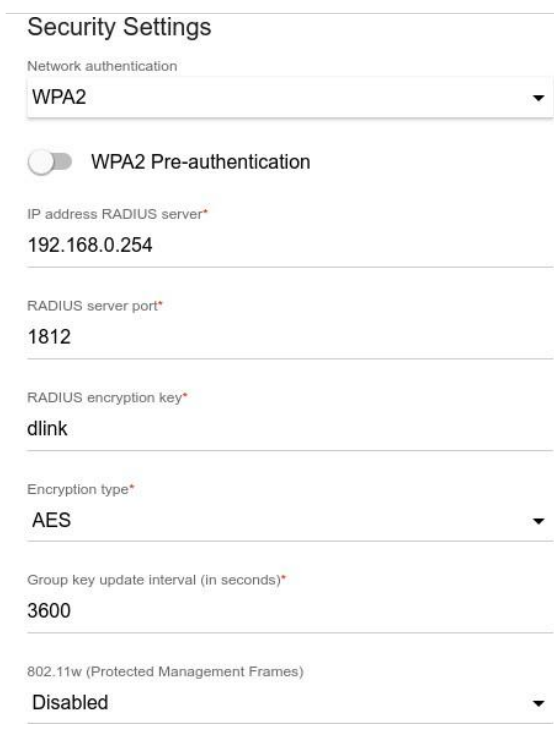
Figure 96. The **WPA2-PSK** value is selected from the **Network authentication** drop-down list.

Parameter	Description
Password PSK	A password for WPA encryption. The password can contain digits, Latin letters (uppercase and/or lowercase), and other characters available in the US keyboard layout. ¹² Click the Show icon () to display the entered password.
Encryption type	An encryption method: TKIP , AES , or TKIP+AES . TKIP and TKIP+AES encryption types are not available for WPA3-SAE and WPA2-PSK/WPA3-SAE mixed authentication types.
Group key update interval	The time period (in seconds), at the end of which a new key for WPA encryption is generated. When the value 0 is specified for this field, the key is not renewed.

¹² 0-9, A-Z, a-z, space, !"#\$%&'()*+,-./:;<=>?@[\\]^_`{|}~.

Parameter	Description
802.11w (Protected Management Frames)	<p>For WPA2-PSK, WPA3-SAE, and WPA2-PSK/WPA3-SAE mixed authentication types only.</p> <p>Protected Management Frames help to improve packet privacy protection for wireless data transmission. Select a value for the wireless network from the drop-down list.</p> <ul style="list-style-type: none"> • Disabled: Protected Management Frames are not used. • Optional: Protected Management Frames are optional. • Required: Protected Management Frames are required. When this value is selected, devices not supporting the 802.11w standard cannot connect to the wireless network. <p>The default value cannot be changed for WPA3-SAE and WPA2-PSK/WPA3-SAE mixed authentication types.</p>

When the **WPA**, **WPA2**, or **WPA/WPA2 mixed** value is selected, the following settings are displayed on the page:



Security Settings

Network authentication
WPA2

☐ WPA2 Pre-authentication

IP address RADIUS server*
192.168.0.254

RADIUS server port*
1812

RADIUS encryption key*
dlink

Encryption type*
AES

Group key update interval (in seconds)*
3600

802.11w (Protected Management Frames)
Disabled


Figure 97. The **WPA2** value is selected from the **Network authentication** drop-down list.

Parameter	Description
WPA2 Pre-authentication	Move the switch to the right to activate preliminary authentication (displayed only for the WPA2 and WPA/WPA2 mixed authentication types).
IP address RADIUS server	The IP address of the RADIUS server.

Parameter	Description
RADIUS server port	A port of the RADIUS server.
RADIUS encryption key	The password which the router uses for communication with the RADIUS server (the value of this parameter is specified in the RADIUS server settings).
Encryption type	An encryption method: TKIP , AES , or TKIP+AES .
Group key update interval	The time period (in seconds), at the end of which a new key for WPA encryption is generated. When the value 0 is specified for this field, the key is not renewed.
802.11w (Protected Management Frames)	<p><i>For WPA2 authentication type only.</i></p> <p>Protected Management Frames help to improve packet privacy protection for wireless data transmission. Select a value for the wireless network from the drop-down list.</p> <ul style="list-style-type: none"> • Disabled: Protected Management Frames are not used. • Optional: Protected Management Frames are optional. • Required: Protected Management Frames are required. When this value is selected, devices not supporting the 802.11w standard cannot connect to the wireless network.

When you have configured the parameters, click the **APPLY** button.

To edit the basic or additional wireless network, left-click the relevant line in the table. On the opened page, change the needed parameters and click the **APPLY** button.

To remove the additional network, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button (). Then click the **APPLY** button.

Settings / Network

To configure the router's local interface, go to the **Settings / Network** page.

IPv4

Go to the **IPv4** tab to change the IPv4 address of the router, configure the built-in DHCP server, specify MAC address and IPv4 address pairs, or add own DNS records.

The screenshot shows the 'Local IP Address' configuration section. It contains three input fields: 'IP address*' with the value '192.168.0.1', 'Mask*' with the value '255.255.255.0', and 'Hostname' with the value 'dlinkrouter.local'. Below these fields is a note: '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./)'.

Figure 98. Configuring the local interface. The **IPv4** tab. The **Local IP Address** section.

Parameter	Description
Local IP Address	
Mode of local IP address assignment	<p>Available if the Access point, Repeater, or Client mode was selected in the Setup Wizard.</p> <p>Select the needed value from the drop-down list.</p> <ul style="list-style-type: none">• Static: The IPv4 address, subnet mask, and the gateway IP address are assigned manually.• Dynamic: The router automatically obtains these parameters from the LAN DHCP server or from the router to which it connects.
IP address	The IPv4 address of the router in the local subnet. By default, the following value is specified: 192.168.0.1 .
Mask	The mask of the local subnet. By default, the following value is specified: 255.255.255.0 .
Gateway IP address	<p>Available if the Access point, Repeater, or Client mode was selected in the Setup Wizard.</p> <p>The gateway IPv4 address which is used by the router to connect to the Internet (e.g., for synchronizing the system time with an NTP server). <i>Optional</i>.</p>

Parameter	Description
Hostname	The name of the device assigned to its IPv4 address in the local subnet. For Wi-Fi clients, the device is not available by the domain name, if multicasting is disabled in the additional settings of Wi-Fi.
<div> <h3>Dynamic IP Addresses</h3> <p>Mode of dynamic IP address assignment</p> <p>Server</p> <hr/> <p>Start IP*</p> <p>192.168.0.100</p> <hr/> <p>End IP*</p> <p>192.168.0.199</p> <hr/> <p>Lease time (in minutes)*</p> <p>1440</p> <hr/> <p><input checked="" type="checkbox"/> DNS relay</p> <p><small>Assigns the LAN IP address of the device as the DNS server for connected clients.</small></p> <p><input type="checkbox"/> ARP Proxy</p> </div>	

Figure 99. Configuring the local interface. The **IPv4** tab. The **Dynamic IP Addresses** section.

Parameter	Description
Dynamic IP Addresses	
Mode of dynamic IP address assignment	<p>An operating mode of the router's DHCP server.</p> <ul style="list-style-type: none"> Disable: The router's DHCP server is disabled, clients' IP addresses are assigned manually. Server: The router assigns IP addresses to clients automatically in accordance with the specified parameters. When this value is selected, the Start IP, End IP, Lease time fields and the DNS relay switch are displayed on the tab. Also when this value is selected, the DHCP Options, Static IP Addresses, and Hosts sections are displayed on the tab. Relay: An external DHCP server is used to assign IP addresses to clients. When this value is selected, the External DHCP server IP, Option 82 Circuit ID, Option 82 Remote ID, and Option 82 Subscriber ID fields are displayed on the tab. <i>Available if the Mobile Internet Router, or WISP Repeater mode was selected in the Setup Wizard.</i>

Parameter	Description
Start IP	The start IP address of the address range used by the DHCP server to distribute IP addresses to clients.
End IP	The end IP address of the address range used by the DHCP server to distribute IP addresses to clients.
Lease time	The lifetime of IP addresses leased by the DHCP server. At the end of this period the leased IP address is revoked and can be distributed to another device, unless the previous device has confirmed the need to keep the address.
DNS relay	Move the switch to the right so that the devices connected to the router obtain the address of the router as the DNS server address. Move the switch to the left so that the devices connected to the router obtain the address transmitted by the ISP or specified on the Settings / Internet / DNS page as the DNS server address.
External DHCP server IP	The IP address of the external DHCP server which assigns IP addresses to the router's clients.
Option 82 Circuit ID Option 82 Remote ID Option 82 Subscriber ID	<i>Available if the Mobile Internet, Router, or WISP Repeater mode was selected in the Setup Wizard.</i> The value of the relevant field of DHCP option 82. Do not fill in the fields unless your ISP or the administrator of the external DHCP server provided these values.

When all needed settings are configured, click the **APPLY** button.

In the **DHCP Options** section, you can change default values for some options of DHCP protocol (IP address, subnet mask, DNS servers) or specify additional parameters which the built-in DHCP server should send to clients to configure the local network.

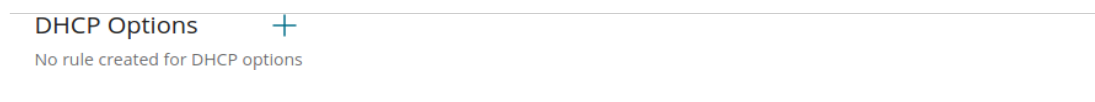


Figure 100. Configuring the local interface. The **IPv4** tab. The section for configuring DHCP options.

To do this, click the **ADD** button ().

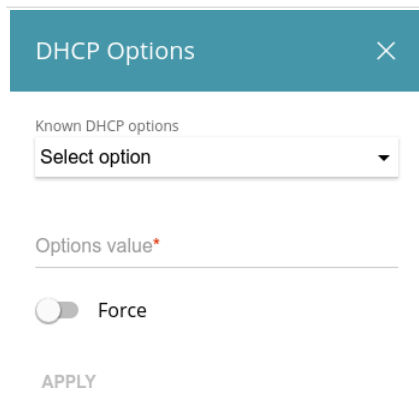



Figure 101. Configuring the local interface. The **IPv4** tab. The window for configuring a DHCP option.

In the opened window, you can specify the following parameters:

Parameter	Description
Known DHCP options	From the drop-down list, select an option which you want to configure.
Options value	Specify the value for the selected option.
Force	<p>Move the switch to the right to let the DHCP server send the selected option regardless of the client's request.</p> <p>Move the switch to the left to let the DHCP server send the selected option only when the client requests it.</p>

After specifying the needed parameters, click the **APPLY** button.

To edit the parameters of an option, left-click the relevant line in the table. In the opened window, change the needed parameters and click the **APPLY** button.

To remove the value of an option, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button (). Then click the **APPLY** button.

In the **Static IP Addresses** section, you can specify MAC address and IPv4 address pairs (set a fixed IPv4 address in the local area network for a device with a certain MAC address). The router assigns IPv4 addresses in accordance with the specified pairs only when the DHCP server is enabled (in the **Dynamic IP Addresses** section, the **Server** value is selected from the **Mode of dynamic IP address assignment** drop-down list).

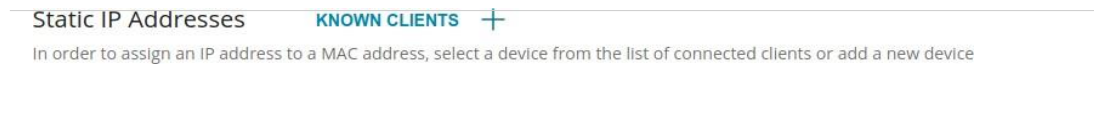





Figure 102. Configuring the local interface. The **IPv4** tab. The section for creating MAC-IPv4 pairs.

To create a MAC-IPv4 pair, click the **ADD** button (). In the opened window, fill in the **MAC address** field. You can choose a device connected to the router's LAN at the moment. To do this, select the relevant MAC address from the drop-down list (the field will be filled in automatically). Then in the **IP address** field, enter an IPv4 address which will be assigned to the device with the specified MAC address. In the **Hostname** field, specify a network name of the device for easier identification (*optional*). Click the **APPLY** button.

To create MAC-IPv4 pairs for the devices connected to the router at the moment, click the **KNOWN CLIENTS** button. In the opened window, select the needed device and click the **OK** button. To view the latest list of the connected devices, click the **REFRESH** button.

To edit the settings for an existing MAC-IPv4 pair, left-click the relevant line in the table. In the opened window, change the needed parameters and click the **APPLY** button.

To remove a MAC-IPv4 pair, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button (). Then click the **APPLY** button. Also you can remove a pair in the editing window.

If needed, you can add your own address resource records. To do this, click the **ADD** button () in the **Hosts** section (*available if the **Router** or **WISP Repeater** mode was selected in the Setup Wizard*).

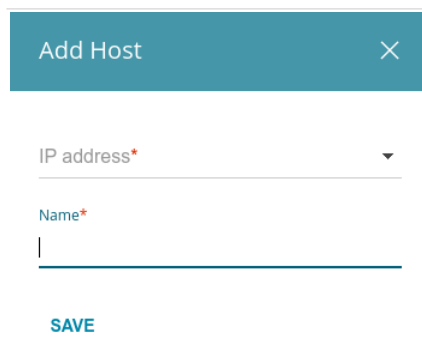



Figure 103. Configuring the local interface. The **IPv4** tab. The window for adding a DNS record.

In the **IP address** field, specify a host from the internal or external network. You can choose a device connected to the router's LAN at the moment. To do this, select the relevant IPv4 address from the drop-down list (the field will be filled in automatically). In the **Name** field, specify the domain name to which the specified IPv4 address will correspond. Click the **SAVE** button.

To edit an existing record, in the **Hosts** section, select the relevant line in the table. In the opened window, change the needed parameters and click the **SAVE** button.

To remove a record, in the **Hosts** section, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

After completing the work with records, click the **APPLY** button.

IPv6

Go to the **IPv6** tab to change or add the IPv6 address of the router, configure IPv6 addresses assignment settings, specify MAC address and IPv6 address pairs, or add own DNS records.

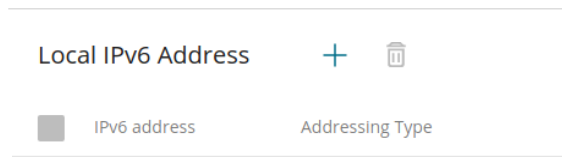


Figure 104. Configuring the local interface. The **IPv6** tab. The **Local IPv6 Address** section.

To add an IPv6 address of the router, click the **ADD** button (**+**). To change the IPv6 address of the router, select it in the table.

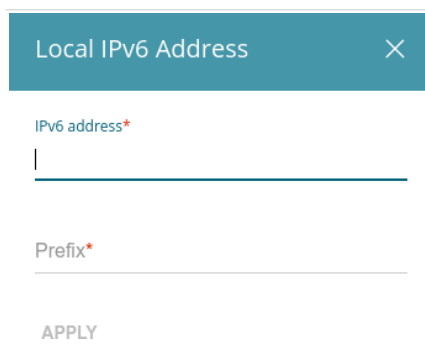


Figure 105. Configuring the local interface. The **IPv6** tab. The window for adding an IPv6 address.

In the opened window, you can specify the following parameters:

Parameter	Description
Local IPv6 Address	
IPv6 address	The IPv6 address of the router in the local subnet.
Prefix	The length of the prefix subnet.
Gateway IPv6 address	<p><i>Available if the Access point or Repeater mode was selected in the Setup Wizard.</i></p> <p>The gateway IPv6 address which is used by the router to connect to the Internet (e.g., for synchronizing the system time with an NTP server). <i>Optional.</i></p>

Click the **APPLY** button.

To remove the IPv6 address, select it in the table and click the **DELETE** button in the opened window. Then click the **APPLY** button.

In the **Dynamic IPv6 Addresses** section, you can configure IPv6 addresses assignment settings.

Dynamic IPv6 Addresses

Mode of dynamic IPv6 address assignment

Stateful

(1-FFFF)*

Address range

2

—

64

(1-FFFF)*

Lease time (in minutes)*

5

☐ The default route for LAN clients
 ☒ DNS relay

① Assigns the LAN IP address of the device as the DNS server for connected clients.

Figure 106. Configuring the local interface. The **IPv6** tab. The **Dynamic IPv6 Addresses** section.

Parameter	Description
Dynamic IPv6 Addresses	
Mode of dynamic IPv6 address assignment	<p>Select the needed value from the drop-down list.</p> <ul style="list-style-type: none"> Disable: Clients' IPv6 addresses are assigned manually. Stateful: The built-in DHCPv6 server of the router allocates addresses from the range specified in the Address range fields. Also when this value is selected, the Static IP Addresses and Hosts sections are displayed on the tab. Stateless: Clients themselves configure IPv6 addresses using the prefix.
Address range	The start and the end values for the latest hextet (16 bit) of the range of IPv6 addresses which the DHCPv6 server distributes to clients.
Lease time	The lifetime of IPv6 addresses provided to clients.
The default route for LAN clients	Move the switch to the right to let the clients, that received IPv6 addresses or configured them using the prefix, use the router as the default IPv6 route.
DNS relay	<p>Move the switch to the right so that the devices connected to the router obtain the address of the router as the DNS server address.</p> <p>Move the switch to the left so that the devices connected to the router obtain the address transmitted by the ISP or specified on the Settings / Internet / DNS page as the DNS server address.</p>

When all needed settings are configured, click the **APPLY** button.

In the **Static IP Addresses** section, you can specify MAC address and IPv6 address pairs (set a fixed IPv6 address in the local area network for a device with a certain MAC address). The router assigns IPv6 addresses in accordance with the specified pairs only when the **Stateful** value is selected from the **Mode of dynamic IPv6 address assignment** drop-down list in the **Dynamic IPv6 Addresses** section.

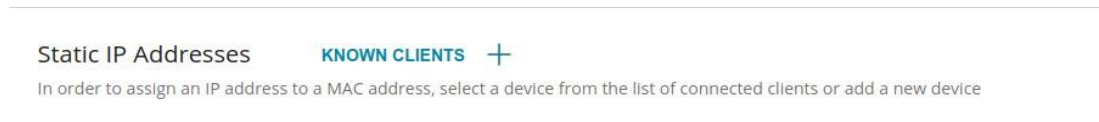




Figure 107. Configuring the local interface. The **IPv6** tab. The section for creating MAC-IPv6 pairs.

To create a MAC-IPv6 pair, click the **ADD** button (). In the opened window, fill in the **MAC address** field. You can choose a device connected to the router's LAN at the moment. To do this, select the relevant MAC address from the drop-down list (the field will be filled in automatically). Then in the **IP address** field, enter an IPv6 address which will be assigned to the device with the specified MAC address. In the **Hostname** field, specify a network name of the device for easier identification (*optional*). Click the **APPLY** button.

To create MAC-IPv6 pairs for the devices connected to the router at the moment, click the **KNOWN CLIENTS** button. In the opened window, select the needed device and click the **OK** button. To view the latest list of the connected devices, click the **REFRESH** button.

To edit the settings for an existing MAC-IPv6 pair, left-click the relevant line in the table. In the opened window, change the needed parameters and click the **APPLY** button.

To remove a MAC-IPv6 pair, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button (). Then click the **APPLY** button. Also you can remove a pair in the editing window.



If needed, you can add your own address resource records. To do this, click the **ADD** button () in the **Hosts** section (*available if the **Router** or **WISP Repeater** mode was selected in the Setup Wizard*).

Figure 108. Configuring the local interface. The **IPv6** tab. The window for adding a DNS record.

In the **IP address** field, specify a host from the internal or external network. You can choose a device connected to the router's LAN at the moment. To do this, select the relevant IPv6 address from the drop-down list (the field will be filled in automatically). In the **Name** field, specify the domain name to which the specified IPv6 address will correspond. Click the **SAVE** button.

To edit an existing record, in the **Hosts** section, select the relevant line in the table. In the opened window, change the needed parameters and click the **SAVE** button.

To remove a record, in the **Hosts** section, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().
After completing the work with records, click the **APPLY** button.


Functions / Firewall

IP Filter

On the **Functions / Firewall / IP filter** page, you can create new rules for filtering IP packets and edit or remove existing rules.



*Figure 128. The **Functions / Firewall / IP filter** page.*

To create a new rule, click the **ADD** button ().

General Settings

☒ Enable rule

Name*

The number of characters should not exceed 32

Action

Allow

Protocol

TCP

IP version

IPv4

Direction

LAN to WAN

Source IP address

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

Set as

Range or single IP address

Start IPv4 address

End IPv4 address

Destination IP address

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

Set as

Range or single IP address

Start IPv4 address

End IPv4 address

Ports

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

Destination port

☐ Set source port manually

APPLY

Figure 129. The page for adding a rule for IP filtering.

You can specify the following parameters:

Parameter	Description
General Settings	
Enable rule	<p>Move the switch to the right to enable the rule.</p> <p>Move the switch to the left to disable the rule.</p>
Name	Enter a name for the rule for easier identification.
Action	<p>Select an action for the rule.</p> <ul style="list-style-type: none"> Allow: Allows packet transmission in accordance with the criteria specified by the rule. Deny: Denies packet transmission in accordance with the criteria specified by the rule.

Parameter	Description
Protocol	A protocol for network packet transmission. Select a value from the drop-down list.
IP version	An IP version to which the rule will be applied. Select the relevant value from the drop-down list.
Direction	<p>The direction of network packet transmission to which the rule will be applied. Select the relevant value from the drop-down list.</p> <ul style="list-style-type: none"> • LAN to WAN: The rule will be applied to the packets transmitted from the local network to the external network. • WAN to LAN: The rule will be applied to the packets transmitted from the external network to the local network. • LAN to Router: The rule will be applied to the packets transmitted from the local network to DIR-842V2. • WAN to Router: The rule will be applied to the packets transmitted from the external network to DIR-842V2.
Source IP Address	
Set as	Select the needed value from the drop-down list.
Start IPv4 address / Start IPv6 address	<p>The source host start IPv4 or IPv6 address.</p> <p>If it is necessary to specify a single address, leave the End IPv4 address / End IPv6 address field blank.</p> <p>You can choose a device connected to the router's LAN at the moment. To do this, select the relevant IPv4 or IPv6 address from the drop-down list (the field will be filled in automatically).</p>
End IPv4 address / End IPv6 address	The source host end IPv4 or IPv6 address.
Subnet IPv4 address / Subnet IPv6 address	The source subnet IPv4 or IPv6 address. The field is displayed when the Subnet value is selected from the Set as drop-down list.
Destination IP Address	
Set as	Select the needed value from the drop-down list.
Start IPv4 address / Start IPv6 address	<p>The destination host start IPv4 or IPv6 address.</p> <p>If it is necessary to specify a single address, leave the End IPv4 address / End IPv6 address field blank.</p> <p>You can choose a device connected to the router's LAN at the moment. To do this, select the relevant IPv4 or IPv6 address from the drop-down list (the field will be filled in automatically).</p>

Parameter	Description
End IPv4 address / End IPv6 address	The destination host end IPv4 or IPv6 address.
Subnet IPv4 address / Subnet IPv6 address	The destination subnet IPv4 or IPv6 address. The field is displayed when the Subnet value is selected from the Set as drop-down list.
Ports	
Destination port	A port of the destination IP address. You can specify one port, several ports separated by a comma, or a range of ports separated by a colon.
Set source port manually	Move the switch to the right to specify a port of the source IP address manually. Upon that the Source port field is displayed.
Source port	A port of the source IP address. You can specify one port, several ports separated by a comma, or a range of ports separated by a colon.

Click the **APPLY** button.

To set a schedule for the IP filter rule, click the **Set Schedule** button (🕒) in the line corresponding to this rule. In the opened window, you can create a new schedule (see the *Schedule* section, page 225) or use the existing one. Existing schedules are displayed in the **Interval of execution** drop-down list in the simplified mode.

To enable the IP filter rule at the time specified in the schedule and disable it at the other time, select the **Enable rule** value from the **Action** drop-down list and click the **SAVE** button.

To disable the IP filter rule at the time specified in the schedule and enable it at the other time, select the **Disable rule** value from the **Action** drop-down list and click the **SAVE** button.

To edit a rule, select the relevant line in the table. In the opened window, change the needed parameters and click the **APPLY** button.

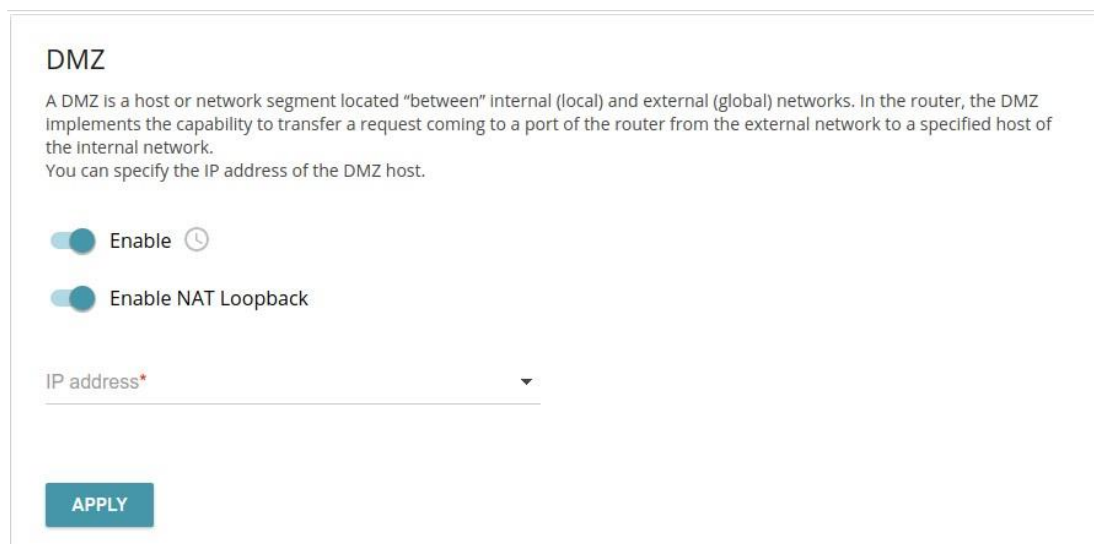
To change or delete the schedule for a rule, click the **Edit schedule** button (🕒) in the line corresponding to this rule. In the opened window, change the parameters and click the **SAVE** button or click the **DELETE FROM SCHEDULE** button.

To remove a rule, select the checkbox located to the left of the relevant line of the table and click the **DELETE** button (🗑️). Also you can remove a rule in the editing window.

DMZ

A DMZ is a host or network segment located “between” internal (local) and external (global) networks. In the router, the DMZ implements the capability to transfer a request coming to a port of the router from the external network to a specified host of the internal network.

On the **Functions / Firewall / DMZ** page, you can specify the IP address of the DMZ host.



The screenshot shows the DMZ configuration page. At the top, the title "DMZ" is displayed. Below it, a descriptive paragraph explains that a DMZ is a host or network segment located between internal and external networks, and that the router implements the capability to transfer requests from the external network to a specified host of the internal network. It also states that the user can specify the IP address of the DMZ host. Below the text, there are two toggle switches: "Enable" and "Enable NAT Loopback". Both switches are currently turned on (indicated by a blue circle). Below the switches, there is a text input field labeled "IP address*" with a small downward arrow on the right side, indicating a drop-down menu. At the bottom of the page, there is a blue button labeled "APPLY".

Figure 130. The **Functions / Firewall / DMZ** page.

To enable the DMZ, move the **Enable** switch to the right.

Enter the IP address of a host from your network in the **IP address** field. 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).

Move the **Enable NAT Loopback** switch to the right in order to let the users of the router's LAN access the DMZ host using the external IP address of the router or its DDNS name (if a DDNS service is configured). Users from the external network access the router using the same address (or DDNS name).

Click the **APPLY** button.

Note that when the DMZ is enabled, all traffic coming to a port of the WAN interface of the router is directed to the same port of the specified IP address. Also note that virtual servers have higher priority than the DMZ host. In other words, if there has been created a virtual server that directs traffic from external port 80 to a port of the device from the router's local network, then entering **http://router_WAN_IP** in the address bar, users of the external network are directed to the specified port and IP address configured for the virtual server, but not to port 80 of the device with the IP address specified on the **Functions / Firewall / DMZ** page.

To set a schedule for the DMZ, click the **Set schedule** button (🕒). In the opened window, you can create a new schedule (see the *Schedule* section, page 225) or use the existing one. Existing schedules are displayed in the **Interval of execution** drop-down list in the simplified mode.

To enable the DMZ for the time specified in the schedule and disable it at the other time, select the **Enable rule** value from the **Action** drop-down list and click the **SAVE** button.

To disable the DMZ for the time specified in the schedule and enable it at the other time, select the **Disable rule** value from the **Action** drop-down list and click the **SAVE** button.

To change or delete the schedule for the DMZ, click the **Edit schedule** button (🕒). In the opened window, change the parameters and click the **SAVE** button or click the **DELETE FROM SCHEDULE** button.

To disable the DMZ, move the **Enable** switch to the left and click the **APPLY** button.

MAC Filter

On the **Functions / Firewall / MAC Filter** page, you can configure MAC-address-based filtering for computers of the router's LAN.

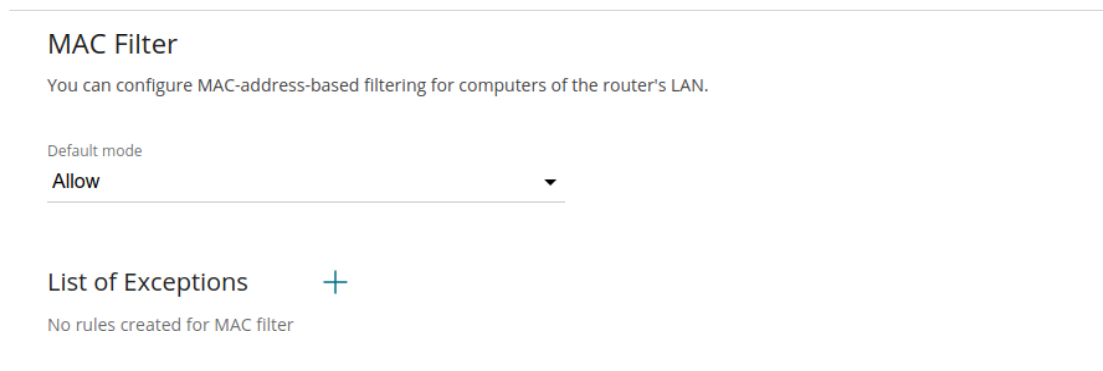


Figure 131. The **Functions / Firewall / MAC Filter** page.

Select the needed action from the drop-down list in the **Default mode** section to configure filtering for all devices of the router's network:

- **Allow:** Allows access to the router's network and to the Internet for devices (the value is specified by default);
- **Deny:** Blocks access to the router's network for devices.

! You can use the **Deny** mode only if an active rule which allows access to the device's network is created on the page.

To create a rule (specify a MAC address of a device for which the specified filtering mode will be applied), click the **ADD** button (**+**).

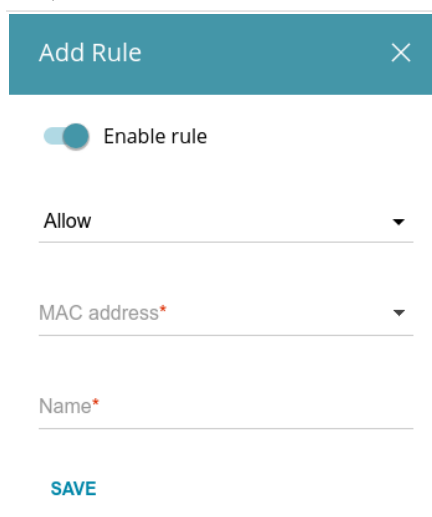



Figure 132. The window for adding a rule for the MAC filter.

In the opened window, you can specify the following parameters:

Parameter	Description
Enable rule	Move the switch to the right to enable the rule. Move the switch to the left to disable the rule.
Action	Select an action for the rule. <ul style="list-style-type: none"> Deny: Blocks access to the Internet for the device with the specified MAC address even if the default mode allows access for all devices. Allow: Allows access to the router's network and to the Internet for the device with the specified MAC address even if the default mode denies access for all devices.
MAC address	The MAC address of a device from the router's LAN. You can enter the MAC address of a device connected to the router's LAN at the moment. To do this, select the relevant device from the drop-down list (the field will be filled in automatically).
Name	The name of the device for easier identification. You can specify any name.


After specifying the needed parameters, click the **SAVE** button.


To set a schedule for the MAC filter rule, click the **Set Schedule** button () in the line corresponding to this rule. In the opened window, you can create a new schedule (see the **Schedule** section, page 225) or use the existing one. Existing schedules are displayed in the **Interval of execution** drop-down list in the simplified mode.

To enable the MAC filter rule at the time specified in the schedule and disable it at the other time, select the **Enable rule** value from the **Action** drop-down list and click the **SAVE** button.

To disable the MAC filter rule at the time specified in the schedule and enable it at the other time, select the **Disable rule** value from the **Action** drop-down list and click the **SAVE** button.

To edit a rule, select the relevant line in the table. In the opened window, change the needed parameters and click the **SAVE** button.

To change or delete the schedule for a rule, click the **Edit schedule** button () in the line corresponding to this rule. In the opened window, change the parameters and click the **SAVE** button or click the **DELETE FROM SCHEDULE** button.

To remove a rule, select the checkbox located to the left of the relevant line of the table and click the **DELETE** button (). Also you can remove a rule in the editing window.

AdBlock

On the **Functions / Firewall / AdBlock** page, you can enable the function of blocking advertisements which appear during web surfing.

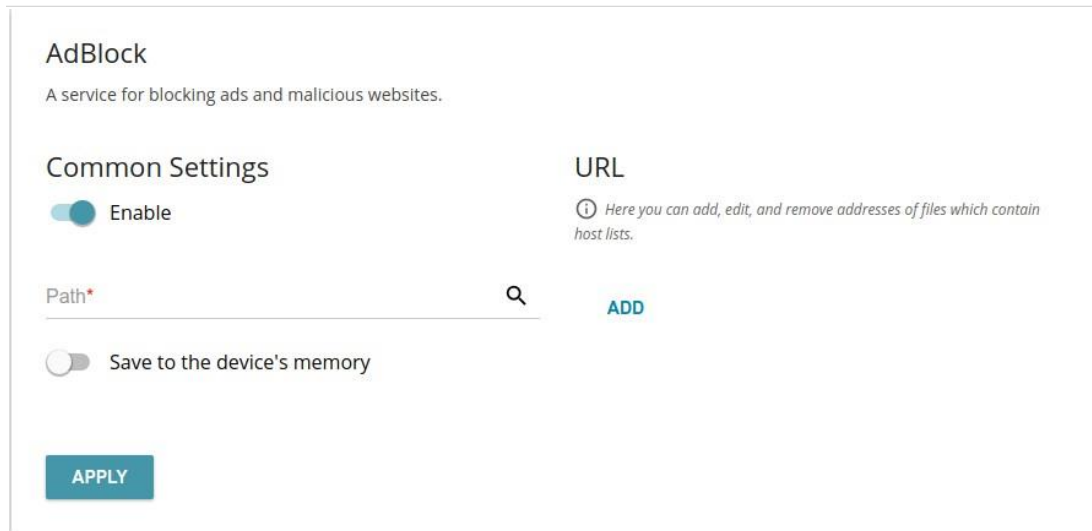


Figure 133. The **Functions / Firewall / AdBlock** page.

To enable the advertisements blocking function, in the **Common Settings** section, move the **Enable** switch to the right. Then in the **URL** section, click the **ADD** button and in the line displayed, enter a URL address of a file containing the list of advertising web sites which should be blocked. You can save the file with the list of advertising web sites to the device's memory. To do this, move the **Save to the device's memory** switch to the right, and then click the **APPLY** button.



Files saved to the device's memory are updated upon every reboot of the router or its or firmware update. In case the file is not available at that moment, the list of web sites to be blocked will not be received.

If you don't want to use a file for blocking advertisements any longer, click the **Delete** icon (✕) in the line of the URL address of the relevant file. Then click the **APPLY** button.

To disable the advertisements blocking function, move the **Enable** switch to the left and click the **APPLY** button.

Functions / Wi-Fi

Client Management

On the **Functions / Wi-Fi / Client Management** page, you can view the list of wireless clients connected to the router.

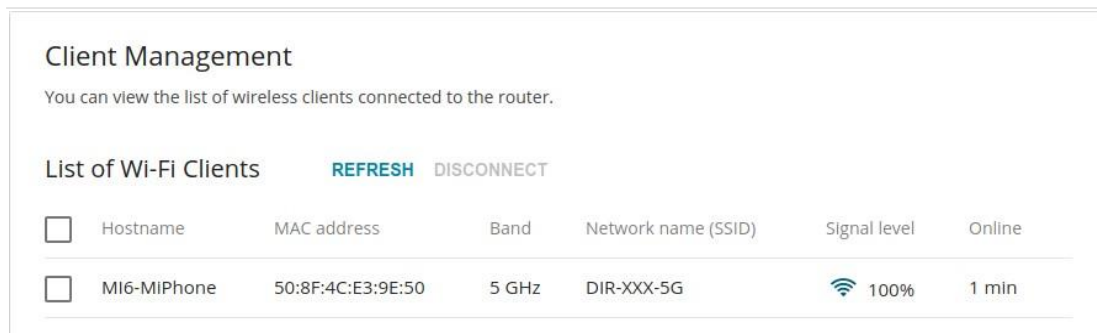


Figure 134. The page for managing the wireless clients.

If you want to disconnect a wireless device from your WLAN, select the checkbox in the line containing the MAC address of this device and click the **DISCONNECT** button.

To view the latest data on the devices connected to the WLAN, click the **REFRESH** button.

To view data on a connected device, left-click the line containing the MAC address of this device.

WPS

On the **Functions / Wi-Fi / WPS** page, you can enable the function for configuration of the WLAN. The WPS function helps to configure the wireless network automatically. Devices connecting to the wireless network via the WPS function must support the WPS function.

! The WPS function allows adding devices only to the basic wireless network of the router.

! Before using the function you need to configure one of the following authentication types: **Open** with no encryption, **WPA2-PSK** or **WPA-PSK/WPA2-PSK mixed** with the **AES** encryption method. When other security settings are specified, controls of the **WPS** page are not available.

The screenshot shows the WPS configuration page. At the top, there are tabs for '2.4 GHz' and '5 GHz', with '2.4 GHz' selected. Below the tabs, the 'WPS' section contains a description: 'The WPS function helps to automatically connect to the wireless network of the router. The connecting devices must support this function.' Below this is a link 'DISABLE WPS'. The 'WPS Control' section features an 'ESTABLISH CONNECTION' button and a toggle switch labeled 'Enable Wi-Fi when WPS function is activated with hardware button', which is currently turned on. A note below the switch says: 'Move the switch to the left in order to forbid the router to enable Wi-Fi/WPS when the WPS function is activated with the relevant hardware button'. The 'Information' section displays the following details: WPS state: Configured; Network name (SSID): DIR-XXX-D105; Network authentication: WPA2-PSK; Encryption: AES; Password PSK: 12345670. An 'UPDATE' button is located at the bottom right of the information section.

Figure 135. The page for configuring the WPS function.

You can activate the WPS function via the web-based interface or the hardware **WPS** button on the cover of the device.

To activate the WPS function via the hardware button, move the **Enable Wi-Fi when WPS function is activated with hardware button** switch to the right on the tabs of both bands. Then, with the device turned on, push the button, hold it for 2 seconds, and release. Upon pressing the button, the wireless interfaces of the device are enabled if they were disabled before.

If you want to disable activating the WPS function via the hardware button, move the **Enable Wi-Fi when WPS function is activated with hardware button** switch to the left on the tabs of both bands and make sure that the WPS function is not activated via the web-based interface.

To activate the WPS function via the web-based interface, click the **ENABLE WPS** button.

When the WPS function is enabled, the **Information** section is available on the page.

Parameter	Description
WPS state	The state of the WPS function: <ul style="list-style-type: none">• Configured (all needed settings are specified; these settings will be used upon establishing the wireless connection)• Unconfigured (after activating the WPS function, the SSID and the encryption key will be configured automatically, the network authentication type will be changed to WPA2-PSK).
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.
UPDATE	Click the button to update the data on the page.

Using WPS Function via Web-based Interface

To connect to the basic wireless network via the WPS function, follow the next steps:

1. Click the **ENABLE WPS** button.
2. In the **WPS Control** section, click the **ESTABLISH CONNECTION** button.
3. Select the PBC method in the software of the wireless device that you want to connect to the router's WLAN.
4. Click the relevant button in the software or press the WPS button on the cover of the wireless device that you want to connect to the WLAN.
5. Right after that, click the **CONNECT** button in the web-based interface of the router.

Using WPS Function without Web-based Interface

You can use the WPS function without accessing the web-based interface of the router. To do this, you need to configure the following router's settings:

1. Specify relevant security settings for the wireless network of the router.
2. Make sure that the **Enable Wi-Fi when WPS function is activated with hardware button** switch is moved to the right on the tabs of both bands.
3. Click the **ENABLE WPS** button.
4. Close the web-based interface (click the **Logout** line of the menu).

Later you will be able to add wireless devices to the WLAN by pressing the **WPS** button of the router.

1. Select the PBC method in the software of the wireless device that you want to connect to the router's WLAN.
2. Click the relevant button in the software or press the WPS button on the cover of the wireless device that you want to connect to the WLAN.
3. Press the **WPS** button of the router and release.

WMM

On the **Functions / Wi-Fi / WMM** page, you can enable the Wi-Fi Multimedia function.

The WMM function implements the QoS features for Wi-Fi networks. It helps to improve the quality of data transfer over Wi-Fi networks by prioritizing different types of traffic.

Select the needed action from the **Work mode** drop-down list to configure the WMM function:

- **Auto:** the settings of the WMM function are configured automatically (the value is specified by default).
- **Manual:** the settings of the WMM function are configured manually. When this value is selected, the **Access Point** and **Station** sections are displayed on the page.

2.4 GHz

5 GHz

Wi-Fi Multimedia

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

Work mode

Manual

Access Point

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

Station

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

Figure 136. The page for configuring the WMM function.



All needed settings for the WMM function are specified in the device's system. Changing parameters manually may negatively affect your WLAN!

The WMM function allows assigning priorities for four Access Categories (AC):

- **BK** (*Background*), low priority traffic (print jobs, file downloads, etc.).
- **BE** (*Best Effort*), traffic from legacy devices or devices/applications that do not support QoS.
- **VI** (*Video*).
- **VO** (*Voice*).

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).

To edit the parameters of an Access Category, left-click the relevant line. In the opened window, change the needed parameters.

Edit Access Point:
Background

AIFSN*
7

CWMin
31

CWMax
1023

TXOP*
0

☐ ACM

☐ ACK

SAVE CLOSE

Figure 137. The window for changing parameters of the WMM function.

Parameter	Description
AIFSN	<i>Arbitrary Inter-Frame Space Number.</i> This parameter influences time delays for the relevant Access Category. The lower the value, the higher is the Access Category priority.
CWMin / CWMax	<i>Contention Window Minimum/Contention Window Maximum.</i> Both fields influence time delays for the relevant Access Category. The CWMax field value should not be lower, than the CWMin field value. The lower the difference between the CWMax field value and the CWMin field value, the higher is the Access Category priority.
TXOP	<i>Transmission Opportunity.</i> The higher the value, the higher is the Access Category priority.
ACM	<i>Admission Control Mandatory.</i> If the switch is moved to the right, the device cannot use the relevant Access Category.
ACK	<i>Acknowledgment.</i> Answering response requests while transmitting. Displayed only in the Access Point section. If the switch is moved to the left, the router answers requests. If the switch is moved to the right, the router does not answer requests.

Click the **SAVE** button.

Client

On the **Functions / Wi-Fi / Client** page, you can configure the router as a client to connect to a wireless access point or to a WISP. To configure the 2.4GHz band or 5GHz band, go to the relevant tab.

Figure 138. The page for configuring the client mode.

To configure the router as a client, move the **Enable** switch to the right. Upon that the following fields are displayed on the page:


Parameter	Description
Broadcast wireless network 2.4 GHz / Broadcast wireless network 5 GHz	If the switch is moved to the left, devices cannot connect to the router's WLAN. Upon that the router can connect to another access point as a wireless client.
Connecting to network	A method for connecting to another access point.

In the **Wireless Networks** section, the list of available wireless networks is displayed. To view the latest data on available wireless networks, click the **UPDATE LIST** button.


To connect to a wireless network from the list, select the needed network. Move the **Network options** switch to the right to view more detailed information on the network to which the router connects. If a password is required, enter it in the relevant field. Click the **CONNECT** button.

To connect to a hidden network, select the **Connect to hidden network** value from the **Connecting to network** drop-down list. Then enter the network name in the **Network name (SSID)** field. If needed, fill in the **BSSID** field. Then select the needed type of authentication from the **Network authentication** drop-down list.

When the **Open** or **WEP** authentication type is selected, the following settings are displayed on the page:

Parameter	Description
Enable encryption WEP	<i>For Open authentication type only.</i> To activate WEP encryption, move the switch to the right. Upon that the Default key ID drop-down list, the Encryption key WEP as HEX switch, and four Encryption key fields are displayed on the page.
Default key ID	The number of the key (from first to fourth) which will be used for WEP encryption.
Encryption key WEP as HEX	Move the switch to the right to set a hexadecimal number as a key for encryption.
Encryption key (1-4)	Keys for WEP encryption. The router uses the key selected from the Default key ID drop-down list. It is required to specify all the fields. Click the Show icon () to display the entered key.

When the **WPA-PSK**, **WPA2-PSK**, **WPA-PSK/WPA2-PSK mixed**, **WPA3-SAE**, and **WPA2-PSK/WPA3-SAE mixed** authentication type is selected, the following fields are displayed:

Parameter	Description
Password PSK	A password for WPA encryption. Click the Show icon () to display the entered password.
Encryption type	An encryption method: TKIP , AES , or TKIP+AES . <i>TKIP and TKIP+AES encryption types are not available for WPA3-SAE and WPA2-PSK/WPA3-SAE mixed authentication types.</i>

When you have configured the parameters, click the **APPLY** button.

When connecting to a wireless access point, the wireless channel of DIR-842V2 will switch to the channel of the access point to which you have connected.

In addition, the **Connection Information** section in which you can view the connection status and the network basic parameters is displayed.


If you want to connect to the WISP network, after configuring the device as a client, you need to create a WAN connection with relevant parameters for the **WiFiClient_2GHz_1** interface in the 2.4GHz band or for the **WiFiClient_5GHz_1** interface in the 5GHz band.

Client Shaping

On the **Functions / Wi-Fi / Client Shaping** page, you can limit the maximum bandwidth of upstream and downstream traffic for each wireless client of the router by its MAC address.



Figure 139. The **Functions / Wi-Fi / Client Shaping** page.

If you want to limit the maximum bandwidth of traffic for the router's wireless client, create a relevant rule. To do this, click the **ADD** button ().

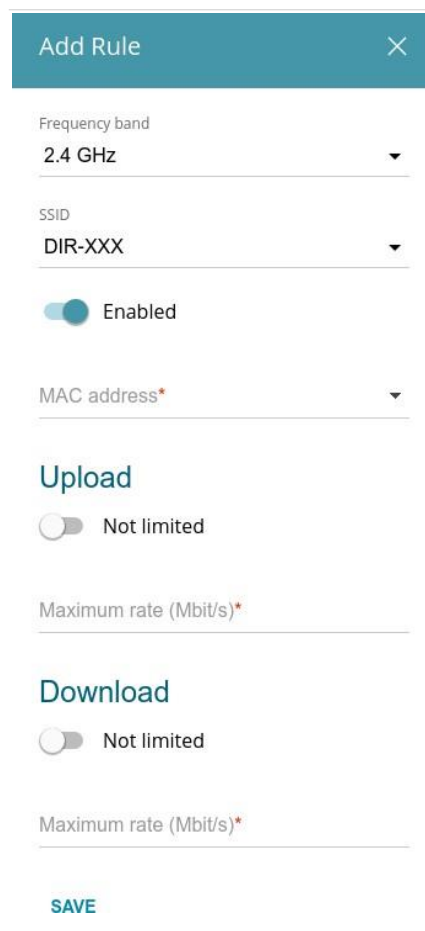
The 'Add Rule' window is a modal dialog with a teal header bar containing the title 'Add Rule' and a close button (X). The form inside has several sections: 1. 'Frequency band' with a dropdown menu set to '2.4 GHz'. 2. 'SSID' with a dropdown menu set to 'DIR-XXX'. 3. A toggle switch for 'Enabled' which is currently turned on. 4. 'MAC address*' with a dropdown menu. 5. 'Upload' section with a toggle switch for 'Not limited' which is currently turned off. 6. 'Maximum rate (Mbit/s)*' input field for upload. 7. 'Download' section with a toggle switch for 'Not limited' which is currently turned off. 8. 'Maximum rate (Mbit/s)*' input field for download. At the bottom of the window is a teal 'SAVE' button.


Figure 140. The window for setting up rate limit.

In the opened window, you can specify the following parameters:

Parameter	Description
Frequency band	From the drop-down list, select a band of the wireless network.
SSID	A wireless network to which the rule will be applied. Select the needed value from the drop-down list.
Enabled	If the switch is moved to the right, the rule is active. Move the switch to the left to disable the rule.
MAC address	In the field, enter the MAC address to which the rule will be applied. You can enter the MAC address of a device connected to the router's LAN at the moment. To do this, select the relevant device from the drop-down list (the field will be filled in automatically).
Upload	
Maximum rate	Specify the maximum value of the upstream traffic rate (Mbit/s) or move the Not limited switch to the right not to limit the maximum bandwidth of upstream traffic.
Download	
Maximum rate	Specify the maximum value of the downstream traffic rate (Mbit/s) or move the Not limited switch to the right not to limit the maximum bandwidth of downstream traffic.

After specifying the needed parameters, click the **SAVE** button.

To edit a rule, left-click the relevant rule. In the opened window, change the needed parameters and click the **SAVE** button.

To remove a rule, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

Additional

On page of the **Functions / Wi-Fi / Additional** section, you can define additional parameters for the WLAN of the router. To configure the 2.4GHz band or 5GHz band, go to the relevant tab.

! Changing parameters presented on this page may negatively affect your WLAN!

2.4 GHz

5 GHz

Wi-Fi Additional Settings

You can define additional parameters for the WLAN of the router.

Bandwidth Auto	B/G protection Auto
<small>Using bandwidth of one or several channels of the wireless network simultaneously</small>	Short GI Enable
<small>Current bandwidth: 40 MHz</small>	Beacon period (in milliseconds)* 100
<input checked="" type="checkbox"/> Autonegotiation 20/40 (Coexistence)	RTS threshold (in bytes)* 2347
<small>Automatic change of bandwidth in the loaded environment</small>	Frag threshold (in bytes)* 2346
TX power (in percent) 100	DTIM period (in beacon frames)* 1
<input type="checkbox"/> Drop multicast	Station Keep Alive (in seconds)* 0
<small>Disables multicasting (IGMP, SSDP, etc.) for the wireless network. In some cases this helps to improve performance</small>	
<input type="checkbox"/> Adaptivity mode	
<small>Reduces influence on operation of other wireless devices in the loaded environment. This can lower performance of your wireless network</small>	
<input checked="" type="checkbox"/> STBC	

APPLY

Figure 141. Additional settings of the WLAN.

The following fields are available on the page:

Parameter	Description
Bandwidth	<p>The channel bandwidth for 802.11n standard in the 2.4GHz band (the 2.4 GHz tab).</p> <ul style="list-style-type: none">• 20 MHz: 802.11n clients operate at 20MHz channels.• 20/40 MHz: 802.11n clients operate at 20MHz or 40MHz channels.• Auto: the router automatically chooses the most suitable channel bandwidth for 802.11n clients. <p>The channel bandwidth for 802.11n and 802.11ac standards in 5GHz band (the 5 GHz tab).</p> <ul style="list-style-type: none">• 20 MHz: 802.11n and 802.11ac clients operate at 20MHz channels.• 20/40 MHz: 802.11n and 802.11ac clients operate at 20MHz or 40MHz channels.• 20/40/80 MHz: 802.11ac clients operate at 20MHz, 40MHz, or 80MHz channels.• Auto: the router automatically chooses the most suitable channel bandwidth for 802.11n and 802.11ac clients.
Autonegotiation 20/40 (Coexistence)	<p><i>Available on the 2.4 GHz tab.</i></p> <p>Move the switch to the right to let the router automatically choose the channel bandwidth (20MHz or 40MHz) depending on availability of other APs within its operational range (this setting can substantially lower the data transfer rate of your wireless network). The switch is displayed when the 20/40 MHz value is selected from the Bandwidth drop-down list.</p>
TX Power	The transmit power (in percentage terms) of the router.
Drop multicast	Move the switch to the right to disable multicasting for the router's WLAN. Move the switch to the left to enable multicasting from the WAN connection selected on the Functions / Advanced / IGMP/MLD page. If the switch is moved to the right, the device will not be available by the domain name for Wi-Fi clients.
Adaptivity mode	Move the switch to the right to prevent your wireless network from interfering with radars and other mobile or stationary radio systems. Such a setting can slow down the router's WLAN.

Parameter	Description
STBC	<p>The STBC (<i>Space-time block coding</i>) technique allows increasing data transfer reliability even for portable devices equipped with poor antennas (smartphones, pads, etc.) due to using several data streams and processing several versions of received data.</p> <p>Move the switch to the right if you need to use the STBC technique.</p>
B/G protection	<p>Available on the 2.4 GHz tab.</p> <p>The 802.11b and 802.11g protection function is used to minimize collisions between devices of your wireless network.</p> <p>Select a value from the drop-down list.</p> <ul style="list-style-type: none"> • Auto: The protection function is enabled and disabled automatically depending on the state of the network (this value is recommended if your wireless local area network consists of both 802.11b and 802.11g devices). • Always On: The protection function is always enabled (this setting can substantially lower the efficiency of your wireless network). • Always Off: The protection function is always disabled.
Short GI	<p>Guard interval (in nanoseconds). This parameter defines the interval between symbols transmitted when the router is communicating to wireless devices.</p> <ul style="list-style-type: none"> • Enable: the router uses the 400 ns short guard interval. Only for the wireless network operating modes which support 802.11n and 802.11ac standards (see the value of the Wireless mode drop-down list on the Settings / Wireless Network page). • Disable: the router uses the 800 ns standard guard interval.
Beacon Period	<p>The time interval (in milliseconds) between packets sent to synchronize the wireless network.</p>
RTS threshold	<p>The minimum size (in bytes) of a packet for which an RTS frame is transmitted.</p>
Frag threshold	<p>The maximum size (in bytes) of a non-fragmented packet. Larger packets are fragmented (divided).</p>
DTIM period	<p>The number of beacon frames between sending DTIM messages (messages notifying on broadcast or multicast transmission).</p>

Parameter	Description
Station Keep Alive	The time interval (in seconds) between keep alive checks of wireless devices from your WLAN. When the value 0 is specified, the checking is disabled.

When you have configured the parameters, click the **APPLY** button.

MAC Filter

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



It is recommended to configure the Wi-Fi MAC filter through a wired connection to DIR-842V2

Figure 142. The page for configuring the MAC filter for the wireless network.

By default, the Wi-Fi MAC filter is not configured.


To configure the MAC filter, first you need to create rules (specify MAC addresses of devices for which the specified filtering modes will be applied). To do this, click the **ADD** button ().


Figure 143. The window for adding a rule for the MAC filter.

You can specify the following parameters:

Parameter	Description
Frequency band	From the drop-down list, select a band of the wireless network.
SSID	A wireless network to which the rule will be applied. Select the needed value from the drop-down list.
MAC address	In the field, enter the MAC address of the device to which the selected filtering mode will be applied. You can enter the MAC address of a device connected to the router's LAN at the moment. To do this, select the relevant device from the drop-down list (the field will be filled in automatically).
Hostname	The name of the device for easier identification (<i>optional</i>). You can specify any name.
Enable	If the switch is moved to the right, the rule is active. Move the switch to the left to disable the rule.

When you have configured the parameters, click the **SAVE** button.


To edit the parameters of the existing rule, in the **Filters** section, left-click the needed rule. In the opened window, change the settings and click the **SAVE** button.

To remove the rule from the page, in the **Filters** section, select the checkbox located to the left of the relevant rule and click the **DELETE** button ().

After creating the rules you need to configure the filtering modes.


To open the basic or additional wireless network for the devices which MAC addresses are specified on this page and to close the wireless network for all other devices, in the section corresponding to the band (**2.4 GHz** or **5 GHz**), left-click the line of the wireless network. In the opened window, move the **Enable MAC filter** switch to the right. Upon that the **MAC filter restrict mode** drop-down list will be displayed. Select the **Allow** value from the drop-down list and click the **SAVE** button.

To close the wireless network for the devices which MAC addresses are specified on this page, select the **Deny** value from the **MAC filter restrict mode** drop-down list and click the **SAVE** button.

To set a schedule for the MAC filter rule, click the **Set Schedule** button () in the line corresponding to this rule. In the opened window, you can create a new schedule (see the *Schedule* section, page 225) or use the existing one. Existing schedules are displayed in the **Interval of execution** drop-down list in the simplified mode.

To enable the MAC filter rule at the time specified in the schedule and disable it at the other time, select the **Enable rule** value from the **Action** drop-down list and click the **SAVE** button.

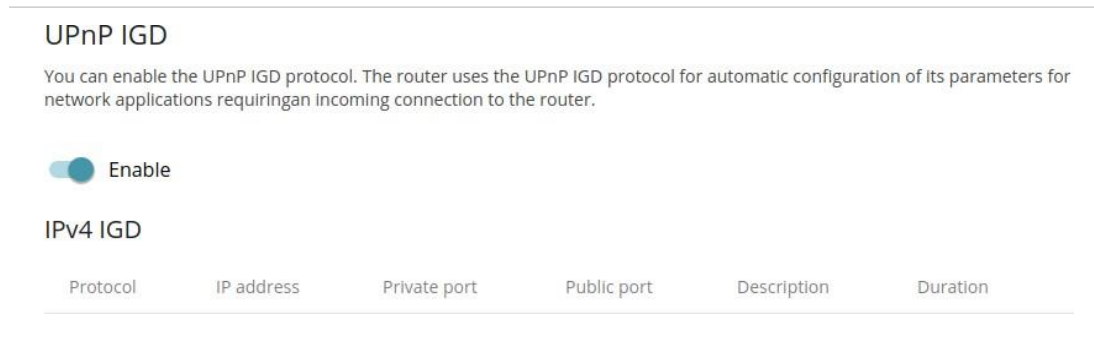
To disable the MAC filter rule at the time specified in the schedule and enable it at the other time, select the **Disable rule** value from the **Action** drop-down list and click the **SAVE** button.

To change or delete the schedule for a rule, click the **Select schedule** button () in the line corresponding to this rule. In the opened window, change the parameters and click the **SAVE** button or click the **DELETE FROM SCHEDULE** button.

Functions / Advanced

UPnP IGD

On the **Functions / Advanced / UPnP IGD** page, you can enable the UPnP IGD protocol. The router uses the UPnP IGD protocol for automatic configuration of its parameters for network applications requiring an incoming connection to the router.



UPnP IGD

You can enable the UPnP IGD protocol. The router uses the UPnP IGD protocol for automatic configuration of its parameters for network applications requiring an incoming connection to the router.

☒ Enable

IPv4 IGD

Protocol	IP address	Private port	Public port	Description	Duration
----------	------------	--------------	-------------	-------------	----------

Figure 146. The **Functions / Advanced / UPnP IGD** page.

If you want to manually specify all parameters needed for network applications, move the **Enable** switch to the left. Then go to the **Functions / Advanced / Virtual Servers** page and specify needed settings.

If you want to enable the UPnP IGD protocol in the router, move the **Enable** switch to the right.

When the protocol is enabled, the following parameters of the router are displayed on the page:

Parameter	Description
Protocol	A protocol for network packet transmission.
IP address	The IP address of a client from the local area network.
Private port	A port of a client's IP address to which traffic is directed from a public port of the router.
Public port	A public port of the router from which traffic is directed to a client's IP address.
Description	Information transmitted by a client's network application.
Duration	The time period during which the UPnP IGD protocol has been used.

Remote Access

On the **Functions / Advanced / Remote Access** page, you can configure access to the web-based interface of the router. By default, the access from external networks to the router is closed. If you need to allow access to the router from the external network, create relevant rules.

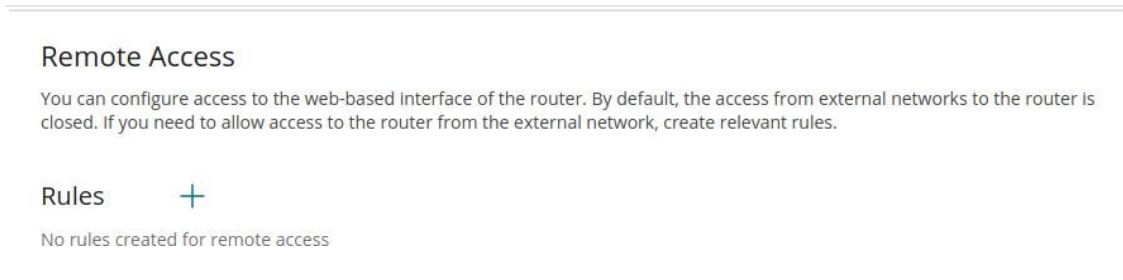


Figure 147. The **Functions / Advanced / Remote Access** page.

To create a new rule, click the **ADD** button ().

The 'Add Rule' window is a modal form with a teal header and a close button. It contains the following fields and options: 'Name*' (text input with a note 'The number of characters should not exceed 32'), 'Interface' (dropdown menu set to 'Automatic'), 'IP version' (dropdown menu set to 'IPv4'), a toggle switch for 'Open access from any external host' (currently off), 'IP address*' (text input), 'Mask*' (text input), 'Public port*' (text input set to '80'), and 'Protocol' (dropdown menu set to 'HTTP'). A 'SAVE' button is at the bottom.


Figure 148. The window for adding a rule for remote management.

In the opened window, you can specify the following parameters:

Parameter	Description
Name	A name for the rule for easier identification. You can specify any name.
Interface	From the drop-down list, select an interface (WAN connection) through which remote access to the router will operate. Leave the Automatic value to allow remote access to operate through all created WAN connections.
IP version	An IP version to which the rule will be applied. Select the relevant value from the drop-down list.
Open access from any external host	Move the switch to the right to allow access to the router for any host. Upon that the IP address and Mask fields are not displayed.
IP address	A host or a subnet to which the rule is applied. You can specify an IPv4 or IPv6 address.
Mask	<i>For the IPv4-based network only.</i> The mask of the subnet.
Public port	<i>For the IPv4-based network only.</i> An external port of the router. You can specify only one port.
Protocol	The protocol available for remote management of the router.

After specifying the needed parameters, click the **SAVE** button.

To edit a rule for remote access, left-click the relevant rule. In the opened window, change the needed parameters and click the **SAVE** button.

To remove a rule for remote access, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

Virtual Servers

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

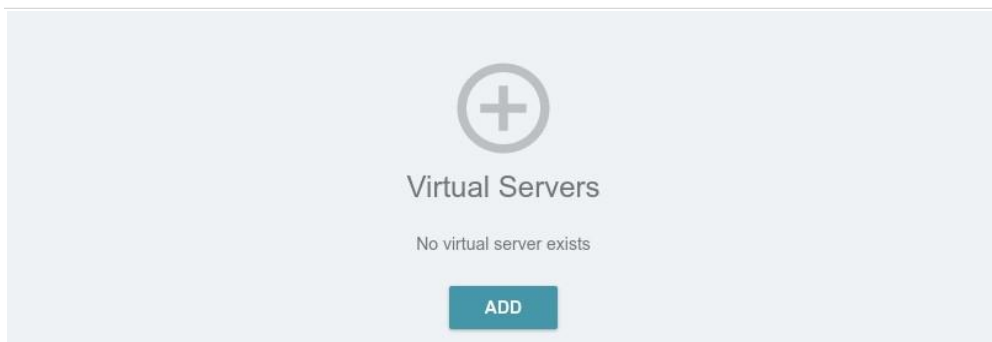



Figure 149. The **Functions / Advanced / Virtual Servers** page.

To create a new virtual server, click the **ADD** button ().

General Settings

☒ Enable

Name*

The number of characters should not exceed 32

Template
Custom

Interface
<All>

Protocol
TCP

☒ NAT Loopback

Private Network Settings

Private IP*

Private port*

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)

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*


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)

APPLY

Figure 150. The page for adding a virtual server.


You can specify the following parameters:

Parameter	Description
General Settings	
Enable	Move the switch to the right to enable the server. Move the switch to the left to disable the server.
Name	A name for the virtual server for easier identification. You can specify any name.

Parameter	Description
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	Move the switch to the right in order to let the users of the router's LAN access the local server using the external IP address of the router or its DDNS name (if a DDNS service is configured). Users from the external network access the router using the same address (or DDNS name).
Public Network Settings	
Remote IP	Enter the IP address of the server from the external network. To add one more IP address, click the ADD REMOTE IP button and enter the address in the displayed line. To remove the IP address, click the Delete icon () in the line of the address.
Public port	A port of the router from which traffic is directed to the IP address specified in the Private IP field in the Private Network Settings section. You can specify one port or several ports separated by a comma.
Private Network 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 . You can specify one port or several ports separated by a comma.

Click the **APPLY** button.

To edit the parameters of an existing server, select the relevant line in the table. On the opened page, change the needed parameters and click the **APPLY** button.

To remove a server, select the checkbox located to the left of the relevant line of the table and click the **DELETE** button (). Also you can remove a server on the editing page.

Static Route

On the **Functions / Advanced / Static Route** page, you can specify static (fixed) routes.

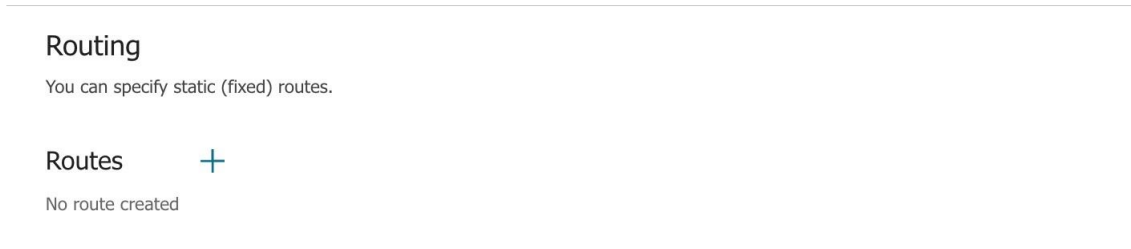


Figure 152. The **Functions / Advanced / Static Route** page.

To specify a new route, click the **ADD** button () in the **Routes** section.

The 'Add Route' dialog box is shown. It has a teal header with the title 'Add Route' and a close button (X). The form contains several fields: an 'Enable' toggle switch (currently turned on), a 'Protocol*' dropdown menu (set to 'IPv4'), an 'Interface*' dropdown menu (set to 'Auto'), a 'Destination network*' text input field, a 'Destination netmask*' text input field, a 'Gateway*' text input field, a 'Metric' text input field, and a 'Table*' dropdown menu (set to 'group_1'). At the bottom, there is a blue 'SAVE' button.


Figure 153. The window for adding a new route.

In the opened window, you can specify the following parameters:

Parameter	Description
Enable	Move the switch to the right to enable the route. Move the switch to the left to disable the route.
Protocol	An IP version.
Interface	From the drop-down list, select an interface (connection) through which the device will communicate with the remote network. If you have selected the Auto value, the router itself sets the interface according to the data on the existing dynamic routes.
Destination network	A remote network which can be accessed with help of this route. You can specify an IPv4 or IPv6 address. The format of a host IPv6 address is 2001:db8:1234::1 , the format of a subnet IPv6 address is 2001:db8:1234::/64 .
Destination netmask	<i>For IPv4 protocol only.</i> The remote network mask.
Gateway	An IP address through which the destination network can be accessed.
Metric	A metric for the route. The lower the value, the higher is the route priority. <i>Optional.</i>
Table	From the drop-down list, select a routing table for the route. <ul style="list-style-type: none"> group_1 table is used to route user traffic. main table is used to route management traffic from internal system services of the router.

After specifying the needed parameters, click the **SAVE** button.

To edit an existing route, select a relevant line of the table. In the opened window, change the needed parameters and click the **SAVE** button.

To remove an existing route, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

Dynamic DNS

On the **Functions / Advanced / Dynamic DNS** page, you can configure the router to use one or several DDNS services.

A DDNS service allows associating a domain name with dynamic IP addresses. In order to use a service, it is necessary to register a domain name on the web site of your DDNS provider.

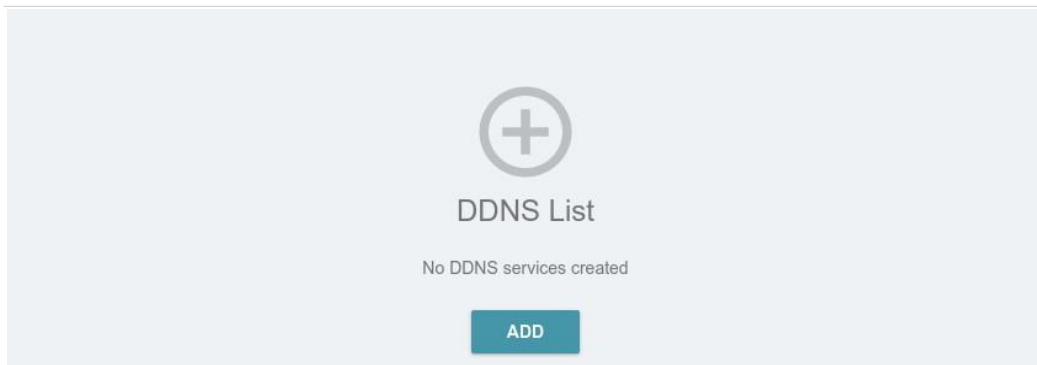



Figure 154. The **Functions / Advanced / Dynamic DNS** page.

To add a new DDNS service, click the **ADD** button ().

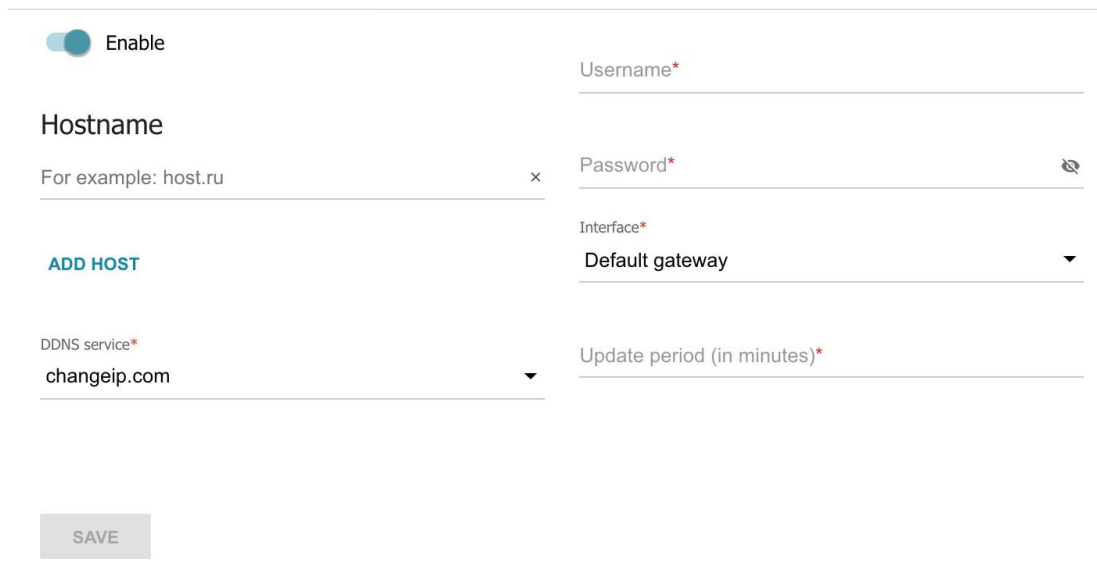


The image shows a configuration form for adding a DDNS service. At the top left is a toggle switch labeled 'Enable', which is currently turned on. Below this is a 'Hostname' field with the example text 'For example: host.ru' and a small 'x' icon to its right. To the right of the Hostname field is a 'Username*' field. Below the Hostname field is an 'ADD HOST' button in blue text. To the right of the Username field is a 'Password*' field with a small eye icon to its right. Below the Password field is an 'Interface*' field with a dropdown arrow. Below the Interface field is a 'Default gateway' field with a dropdown arrow. Below the ADD HOST button is a 'DDNS service*' dropdown menu with 'changeip.com' selected. To the right of the DDNS service field is an 'Update period (in minutes)*' field. At the bottom left is a grey 'SAVE' button.


Figure 155. The page for adding a DDNS service.

On the opened page, you can specify the following parameters:

Parameter	Description
Enable	Move the switch to the right to enable DDNS. Move the switch to the left to disable DDNS.
Hostname	Enter the full domain name registered at your DDNS provider. If you want to use another domain name of this DDNS provider, click the ADD HOST button, and in the line displayed, enter the needed value. To remove a domain name, click the Delete icon () in the line of the name.
DDNS service	Select the DDNS provider from the drop-down list. If your provider is not in the list, select the Custom provider value and fill in the fields displayed on the page. Specify the DDNS provider name in the Name field, the domain name of the provider's server in the Server field, and the location of settings in the Path field.
Username	The username to authorize for your DDNS provider.
Password	The password to authorize for your DDNS provider. Click the Show icon () to display the entered password.
Interface	From the drop-down list, select a WAN connection which will be used for DDNS, or leave the Default gateway value.
Update period	An interval (in minutes) between sending data on the router's external IP address to the relevant DDNS service.

After specifying the needed parameters, click the **SAVE** button.

To specify other parameters for a DDNS service, select the relevant line in the table. On the opened page, change the needed parameters and click the **SAVE** button.

To remove settings for a DDNS service, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

IPsec

On the **Functions / Advanced / IPsec** page, you can configure VPN tunnels based on IPsec protocol.

IPsec is a protocol suite for securing IP communications.

The screenshot shows the IPsec configuration interface. At the top, there is an 'Enable' toggle switch that is currently turned on. Below it is a 'Logging level' dropdown menu set to 'Basic'. The 'Tunnels' section features a 'RECONNECT' button, a plus icon for adding a new tunnel, and a trash icon for deleting an existing one. Below this is a table with columns for 'Remote host', 'Encryption algorithm', 'Hashing algorithm', and 'Interface'. The 'Status' section contains a table with columns for 'Remote host', 'IKE', 'CHILD', and 'State'.

Remote host	Encryption algorithm	Hashing algorithm	Interface
-------------	----------------------	-------------------	-----------

Remote host	IKE	CHILD	State
-------------	-----	-------	-------


Figure 156. The **Functions / Advanced / IPsec** page.

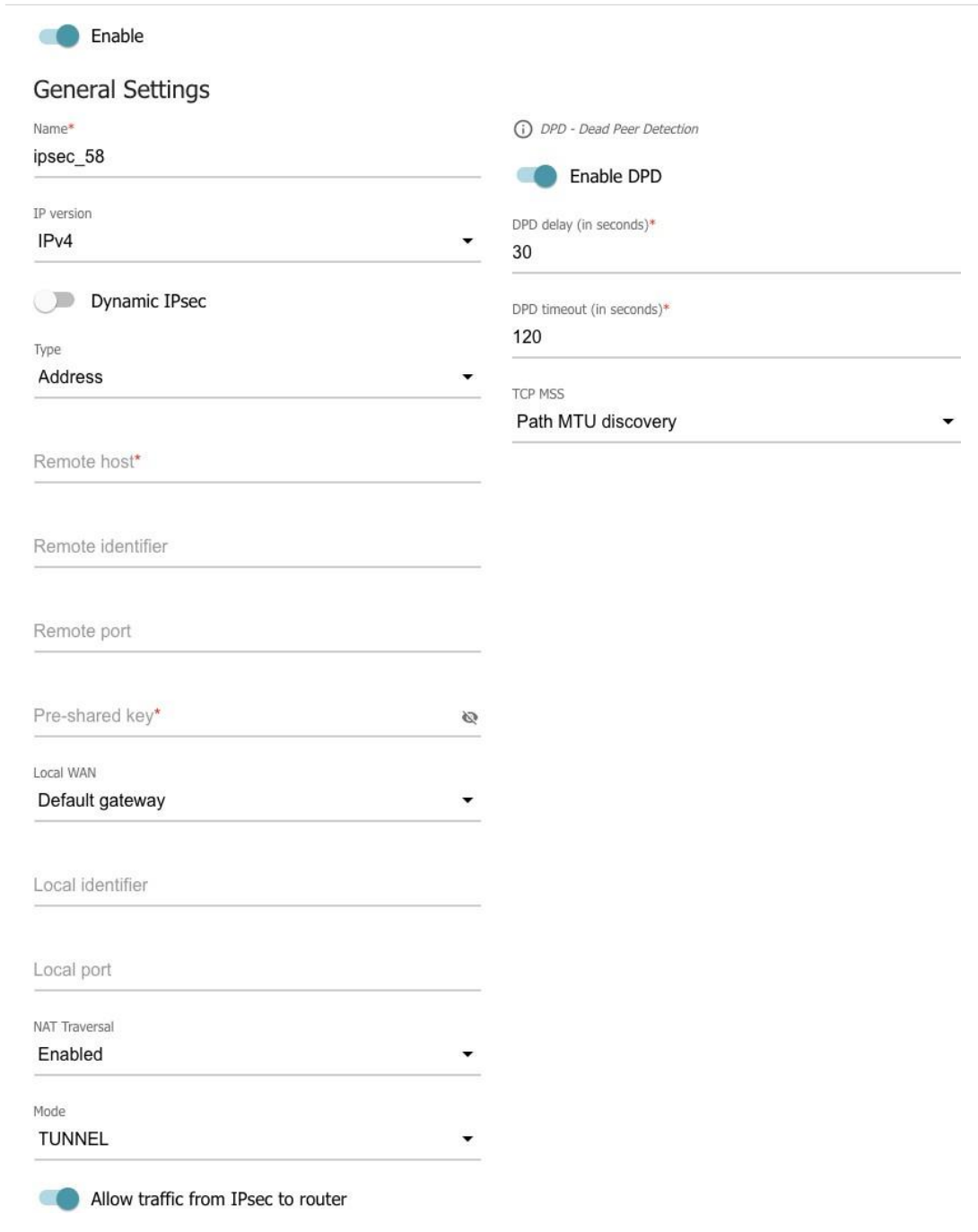
To allow IPsec tunnels, move the **Enable** switch to the right. Upon that the **Tunnels** and **Status** sections and the **Logging level** drop-down list are displayed on the page.

In the **Status** section, the current state of an existing tunnel is displayed.

From the **Logging level** drop-down list, select a detail level of messages recorded to the system log or leave the value specified by default. The **Basic** value is recommended to establish an IPsec tunnel faster. To view the log, go to the **Management / System Log** page (see the *System Log* section, page 212).

To create a new tunnel, click the **ADD** button () in the **Tunnels** section.

 Setting for both devices which establish the tunnel should be the same.




The screenshot displays the 'General Settings' section for configuring an IPsec tunnel. At the top, there is an 'Enable' toggle switch which is turned on. Below this, the 'Name' field is populated with 'ipsec_58'. To the right, a section titled 'DPD - Dead Peer Detection' includes an 'Enable DPD' toggle (also on), a 'DPD delay (in seconds)' field set to 30, and a 'DPD timeout (in seconds)' field set to 120. Further right, the 'TCP MSS' dropdown is set to 'Path MTU discovery'. On the left side, the 'IP version' is set to 'IPv4', and the 'Dynamic IPsec' toggle is off. The 'Type' dropdown is set to 'Address'. Below these are empty input fields for 'Remote host', 'Remote identifier', and 'Remote port'. A 'Pre-shared key' field is present with a copy icon. The 'Local WAN' dropdown is set to 'Default gateway'. Below this are empty fields for 'Local identifier' and 'Local port'. The 'NAT Traversal' dropdown is set to 'Enabled'. The 'Mode' dropdown is set to 'TUNNEL'. At the bottom, an 'Allow traffic from IPsec to router' toggle is turned on.

Figure 157. The page for adding an IPsec tunnel. The **General Settings** section.

You can specify the following parameters:

Parameter	Description
Enable	<p>Move the switch to the right to enable the tunnel.</p> <p>Move the switch to the left to disable the tunnel.</p>
General Settings	
Name	A name for the tunnel for easier identification. Use digits, Latin letters (uppercase and/or lowercase), and other characters available in the US keyboard layout. ¹⁶
IP version	An IP version.
Dynamic IPsec	<p>Move the switch to the right to allow a remote host with any public IP address to connect to the router via IPsec protocol. Such a setting can be specified for one IPsec tunnel only. Connection requests via this tunnel can be sent by a remote host only.</p>
Type	<p>Select an identification method for the remote host (router) from the drop-down list:</p> <ul style="list-style-type: none"> • Address: The remote host is identified by its IP address. • FQDN: The remote host is identified by its domain name. <p>The drop-down list is displayed if the Dynamic IPsec switch is moved to the left.</p>
Remote host	<p>Enter the remote subnet VPN gateway IP address if the Address value is selected from the Type drop-down list.</p> <p>Enter the remote subnet VPN gateway domain name if the FQDN value is selected from the Type drop-down list.</p> <p>The field is available for editing if the Dynamic IPsec switch is moved to the left.</p>
Remote identifier	A remote host identifier to establish connection over IPsec with particular hosts only. To establish connection, DIR-842V2 remote identifier value should correspond to the local identifier value specified in the settings of the remote host. Use an IP address, domain name, or certificate CN. <i>Optional.</i>

¹⁶ 0-9, A-Z, a-z, space, !"#\$%&'()*+,-./:;<=>?@[\\]^_`{|}~.

Parameter	Description
Remote port	A port of the remote host, that is used for IPsec packets exchange during the First Phase of the connection. If the field is left blank, port 500 is used. If the field is left blank and the network address translation (NAT) function is used for the connection, port 4500 is used.
Pre-shared key	A PSK key for mutual authentication of the parties. Click the Show icon () to display the entered key.
Local WAN	<p>A WAN connection through which the tunnel will pass. Select a value from the drop-down list.</p> <ul style="list-style-type: none">• Interface: When this value is selected, the Interface drop-down list is displayed. Select an existing WAN connection from the list.• Default gateway: When this value is selected, the router uses the default WAN connection.
Local identifier	A local identifier of the router to establish connection over IPsec with particular hosts only. To establish connection, DIR-842V2 local identifier value should correspond to the remote identifier value specified in the settings of the remote host. Use an IP address, domain name, or certificate CN. <i>Optional.</i>
Local port	A port of the router, that is used for IPsec packets exchange during the First Phase of the connection. If the field is left blank, port 500 is used. If the field is left blank and the network address translation (NAT) function is used for the connection, port 4500 is used.
NAT Traversal	<p>The NAT Traversal function allows VPN traffic to pass through the NAT-enabled device. DIR-842V2 allows to forcibly encapsulate VPN traffic in UDP packets for passing through a remote device regardless of whether it supports address translation. If you need to enable forced encapsulation of VPN traffic, select the Enabled value.</p> <p>If you need to disable forced encapsulation of VPN traffic, select the Disabled value.</p>


Parameter	Description
Mode	<p>An operation mode of the IPsec tunnel. Select a value from the drop-down list.</p> <ul style="list-style-type: none"> • TUNNEL: As a rule, it is used to create a secure connection to remote networks. In this mode, the source IP packet is fully encrypted and added to a new IP packet and data transfer is based on the header of the new IP packet. • TRANSPORT: As a rule, it is used to encrypt data stream within one network. In this mode, only the content of the source IP packet is encrypted, its header remains unchanged and data transfer is based on the source header.
Allow traffic from IPsec to router	Move the switch to the left to deny access to your router from the remote subnet via IPsec.
Enable DPD	<p>Move the switch to the right to enable using DPD protocol for this tunnel. Such a setting allows to check the status of the remote host: if encrypted packets exchange between the router and the remote host breaks down, the router starts sending DPD messages to the remote host. If the switch is moved to the left, the DPD delay and DPD timeout fields are not available for editing.</p>
DPD delay	A time period (in seconds) between DPD messages. By default, the value 30 is specified.
DPD timeout	A waiting period for the response to a DPD message (in seconds). If the host does not answer in the specified time, the router breaks down the tunnel connection, updates information on it, and tries to reestablish the connection. By default, the value 120 is specified.
TCP MSS	<p><i>Maximum Segment Size of a TCP packet.</i> This parameter influences the size of a TCP packet which will be sent from the remote host to the router.</p> <p>If the Manual value is selected, you can specify the value of this parameter for each subnet of the tunnel in the MTU field. The field is displayed in the window for adding a subnet in the Tunneled Networks section.</p> <p>If the Path MTU discovery value is selected, the parameter will be configured automatically for all created subnets.</p>

The First Phase	The Second Phase
Encryption mode CBC	Encryption mode CBC
First phase encryption algorithm DES	Second phase encryption algorithm DES
Hashing mode HMAC	Hashing mode HMAC
Size of hash 96	Size of hash 96
Hashing algorithm MD5	Hashing algorithm MD5
First phase DHgroup type MODP768	<input checked="" type="checkbox"/> Enable PFS
IKE-SA lifetime* 10800	Second phase DHgroup type MODP768
<input type="checkbox"/> Aggressive Mode	IPsec-SA lifetime* 3600
IKE version 1	

Figure 158. The page for adding an IPsec tunnel. **The First Phase / The Second Phase** sections.

Parameter	Description
The First Phase	
Encryption mode	Select an encryption mode from the drop-down list.
First phase encryption algorithm	Select an available encryption algorithm from the drop-down list.
Hashing mode	Select a hashing mode from the drop-down list.
Size of hash	The length of the hash in bits.
Hashing algorithm	Select a hashing algorithm from the drop-down list.
First phase DHgroup type	A Diffie-Hellman key group for the First Phase. Select a value from the drop-down list.
IKE-SA lifetime	The lifetime of IKE-SA keys in seconds. After the specified period it is required to renegotiate the keys. The value specified in this field should be greater than the value specified in the IPsec-SA lifetime field.

Parameter	Description
Aggressive Mode	Move the switch to the right to enable the aggressive mode for mutual authentication of the parties. Such a setting accelerates the connection establishment, but reduces its security.
IKE version	IKE (<i>Internet Key Exchange</i>) is a protocol of keys exchange between two hosts of VPN connections. Select a version of the protocol from the drop-down list.
The Second Phase	
Encryption mode	Select an encryption mode from the drop-down list.
Second phase encryption algorithm	Select an available encryption algorithm from the drop-down list.
Hashing mode	Select a hashing mode from the drop-down list.
Size of hash	The length of the hash in bits.
Hashing algorithm	Select a hashing algorithm from the drop-down list.
Enable PFS	Move the switch to the right to enable the PFS option (<i>Perfect Forward Secrecy</i>). If the switch is moved to the right, a new encryption key exchange will be used for the Second Phase. This option enhances the security level of data transfer, but increases the load on DIR-842V2.
Second phase DHgroup type	A Diffie-Hellman key group for the Second Phase. Select a value from the drop-down list. The drop-down list is available if the Enable PFS switch is moved to the right.
IPsec-SA lifetime	The lifetime of the Second Phase keys in seconds. After the specified period it is required to renegotiate the keys. The value specified in this field should be greater than zero.

To specify IP addresses of local and remote subnets for this tunnel, click the **ADD** button  in the **Tunneled Networks** section.

If the IPsec tunnel operates over IKEv1 (**1** is selected from the **IKE version** list in the **The First Phase** section), you can create only one subnet.

If the IPsec tunnel operates over IKEv2 (**2** is selected from the **IKE version** list in the **The First Phase** section), you can create several subnets.


Figure 159. The page for adding an IPsec tunnel. The window for adding a tunneled network.

In the opened window, you can specify the following parameters:

Parameter	Description
Local network	A local subnet IP address and mask.
Remote subnet	A remote subnet IP address and mask.
MTU	The maximum size (in bytes) of a non-fragmented packet. The field is displayed when the Manual value is selected from the TCP MSS drop-down list in the General Settings section.

To edit fields in the **Tunneled Networks** section, select the relevant line in the table.


In the opened window, change the needed parameters and click the **SAVE** button.

To remove a subnet, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button (). Also you can remove a subnet in the editing window.

After configuring all needed settings for the IPsec tunnel, click the **APPLY** button.

To edit the parameters of an existing tunnel, in the **Tunnels** section, select the relevant tunnel in the table. On the opened page, change the needed parameters and click the **APPLY** button.

To disconnect an existing tunnel and establish it again, select the checkbox located to the left of the relevant line in the table and click the **RECONNECT** button.

To remove an existing tunnel, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button (). Also you can remove a tunnel on the editing page.

To disable VPN tunnels based on IPsec protocol, move the **Enable** switch to the left.

Ports Settings

On the **Functions / Advanced / Ports Settings** page, you can configure or disable autonegotiation of speed and duplex mode or manually configure speed and duplex mode for each Ethernet port of the router.

Also you can enable or disable data flow control in the autonegotiation mode. This function is used for equal load balancing in ISPs' networks. Contact your ISP to clarify if this function needs to be enabled.






Ports Settings				
You can configure or disable autonegotiation of speed and duplex mode or manually configure speed and duplex mode for each Ethernet port of the device. Also you can enable or disable data flow control in the autonegotiation mode.				
Port	Status	Autonegotiation	Speed	Flow control
LAN4	 Disconnected	On	-	-
LAN3	 Disconnected	On	-	-
LAN2	 Disconnected	On	-	-
LAN1	 Connected	On	1000M-Full	802.3x(tx+rx)
WAN	 Connected	On	1000M-Full	Off

Figure 160. The **Functions / Advanced / Ports Settings** page.

In order to configure autonegotiation or configure speed and duplex mode manually for an Ethernet port, select it in the table.



Autonegotiation should be enabled for both devices connected to each other.



When autonegotiation is disabled, speed and duplex mode settings for both devices connected to each other should be the same.

LAN1

Speed
Auto

Autonegotiation Modes

☒ 1000M-Full

☒ 100M-Full

☒ 100M-Half

☒ 10M-Full

☒ 10M-Half

Flow control

☒ Symmetric flow control

SAVE

Figure 161. The window for changing the settings of the router's port.

In the opened window, specify the needed parameters:

Parameter	Description
Speed	<p>Data transfer mode.</p> <p>Select the Auto value to enable autonegotiation. When this value is selected, the Autonegotiation Modes and Flow control sections are displayed.</p> <p>Select the 10M-Half, 10M-Full, 100M-Half, or 100M-Full value to manually configure speed and duplex mode for the selected port:</p> <ul style="list-style-type: none">• 10M-Half: Data transfer in just one direction at a time (data can be either sent or received) at the maximum possible rate of up to 10Mbps.• 10M-Full: Data transfer in two directions simultaneously (data can be sent and received at the same time) at the maximum possible rate of up to 10Mbps.• 100M-Half: Data transfer in just one direction at a time (data can be either sent or received) at the maximum possible rate of up to 100Mbps.• 100M-Full: Data transfer in two directions simultaneously (data can be sent and received at the same time) at the maximum possible rate of up to 100Mbps.
Autonegotiation Modes	
To enable the needed data transfer modes, move relevant switches to the right.	

Parameter		Description
Flow control		
Symmetric flow control		Move the switch to the right to enable the flow control function for the port.
		Move the switch to the left to disable the flow control function for the port.

After specifying the needed parameters, click the **SAVE** button.

If in the future you need to edit the parameters of the router's port, select the port in the table. In the opened window, change the needed parameters and click the **SAVE** button.

Redirect

On the **Functions/ Advanced / Redirect** page, you can enable notifications on the reason of the Internet connection failure. Notifications will be displayed in the browser window when a user is attempting to open a web site on the Internet.

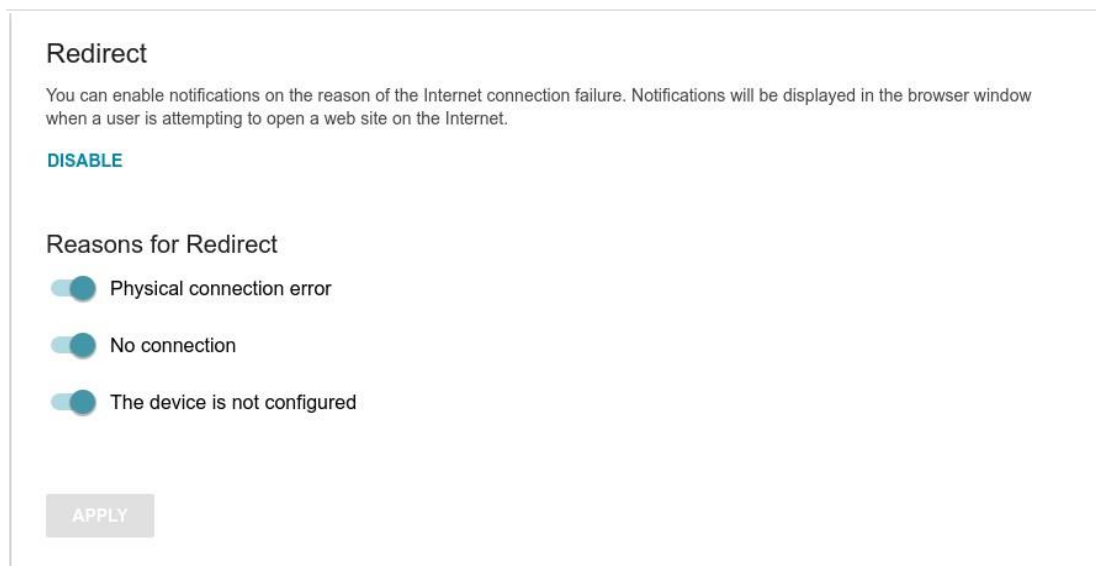


Figure 162. The **Functions / Advanced / Redirect** page.

To configure notifications, click the **ENABLE** button. Then, in the **Reasons for Redirect** section, move the needed switches to the right.

Parameter		Description
Reasons for Redirect		
Physical connection error		Notifications in case of physical connection problems (the ISP's cable is not connected, an additional device needed to access the Internet is not connected).
No connection		Notifications in case of problems of the default WAN connection (authorization error, the ISP's server does not respond, etc.).
The device is not configured		Notifications in case when the device works with default settings.

When you have configured the parameters, click the **APPLY** button.

To disable notifications, click the **DISABLE** button.

IGMP/MLD

On the **Functions/ Advanced / IGMP/MLD** page, you can allow the router to use IGMP and MLD and specify needed settings.

IGMP and MLD are used for managing multicast traffic (transferring data to a group of destinations) in IPv4 and IPv6 networks correspondingly. These protocols allow using network resources for some applications, e.g., for streaming video, more efficiently.

IGMP
Internet Group Management Protocol is designed to manage multicast traffic in IP-based networks.

☒ Enable

IGMP version
IGMPv2

Interface*
statip_23

MLD
Multicast Listener Discovery is designed to manage multicast traffic in IPv6-based networks

☒ Enable

MLD version
MLDv1v2

Interface
Not selected

APPLY

Figure 163. The **Functions / Advanced / IGMP/MLD** page.

The following elements are available on the page:

Parameter	Description
IGMP	
Enable	Move the switch to the right to enable IGMP.
IGMP version	Select a version of IGMP from the drop-down list.
Interface	From the drop-down list, select a connection of the Dynamic IPv4 or Static IPv4 type for which you need to allow multicast traffic (e.g. streaming video).
MLD	
Enable	Move the switch to the right to enable MLD.
MLD version	Select a version of MLD from the drop-down list.
Interface	From the drop-down list, select a connection of the Dynamic IPv6 or Static IPv6 type for which you need to allow multicast traffic (e.g. streaming video).

After specifying the needed parameters, click the **APPLY** button.

ALG/Passthrough

On the **Functions/ Advanced / ALG/Passthrough** page, you can allow the router to use RTSP, enable the SIP ALG and PPPoE/PPTP/L2TP/IPsec pass through functions.

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

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

The PPPoE pass through function allows PPPoE clients of computers from your LAN to connect to the Internet through connections of the router.

The PPTP pass through, L2TP pass through and IPsec pass through 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.

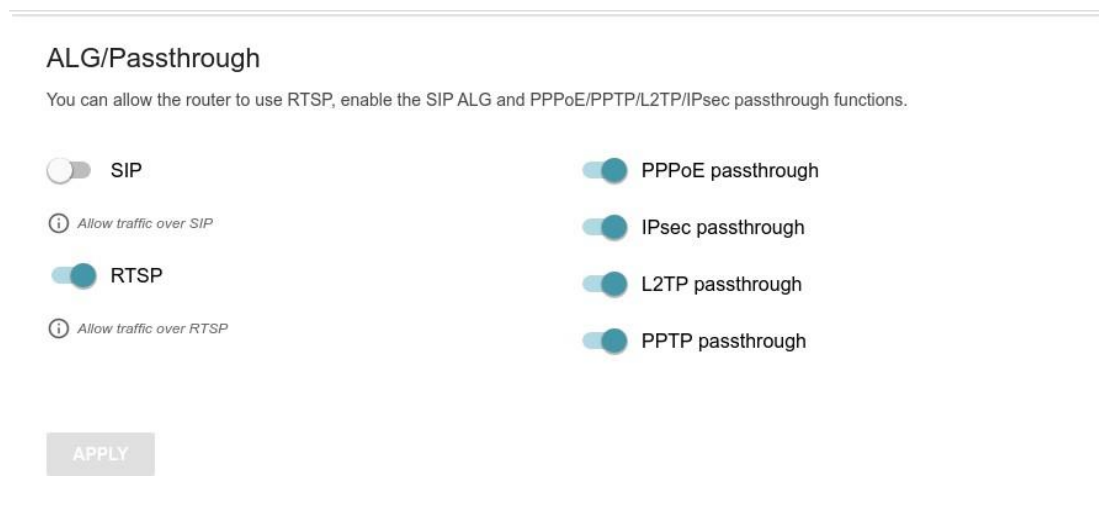


Figure 164. The **Functions / Advanced / ALG/Passthrough** page.

The following elements are available on the page:

Parameter	Description
SIP	Move the switch to the right to enable SIP. Such a setting allows using the SIP ALG function. This function allows VoIP traffic to pass through the NAT-enabled router. ¹⁷
RTSP	Move the switch to the right to enable RTSP. Such a setting allows managing media stream: fast forward streaming audio/video, pause and start it.
PPPoE pass through	Move the switch to the right to enable the PPPoE pass through function.
IPsec pass through	Move the switch to the right to enable the IPsec pass through function.
L2TP pass through	Move the switch to the right to enable the L2TP pass through function.
PPTP pass through	Move the switch to the right to enable the PPTP pass through function.

After specifying the needed parameters, click the **APPLY** button.

¹⁷ On the **Settings / Internet / WAN** page, create a WAN connection, move the **SIP** switch to the right on the **Functions / Advanced / ALG/Passthrough** page, connect an Ethernet cable between a LAN port of the router and the IP phone. Specify SIP parameters on the IP phone and configure it to obtain an IP address automatically (as DHCP client).

Management

System Time

On the **Management / System Time** page, you can manually set the time and date of the router or configure automatic synchronization of the system time with a time server on the Internet.

The screenshot shows the 'System Time' configuration page. At the top, it says 'You can set up automatic synchronization of the system time with a time server on the Internet.' Below this are five toggle switches: 'Enable NTP' (checked), 'UTC offset settings' (unchecked), 'Configure daylight saving time manually' (unchecked), 'Get NTP server addresses using DHCP' (unchecked), and 'Run as a server for the local network' (unchecked). To the right of these are two dropdown menus for 'Time interval between NTP requests after synchronization with NTP server' and 'Time interval between NTP requests for unsynchronized NTP client', both set to 'Auto'. Below these is a 'Time zone*' dropdown menu set to 'Europe/Moscow'. A 'DETERMINE TIMEZONE' button is located to the right of the time zone dropdown. Below the toggles and dropdowns are three fields: 'System date:' with the value '09.04.2021', 'System Time:' with the value '09:43', and 'Synchronization:' with the value 'Completed'. Below these fields is a section titled 'NTP Servers' containing a list with 'pool.ntp.org' and a close button 'x'. Below the list is an 'ADD SERVER' button. At the bottom of the page is an 'APPLY' button.

Figure 165. The **Management / System Time** page.

To set the system time manually, follow the next steps:

1. Move the **Enable NTP** switch to the left.
2. In the **Time Settings** section, specify needed values. To specify the time set up your PC or portable device, click the **SET LOCAL TIME** button.
3. Click the **APPLY** button. The **System date** and **System Time** fields will be filled in automatically.

To enable automatic synchronization with a time server, follow the next steps:

1. Move the **Enable NTP** switch to the right.
2. Specify the needed NTP server or leave the value specified by default in the **NTP Servers** section. If you need to specify several servers, click the **ADD SERVER** button.

3. Select your time zone from the **Time zone** drop-down list. To set the time zone in accordance with the settings of your operating system or portable device, click the **DETERMINE TIMEZONE** button.
4. Click the **APPLY** button. The **System date** and **System Time** fields will be filled in automatically and the **Completed** value will be displayed in the **Synchronization** field.

Additional settings are also available on the page:

Parameter	Description
UTC offset settings	Move the switch to the right to set the UTC (<i>Coordinated Universal Time</i>) offset for the router clock manually. In the UTC offset field displayed, specify the required offset time (in minutes).
Configure daylight saving time manually	Move the switch to the right to configure settings for daylight saving time for the router clock manually. In the Daylight Saving Time section displayed, specify the required offset time for daylight saving time (in minutes), and specify the needed values in the Beginning of daylight saving time and End of daylight saving time sections.
Get NTP server addresses using DHCP	Move the switch to the right if NTP servers addresses are provided by your ISP. Contact your ISP to clarify if this setting needs to be enabled. If the switch is moved to the right, the NTP Servers section is not displayed.
Run as a server for the local network	Move the switch to the right to allow connected devices to use the IP address of the router in the local subnet as a time server.
Time interval between NTP requests after synchronization with NTP server	From the drop-down list, select a time period (in seconds) after which a request to update the system time will be sent to the NTP server or leave the Auto value.
Time interval between NTP requests for unsynchronized NTP client	A time period (in seconds) after which a request to synchronize the system time will be sent to the NTP server. Select the needed value from the drop-down list. <ul style="list-style-type: none"> • Auto: The time period is defined automatically. • Manual: The time period is defined in accordance with the value specified in the Interval value field.
Interval value	Specify the time period (in seconds). The minimum acceptable value is 3.

After specifying the needed parameters, click the **APPLY** button.



When the router is powered off or rebooted, the system time is reset to the default value. If you have set automatic synchronization for the system time, the internal clock of the device will be configured after connecting to the Internet. If you have set the system time manually, you need to set the time and date again (see above).

Administration

On the **Management / Administration** page, you can change the password for the administrator account used to access the web-based interface of the router and to access the device settings via TELNET and SSH, restore the factory defaults, backup the current configuration, restore the router's configuration from a previously created file, save the changed settings to the non-volatile memory, reboot the device, or change the web-based interface language.

The screenshot displays the 'Management / Administration' web interface. On the left, the 'User' section contains fields for 'admin' (username), 'New password', and 'Password confirmation', each with a 'Show' icon (eye with a slash). A note states: 'Password should be between 1 and 31 ASCII characters'. Below these fields is a 'SAVE' button. At the bottom left is a 'Language' dropdown menu currently set to 'English'. On the right, a vertical list of actions includes: 'Factory' (Reset factory default settings), 'Backup' (Save current configuration to a file), 'Restore' (Load previously saved configuration to the device), 'Save' (Save current settings), and 'Reboot' (Reboot device). Below these actions is an 'Idle time (in minutes)*' field set to '5', with a note: 'When the function "Stay signed in" is enabled, then users are not redirected to the login page despite the specified idle time.' A 'SAVE' button is at the bottom right.

Figure 168. The **Management / Administration** page.

In order to change the password for the administrator account, in the **User** section, enter a new password in the **New password** and **Password confirmation** fields. Use digits, Latin letters (uppercase and/or lowercase), and other characters available in the US keyboard layout.¹⁸ Click the **Show** icon (👁) to display the entered values. Then click the **SAVE** button.

! Remember or write down the new password for the administrator account. In case of losing the new password, you can access the settings of the router only after restoring the factory default settings via the hardware **RESET** button. This procedure wipes out all settings that you have configured for your router.

To change the web-based interface language, select the needed value from the **Language** drop-down list.

¹⁸ 0-9, A-Z, a-z, space, !"#%&'()*+,-./:;<=>?@[\\]^_`{|}~.

The following buttons are also available on the page:

Control	Description
Factory	Click the button to restore the factory default settings. Also you can restore the factory defaults via the hardware RESET button (see the <i>Back Panel</i> section, page 17).
Backup	Click the button to save the configuration (all settings of the router) to your PC. The configuration backup will be stored in the download location of your web browser.
Restore	Click the button and follow the dialog box appeared to select a previously saved configuration file (all settings of the router) located on your PC and upload it.
Save	Click the button to save settings to the non-volatile memory. The router saves changed settings automatically. If changed settings have not been saved automatically, a notification is displayed in the top right part of the page.
Reboot	Click the button to reboot the device. All unsaved changes will be lost after the device's reboot.

In the **Idle time** field specify a period of inactivity (in minutes) after which the router completes the session of the interface. By default, the value **5** is specified. Then click the **SAVE** button.

Telnet/SSH

On the **Management / Telnet/SSH** page, you can enable or disable access to the device settings via TELNET and/or SSH from your LAN. By default, access is disabled.

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

APPLY

Figure 169. The **Management / Telnet/SSH** page.

To enable access via TELNET and/or SSH, move the **Enable Telnet** switch and/or **Enable SSH** switch to the right. In the **Port** field, enter the number of the router's port through which access will be allowed (by default, the port **23** is specified for Telnet and the port **22** is specified for SSH). Then click the **APPLY** button.

To disable access via TELNET and/or SSH again, move the **Enable Telnet** switch and/or **Enable SSH** switch to the left and click the **APPLY** button.

Firmware Update

On the **Management / Firmware Update** page, you can update the firmware of the router and configure the automatic check for updates of the router's firmware.



Update the firmware only when the router is connected to your PC via a wired connection.

Figure 173. The **Management / Firmware Update** page.

The current version of the router's firmware is displayed in the **Current firmware version** field. By default, the automatic check for the router's firmware updates is enabled. If the **Access point**, **Repeater**, or **Client** mode was selected in the Setup Wizard, and the **Static** value is selected from the **Mode of local IP address assignment** list on the **Connections Setup / LAN** page, the **Gateway IP address** field should also be filled in on order to realize automatic check.

If a firmware update is available, a notification will be displayed in the top right corner of the page. To disable the automatic check for firmware updates, in the **Remote Update** section, move the **Check for updates automatically** switch to the left and click the **APPLY SETTINGS** button. To enable the automatic check for firmware updates, in the **Remote Update** section, move the **Check for updates automatically** switch to the right. In the **Interval** field, specify the time period (in seconds) between checks or leave the value specified by default (**43200**).

You can update the firmware of the router locally (from the hard drive of your PC) or remotely (from the update server).

Local Update



Attention! Do not turn off the router before the firmware update is completed. This may cause the device breakdown.

To update the firmware of the router locally, follow the next steps:

1. Download a new version of the firmware from <https://eu.dlink.com/>.
2. Click the **CHOOSE FILE** button in the **Local Update** section on the **Management / Firmware Update** page to locate the new firmware file.
3. If you want to restore the factory default settings immediately after updating the firmware, move the **Restore factory defaults after firmware update** switch to the right.
4. Click the **UPDATE FIRMWARE** button.
5. Wait until the router is rebooted (about one and a half or two minutes).
6. Log into the web-based interface using the login (**admin**) and the current password.

If after updating the firmware the router doesn't work correctly, please restore the factory default settings. To do this, click the **Factory** button on the **Management / Administration** page. Wait until the router is rebooted.

Remote Update



Attention! Do not turn off the router before the firmware update is completed. This may cause the device breakdown.

To update the firmware of the router remotely, follow the next steps:

1. On the **Management / Firmware Update** page, in the **Remote Update** section, click the **CHECK FOR UPDATES** button to check if a newer firmware version exists.
2. Click the **UPDATE FIRMWARE** button (the button is displayed if a newer version of the firmware is available).
3. Wait until the router is rebooted (about one and a half or two minutes).
4. Log into the web-based interface using the login (**admin**) and the current password.

If after updating the firmware the router doesn't work correctly, please restore the factory default settings. To do this, click the **Factory** button on the **Management / Administration** page. Wait until the router is rebooted.

Schedule

On the **Management / Schedule** page, you can enable/disable Wi-Fi connection and configure automatic reboot of the device on a schedule, and set a schedule for different filter rules.

! Before creating a schedule you need to configure automatic synchronization of the system time with a time server on the Internet (see the *System Time* section, page 209).

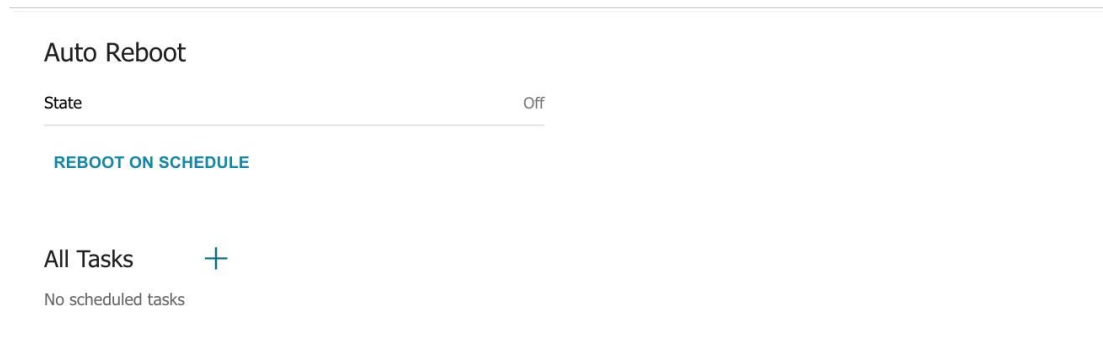


Figure 174. The **Management / Schedule** page.

To configure automatic reboot of the device on a schedule, click the **REBOOT ON SCHEDULE** button in the **Auto Reboot** section.

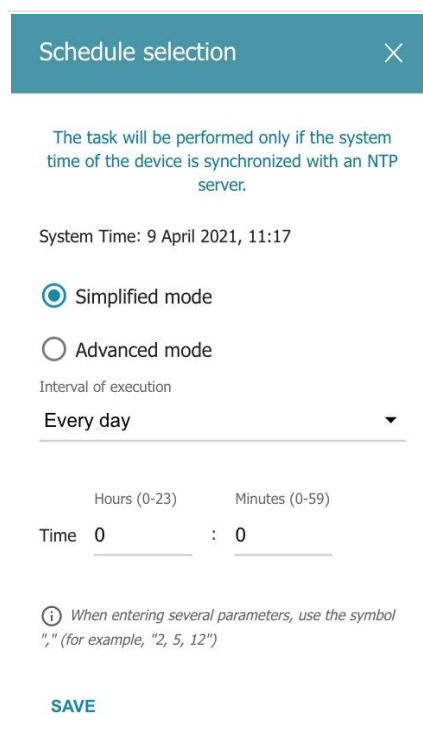


Figure 175. The window for configuring automatic reboot on a schedule.

In the opened window, in the **System Time** field, the system time of the device is displayed. You can select the **Simplified mode** choice of the radio button and specify the following parameters:

Parameter	Description
Simplified mode	
Interval of execution	Specify the time period for the device's reboot. Every day: When this value is selected, the Time field is displayed in the section. Every week: When this value is selected, the names of days of the week and the Time field are displayed in the section. Every month: When this value is selected, the Day of month and Time fields are displayed in the section.
Time	Specify the time for the device's reboot.
Days of week	Select a day or days of the week when the device will be automatically rebooted. To do this, select the checkbox located to the left of the relevant value.
Day of month	Specify a day of the month. You can specify one value or several values separated by a comma.

In the advanced mode, you can specify more parameters for the schedule using a cron expression. To do this, select the **Advanced mode** choice of the radio button and specify the needed values in the fields displayed. You can specify one value or several values separated by a comma. You can use the character * (asterisk) to specify the entire range of possible values. Upon that the **Schedule** field will be filled in automatically.

Click the **SAVE** button.

To edit the automatic reboot schedule, click the **EDIT** button in the **Auto Reboot** section. In the opened window, change the needed parameters and click the **SAVE** button.

To disable automatic reboot of the device on a schedule, click the **EDIT** button in the **Auto Reboot** section. In the opened window, click the **DISABLE** button.

To set a schedule for a task which will be applied to a filter rule or will enable/disable Wi-Fi connection, click the **ADD** button () in the **All Tasks** section.

Schedule

×

The task will be performed only if the system time of the device is synchronized with an NTP server.

System Time: 9 April 2021, 11:18

☐ Perform task on schedule

☒ Simplified mode

☐ Advanced mode

Interval of execution

Every day

Hours (0-23)

Minutes (0-59)

Time 0 : 0

① When entering several parameters, use the symbol "," (for example, "2, 5, 12")

Duration

Hours*

Minutes*

Seconds*

0

0

30

SAVE

Figure 176. The window for adding a schedule for a task.

In the opened window, in the **System Time** field, the system time of the device is displayed. You can select the **Simplified mode** choice of the radio button and specify the following parameters:


Parameter	Description
Perform task on schedule	Move the switch to the right to enable the schedule. Move the switch to the left to disable the schedule.
Simplified mode	
Interval of execution	Specify the time period for performing a task. Every minute. Every hour: When this value is selected, the Time field is displayed in the section. Every day: When this value is selected, the Time field is displayed in the section.

Parameter	Description
	<p>Every week: When this value is selected, the names of days of the week and the Time field are displayed in the section.</p> <p>Every month: When this value is selected, the Day of month and Time fields are displayed in the section.</p>
Duration	Specify the interval during which the task will be performing.
Time	Specify the time when the task should start running.
Days of week	Select a day or days of the week when the task will be performing. To do this, select the checkbox located to the left of the relevant value.
Day of month	Specify a day of the month. You can specify one value or several values separated by a comma.

In the advanced mode, you can specify more parameters for the schedule using a cron expression. To do this, select the **Advanced mode** choice of the radio button and specify the needed values in the fields displayed. You can specify one value or several values separated by a comma. You can use the character * (asterisk) to specify the entire range of possible values. Upon that the **Schedule** field will be filled in automatically.

Click the **SAVE** button.

To edit a schedule, in the **All Tasks** section, select the relevant line in the table. In the opened window, change the needed parameters and click the **SAVE** button.

To remove a schedule, in the **All Tasks** section, select the checkbox located to the left of the relevant line in the table and click the **DELETE** button ().

To assign a created schedule to a task which will be applied to a filter rule or will enable/disable Wi-Fi connection, go to the relevant page of the web-based interface of the device.

Statistics

The pages of this section display data on the current state of the router.

Network Statistics

On the **Management / Statistics / Network Statistics** page, you can view statistics for all connections existing in the system (WAN connections, LAN, WLAN). For each connection the following data are displayed: name and state (when the connection is on, its name is highlighted in green, when the connection is off, its name is highlighted in red), IP address and subnet mask, and volume of data received and transmitted (with increase of the volume the units of measurement are changed automatically: byte, Kbyte, Mbyte, Gbyte).

Network Statistics				
You can view statistics for all interfaces (connections) existing in the system.				
Name	IP - Gateway	Rx/Tx	Rx/Tx errors	Duration
LAN	IPv4: 192.168.0.1/24 – 192.168.0.1	5.15 Gbyte / 382.03 Mbyte	0 / 0	-
statip_23	IPv4: 192.168.161.191/24 – 192.168.161.1	434.02 Mbyte / 638.69 Mbyte	0 / 0	5 d, 7 h., 5 min
pppoe_40	IPv4: 172.42.155.16/32 – 172.42.155.1	- / 72.00 byte	0 / 0	4 d, 4 h., 23 min
WiFi_2GHz_1	-	3.44 Gbyte / 22.04 Mbyte	0 / 0	-
WiFi_5GHz_1	-	1.63 Gbyte / 5.08 Mbyte	0 / 0	-

Figure 177. The **Management / Statistics / Network Statistics** page.

To view detailed data on a connection, click the line corresponding to this connection.

Port Statistics

On the **Management / Statistics / Port statistics** page, you can view statistics for traffic passing through ports of the router. The information shown on the page can be used for diagnosing connection problems.

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
LAN4	Disconnected	0	0
LAN3	Disconnected	0	0
LAN2	Disconnected	0	0
LAN1	Connected	355	79
WAN	Connected	638	434

Figure 178. The **Management / Statistics / Port Statistics** page.

To view the full list of counters for a port, click the line corresponding to this port.

Routing

The **Management / Statistics / Routing** page displays the routing rules and routing tables.

Rules						
Table	Type	IP (Source/Destination)	Interfaces (Incoming/Outgoing)	Priority	ToS	FWmark (HEX)
pppoe_1	IPv4	all / all	any / any	100	0	0x66
static_1	IPv4	all / all	any / any	200	0	0x65
group_1	IPv4	all / all	LAN / any	300	0	0x0
group_1	IPv4	all / all	any / any	400	0	0x64
main	IPv4	all / all	any / any	32766	0	0x0
pppoe_1	IPv6	all / all	any / any	100	0	0x66
static_1	IPv6	all / all	any / any	200	0	0x65
group_1	IPv6	all / all	LAN / any	300	0	0x0
group_1	IPv6	all / all	any / any	400	0	0x64
main	IPv6	all / all	any / any	32766	0	0x0

Tables		
ID	Name	Description
254	main	Main routing table
257	group_1	Routing table for groups
256	static_1	Routing table for connections
258	pppoe_1	Routing table for connections


 The group contains one or several WAN interfaces and LAN interface.

Figure 179. The **Management / Statistics / Routing** page.

The **Rules** section displays routing rules, their corresponding routing tables, incoming and outgoing interfaces, priority levels, and other data.

The **Tables** section displays the list of routing tables stored in the device's memory. To view detailed information on routes, left-click the relevant line in the table.

Routing Table main						
You can view the information on routes.						
Interface	Destination	Subnet mask	Gateway	Flags	Metric	Table
WAN	0.0.0.0	0.0.0.0	192.168.161.1	UG	410	254
WAN	8.8.8.8		192.168.161.1	UGH	0	254
LAN	192.168.0.0	255.255.255.0		U	0	254
WAN	192.168.161.0	255.255.255.0		U	0	254

Figure 180. The routing table page.

The opened page displays the information on routes in the selected routing table. The table contains destination IP addresses, gateways, subnet masks, and other data.

DHCP

The **Management / Statistics / DHCP** page displays the information on computers that have been identified by hostnames and MAC addresses and have got IP addresses from the DHCP server of the device.

DHCP			
You can view the information on devices that have got IP addresses from the DHCP server.			
Hostname	IP address	MAC	Expires

*Figure 181. The **Management / Statistics / DHCP** page.*

Multicast Groups

The **Management / Statistics / Multicast Groups** 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.

Multicast Groups			
You can view 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.			
IPv4		IPv6	
IP address	Interface	IP address	Interface
239.255.255.250	LAN		

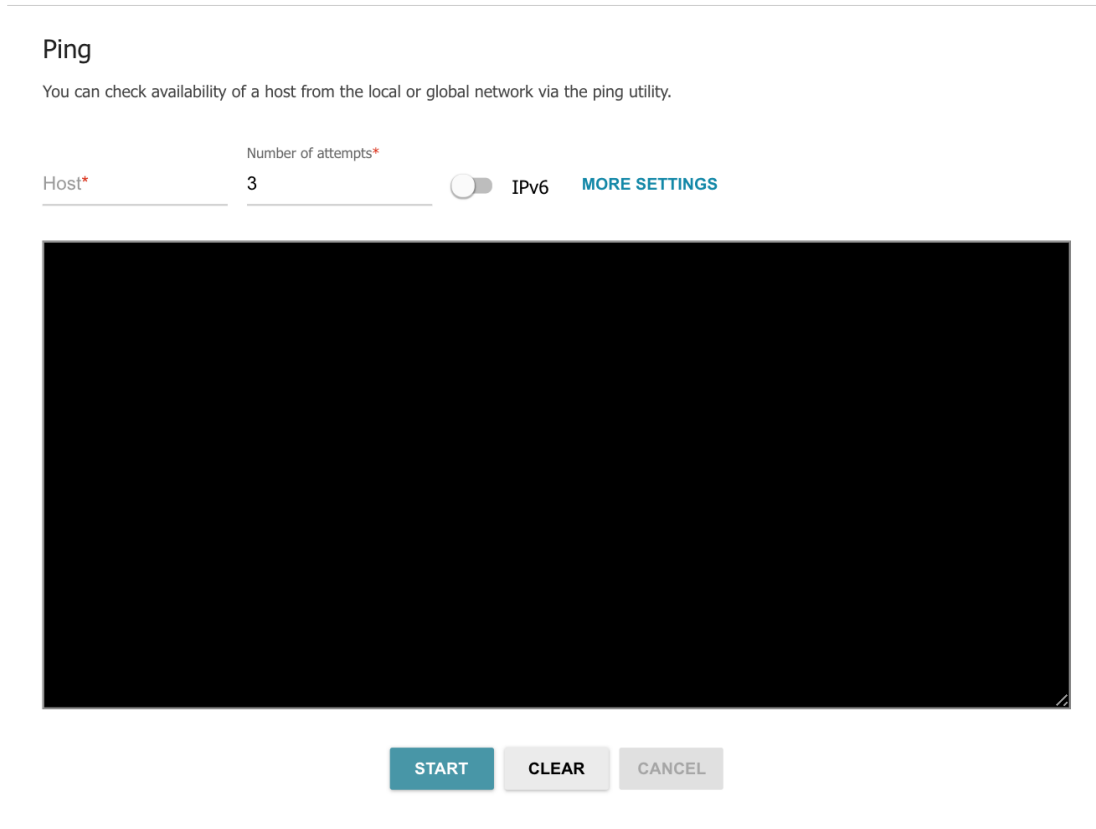
Figure 182. The **Management / Statistics / Multicast Groups** page.

Diagnostics

Ping

On the **Management / Diagnostics / Ping** page, you can check availability of a host from the local or global network via the Ping utility.

The Ping utility sends echo requests to a specified host and receives echo replies.

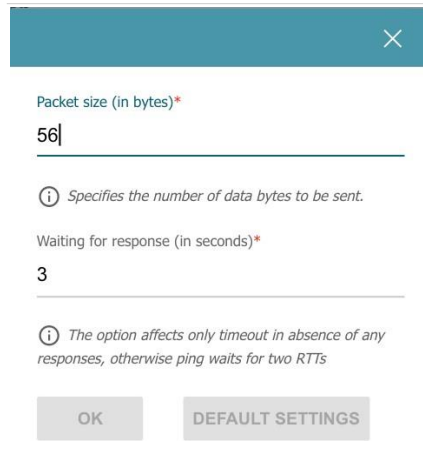


The screenshot shows the 'Ping' utility page. At the top, it says 'Ping' and 'You can check availability of a host from the local or global network via the ping utility.' Below this, there are two input fields: 'Host*' and 'Number of attempts*'. The 'Host*' field is empty, and the 'Number of attempts*' field contains the value '3'. To the right of these fields is a toggle switch labeled 'IPv6', which is currently turned off. Next to the toggle is a link labeled 'MORE SETTINGS'. Below the input fields is a large black rectangular area, likely a placeholder for a network diagram or a large text area. At the bottom of the page, there are three buttons: 'START', 'CLEAR', and 'CANCEL'.

Figure 183. The **Management / Diagnostics / Ping** page.

To check availability of a host, enter the IP address or name of this host in the **Host** field and specify a number of requests that will be sent in order to check its availability in the **Number of attempts** field. If availability check should be performed with IPv6, move the **IPv6** switch to the right.

To specify additional settings, click the **MORE SETTINGS** button.



Packet size (in bytes)*
56

ⓘ Specifies the number of data bytes to be sent.

Waiting for response (in seconds)*
3

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

OK DEFAULT SETTINGS

Figure 184. The **Management / Diagnostics / Ping** page. The additional settings window.

In the opened window, in the **Packet size** field, specify the volume of data sent in a request. In the **Waiting for response** field, specify the response waiting period in seconds. To restore the default field values, click the **DEFAULT SETTINGS** button.

After specifying the additional parameters, click the **OK** button.

To run the check, click the **START** button. After a while, the results will be displayed on the page.

If you need to interrupt the check, click the **CANCEL** button (the button is available from the moment the check starts).

To remove the check result from the page, click the **CLEAR** button.

CHAPTER 5. OPERATION GUIDELINES

Safety Rules and Conditions

Please carefully read this section before installation and connection of the device. Make sure that the power adapter and cables are not damaged. The device should be used only as intended in accordance with the documents.

The device is intended for use in dry, clean, dust-free, and well ventilated areas with normal humidity away from strong heat sources. Do not use the device outdoors or in the areas with high humidity. Do not place foreign objects on the device. Do not obstruct the ventilation openings of the device. The environmental temperature near the device and the temperature inside the device's cover should be within the range from 0 °C to +40 °C.

Only use the power adapter supplied with the device. Do not plug in the adapter, if its case or cable are damaged. Plug the adapter only into working electrical outlets with parameters indicated on the adapter.

Do not open the cover of the device! Unplug the device before dusting and cleaning. Use a damp cloth to clean the device. Do not use liquid/aerosol cleaners or magnetic/static cleaning devices. Prevent moisture getting into the device or the power adapter.

The service life of the device is 2 years.

Wireless Installation Considerations

The DIR-842V2 device lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF noise in your home or office. To maximize your wireless range, follow the guidelines below.

1. Keep the number of walls and ceilings between the DIR-842V2 device and other network devices to a minimum – each wall or ceiling can reduce your wireless network range by 3-90 feet (1-30 meters).
2. Be aware of the direct line between network devices. Place your devices so that the signal travels straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building materials make a difference. A solid metal door or aluminum studs may have a negative effect on your wireless range. Try to position your router, access points, and computers so that the signal passes through drywalls or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your router away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4 GHz cordless phones or X-10 equipment (wireless devices such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4 GHz phone base is as far away from your wireless devices as possible. Note, that the base transmits a signal even if the phone is not in use.

CHAPTER 6. ABBREVIATIONS AND ACRONYMS

3G	Third Generation
AC	Access Category
AES	Advanced Encryption Standard
AP	Access Point
ARP	Address Resolution Protocol
BPSK	Binary Phase-shift Keying
BSSID	Basic Service Set Identifier
CCK	Complementary Code Keying
DBSK	Differential Binary Phase-shift Keying
DDNS	Dynamic Domain Name System
DDoS	Distributed Denial of Service
DES	Data Encryption Standard
DHCP	Dynamic Host Configuration Protocol
DMZ	DeMilitarized Zone
DNS	Domain Name System
DPD	Dead Peer Detection
DQPSK	Differential Quadrature Phase-shift Keying
DSL	Digital Subscriber Line
DSSS	Direct-sequence Spread Spectrum
DTIM	Delivery Traffic Indication Message
GMT	Greenwich Mean Time
GSM	Global System for Mobile Communications
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure

ICMP	Internet Control Message Protocol
ID	Identifier
IGD	Internet Gateway Device
IGMP	Internet Group Management Protocol
IKE	Internet Key Exchange
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol
IPTV	Internet Protocol Television
IPsec	Internet Protocol Security
ISP	Internet Service Provider
L2TP	Layer 2 Tunneling Protocol
LAN	Local Area Network
LCP	Link Control Protocol
LED	Light-emitting diode
LTE	Long Term Evolution
MAC	Media Access Control
MBSSID	Multiple Basic Service Set Identifier
MIB	Management Information Base
MIMO	Multiple Input Multiple Output
MPPE	Microsoft Point-to-Point Encryption
MS-CHAP	Microsoft Challenge Handshake Authentication Protocol
MTU	Maximum Transmission Unit
NAT	Network Address Translation
NIC	Network Interface Controller

NTP	Network Time Protocol
OFDM	Orthogonal Frequency Division Multiplexing
PBC	Push Button Configuration
PFS	Perfect Forward Secrecy
PIN	Personal Identification Number
PoE	Power over Ethernet
PPP	Point-to-Point Protocol
pppd	Point-to-Point Protocol Daemon
PPPoE	Point-to-point protocol over Ethernet
PPTP	Point-to-point tunneling protocol
PSK	Pre-shared key
PUK	PIN Unlock Key
QAM	Quadrature Amplitude Modulation
QoS	Quality of Service
QPSK	Quadrature Phase-shift Keying
RADIUS	Remote Authentication in Dial-In User Service
RIP	Routing Information Protocol
RIPng	Next Generation Routing Information Protocol
RTS	Request To Send
RTSP	Real Time Streaming Protocol
SA	Security Association
SAE	Simultaneous Authentication of Equals
SIM	Subscriber Identification Module
SIP	Session Initiation Protocol
SMB	Server Message Block

SNMP	Simple Network Management Protocol
SSH	Secure Shell
SSID	Service Set Identifier
STBC	Space-time block coding
TCP	Transmission Control Protocol
TKIP	Temporal Key Integrity Protocol
UDP	User Datagram Protocol
UPnP	Universal Plug and Play
URL	Uniform Resource Locator
VLAN	Virtual Local Area Network
VPN	Virtual Private Network
WAN	Wide Area Network
WEP	Wired Equivalent Privacy
Wi-Fi	Wireless Fidelity
WISP	Wireless Internet Service Provider
WLAN	Wireless Local Area Network
WMM	Wi-Fi Multimedia
WPA	Wi-Fi Protected Access
WPS	Wi-Fi Protected Setup