



DPN-144DG

**GPON ONT Dual Band Wireless AC1200
VoIP Gateway with 1 GPON Port, 4
10/100/1000Base-T Ports, 2 FXS Ports,
and 1 USB Port**

BEFORE YOU BEGIN

Delivery Package

- GPON ONT VoIP gateway DPN-144DG
- Power adapter DC 12V/2.5A
- “*Quick Installation Guide*” (brochure).

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

The “*User Manual*” and “*Quick Installation Guide*” documents are available on D-Link website (see www.dlink.ru).



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

Default Settings

IP address of device		192.168.0.1
Username (login)		admin
Password		admin
Name of wireless network (SSID)	2.4GHz	DPN-144DG
	5GHz	DPN-144DG-5G
Network key (PSK)		see WPS PIN on the barcode label on the bottom panel of the device

! Gateway DPN-144DG with default settings cannot connect to the Internet. To get started, please set your own password for access to the web-based interface; then, if needed, configure other settings recommended by your ISP.

System Requirements and Equipment

- A computer with any operating system that supports a web browser.
- A web browser to access the web-based interface of the gateway:
 - 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.
- A NIC (Ethernet or Wi-Fi adapter) to connect to the gateway.
- An 802.11a, b, g, n, or ac Wi-Fi adapter to create a wireless network.
- An analog phone.
- A USB modem (when it is necessary to connect to the Internet via mobile operators' networks)¹.

Your USB modem should be equipped with an active identification card (SIM or R-UIM) of your operator.



Some operators require subscribers to activate their USB modems prior to using them. Please, refer to connection guidelines provided by your operator when concluding the agreement or placed on its website.

For some models of LTE USB modems, it is required to disable the PIN code check on the SIM card prior to connecting the USB modem to the gateway.

¹ Contact your operator to get information on the service coverage and fees.

CONNECTING TO PC



Invisible laser radiation may be emitted from the end of the fiber and/or from DPN-144DG. Take all necessary precautions to avoid unnecessary exposure to this radiation.

PC with Ethernet Adapter

1. Connect an Ethernet cable between any of LAN ports located on the back panel of the gateway and the Ethernet port of your PC.
2. ***To connect via USB modem***: connect your USB modem to the USB port² located on the back panel of the gateway.



In some cases you will need to reboot the gateway after connection of the USB modem.

3. ***To connect the device to a fiber optic line***: connect the fiber optic cable to the PON port on the back panel of the gateway. Make sure that center conductor of the cable is inserted directly into the center of the PON connector. Secure the cable by carefully pushing the fiber connector onto the PON connector until tight. Be careful not to over-tighten the connector or you may damage either the cable or the device.
4. ***To connect the device to an Ethernet line***: in the web-based interface of the gateway, select the gateway's LAN port that will be used as the WAN port and create an Ethernet WAN connection. Then connect an Ethernet cable between an available Ethernet port of the gateway and the Ethernet line.



Please connect the gateway to the ISP's Ethernet line only after setting the WAN port and creating the Internet connection.

5. Connect a phone cable between an FXS port of the gateway and the phone.
6. Connect the power cord to the power connector port on the back panel of the gateway, then plug the power adapter into an electrical outlet or power strip.

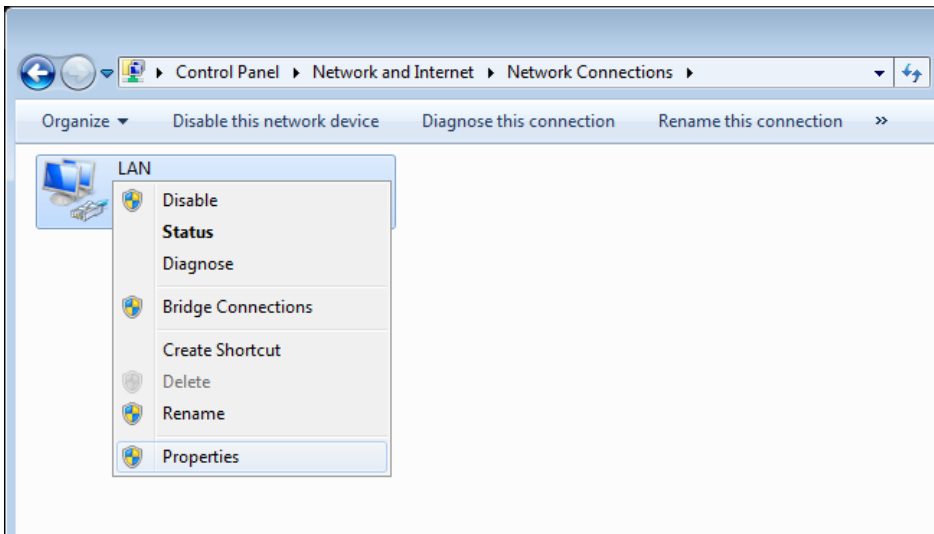
2 It is recommended to use a USB extension cable to connect a USB modem to the gateway.

7. Turn on the gateway by pressing the **POWER ON/OFF** button on its back panel.
8. Wait for several minutes. When the device receives all needed settings, the **PON** LED will stop blinking and will light solid green. When the Internet connection is established, the **Internet** LED will light solid green.

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

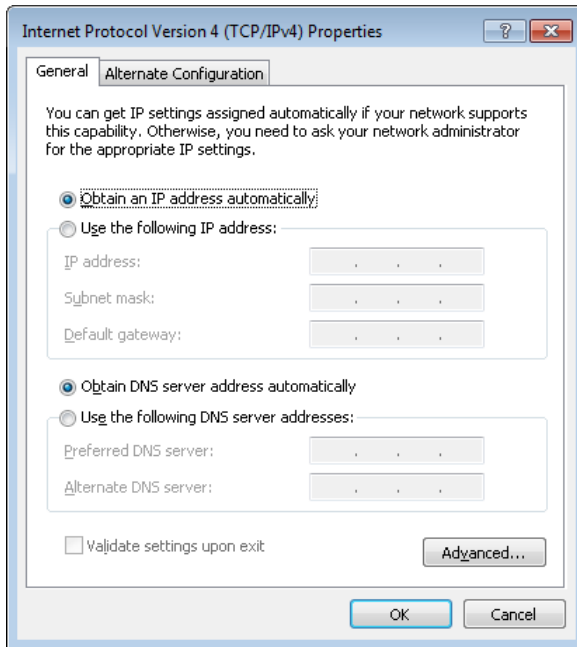
Obtaining IP Address Automatically (OS Windows 7)

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.)
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 **Local Area Connection** icon and select the **Properties** line in the menu displayed.



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.

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.



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

PC with Wi-Fi Adapter

1. **To connect via USB modem:** connect your USB modem to the USB port³ located on the back panel of the gateway.

! In some cases you will need to reboot the gateway after connection of the USB modem.

2. **To connect the device to a fiber optic line:** connect the fiber optic cable to the PON port on the back panel of the gateway. Make sure that center conductor of the cable is inserted directly into the center of the PON connector. Secure the cable by carefully pushing the fiber connector onto the PON connector until tight. Be careful not to over-tighten the connector or you may damage either the cable or the device.
3. **To connect the device to an Ethernet line:** in the web-based interface of the gateway, select the gateway's LAN port that will be used as the WAN port and create an Ethernet WAN connection. Then connect an Ethernet cable between an available Ethernet port of the gateway and the Ethernet line.

! Please connect the gateway to the ISP's Ethernet line only after setting the WAN port and creating the Internet connection.

4. Connect the power cord to the power connector port on the back panel of the gateway, then plug the power adapter into an electrical outlet or power strip.
5. Turn on the gateway by pressing the **POWER ON/OFF** button on its back panel.
6. Make sure that the Wi-Fi adapter of your PC is on. As a rule, modern notebooks with built-in wireless NICs are equipped with a button or switch that turns on/off the wireless adapter (refer to your PC documents). If your PC is equipped with a pluggable wireless NIC, install the software provided with your Wi-Fi adapter.

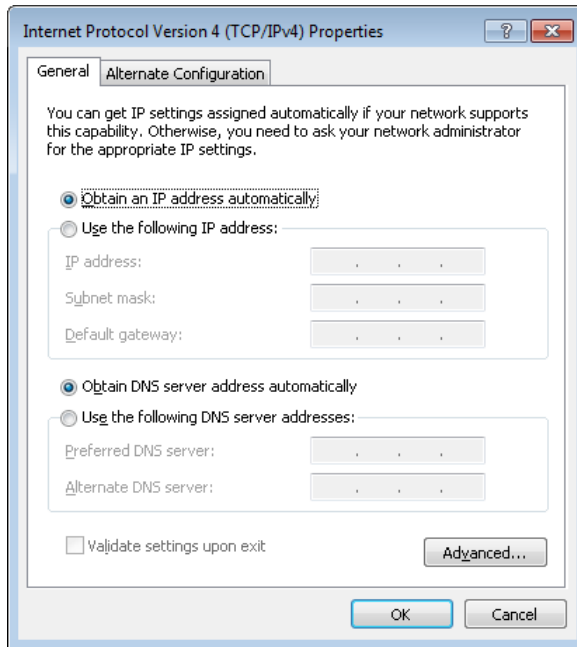
Then make sure that your Wi-Fi adapter is configured to obtain an IP address automatically (as DHCP client).

³ It is recommended to use a USB extension cable to connect a USB modem to the gateway.

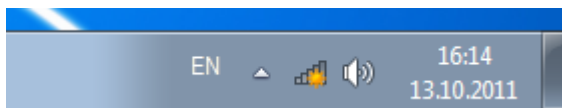
Obtaining IP Address Automatically and Connecting to Wireless Network (OS Windows 7)

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.)
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.

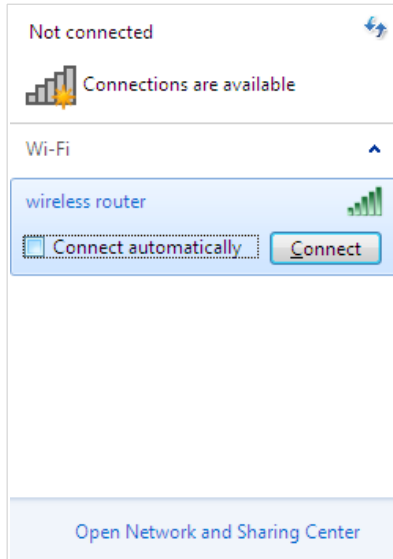
6. Make sure that the **Obtain an IP address automatically** and **Obtain DNS server address automatically** choices of the radio buttons are selected. Click the **OK** button.



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.



- In the opened window, in the list of available wireless networks, select the wireless network **DPN-144DG** (for operating in the 2.4GHz band) or **DPN-144DG-5G** (for operating in the 5GHz band) and click the **Connect** button.



- 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.
- 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 gateway via Wi-Fi connection, note that immediately after changing the wireless default settings of the gateway you will need to reconfigure the wireless connection using the newly specified settings.

CONFIGURING GATEWAY

Connecting to Web-based Interface

Start a web browser. In the address bar of the web browser, enter the IP address of the gateway (by default, **192.168.0.1**). Press the **Enter** key.



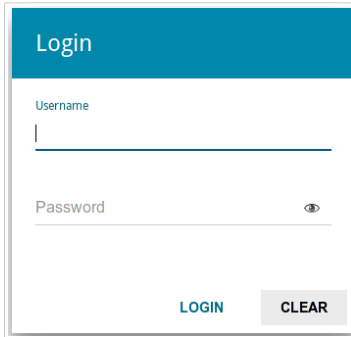
! If the error “*The page cannot be displayed*” (or “*Unable to display the page*”/“*Could not connect to remote server*”) occurs upon connecting to the web-based interface of the gateway, make sure that you have properly connected the gateway to your computer.

If the device has not been configured previously or the default settings have been restored, after access to the web-based interface the Initial Configuration page opens (see the **Initial Configuration** section, page 17).

Dear Customer! It's the first time the device is turned on. Please configure the device in order to use the Internet access services.
To run the Wizard, click the "Start" button.

START

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.



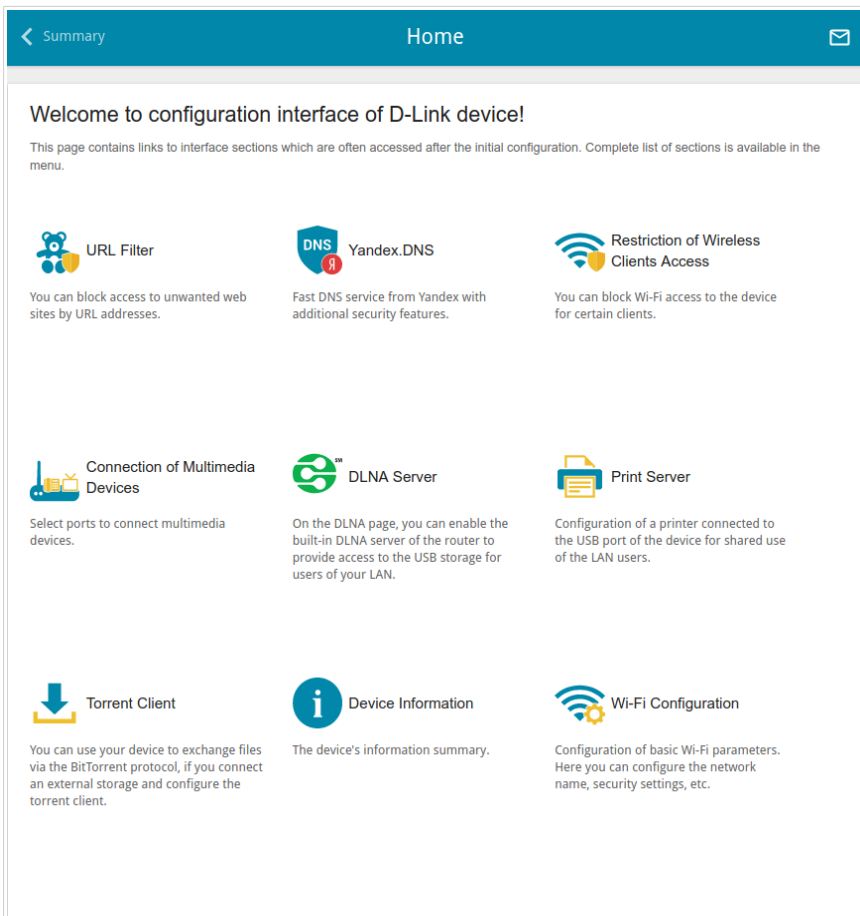
The screenshot shows a login form with a blue header containing the word "Login". Below the header, there are two input fields: "Username" and "Password". The "Username" field has a vertical cursor at the beginning. The "Password" field has a small eye icon to its right, indicating a toggle for password visibility. At the bottom of the form, there are two buttons: "LOGIN" and "CLEAR".

The **Summary** page displays general information on the gateway and its software.

The screenshot displays the 'Summary' page of the DPN-144DG gateway. The page is organized into several sections:

- Device Information:**
 - Model: DPN-144DG
 - Hardware revision: A1
 - Firmware version: 3.0.10
 - Build time: Fri Apr 21 12:02:12 MSK 2017
 - Vendor: D-Link Russia
 - Support: support@dlink.ru
 - Summary: Root filesystem image for DPN-144DG
 - Uptime: 0d 05:19:43
 - Device mode: [Configure](#)
- 2.4 GHz Access Point:**
 - Broadcasting: On
 - Network name (SSID): DPN-144DG-dce2
 - Security: WPA2-PSK
- 5 GHz Access Point:**
 - Broadcasting: On
 - Network name (SSID): DPN-144DG-5G-dce2
 - Security: WPA2-PSK
- WAN IPv4:**
 - Connection type: Dynamic IPv4
 - Status: Connected
 - IP address: 192.168.161.224
- LAN:**
 - LAN IPv4: 192.168.0.1
 - LAN IPv6: fd01:1:04
 - Wireless connections: -
 - Wired connections: 1
- LAN Ports:**
 - LAN1: On
 - LAN2: On
 - LAN3: Off
 - LAN4: Off
- USB Devices:**
 - Transcend 8GB
- VoIP Line 1:**
 - Line status: Registration off
 - Phone: Handset is put down
- VoIP Line 2:**
 - Line status: Registration off
 - Phone: Handset is put down
- Yandex DNS:**
 - Yandex.DNS: Enable
- Safe:**
 - 1 device
- Child:**
 - 0 devices
- Protection off:**
 - 0 devices
- CPU:**
 - CPU load: 37%
- Memory:**
 - Used: 37% (49.68 Mbyte)
 - Free: 37.04 Mbyte
 - Buffered: 7.71 Mbyte
 - Total: 86.73 Mbyte
- GPON Status:**
 - Sync status: EtherWAN

The **Home** page displays links to the most frequently used pages with device's settings.

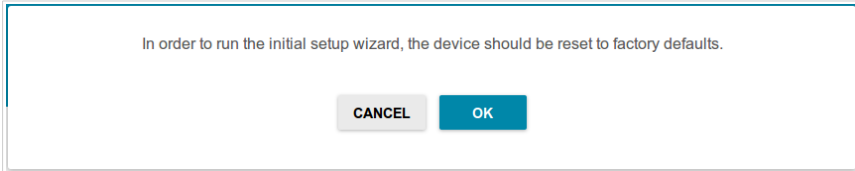


The web-based interface of the gateway is bilingual (English/Russian). You can select the needed language upon the initial configuration of the web-based interface of the gateway or in the **System / Configuration** section of the menu.

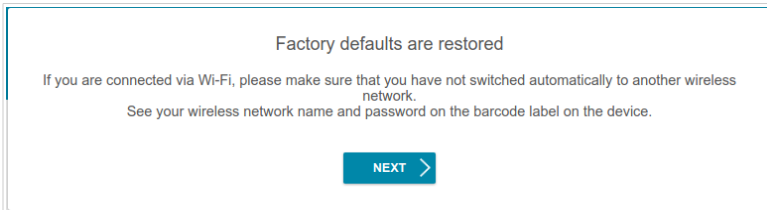
Other settings of the gateway are available in the menu in the left part of the page. Go to the relevant section and select the needed page.

Initial Configuration

In order to start the Initial Configuration, go to the **Initial Configuration** section.

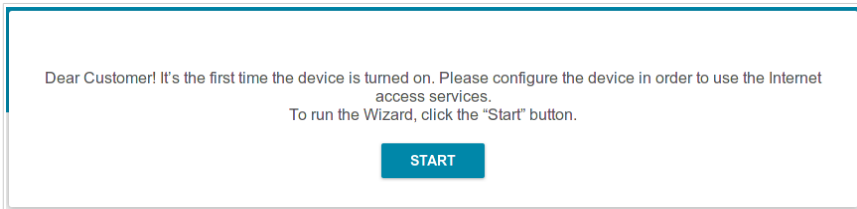


Click the **OK** button and wait until the factory default settings are restored.

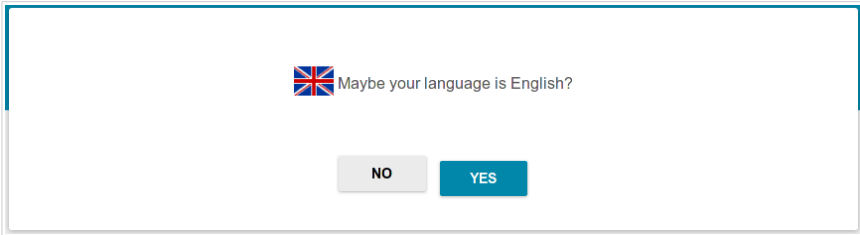


If you perform initial configuration of the gateway via Wi-Fi connection, please make sure that you are connected to the wireless network of DPN-144DG (see the WLAN name (SSID) in the **Default Settings** section, page 3) and click the **NEXT** button. Then click the **START** button.

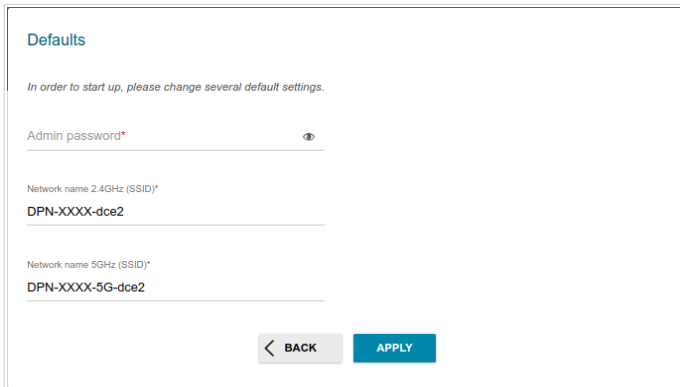
If the device has not been configured previously or the default settings have been restored, the Initial Configuration page opens automatically upon access to the web-based interface or upon opening a web site on the Internet.



1. Click **YES** in order to leave the current language of the web-based interface or click **NO** to select the other language.



2. On the next page, change the default settings: specify the administrator password in the **Admin password** field and the name of the wireless network in the 2.4GHz and 5GHz bands in the **Network name 2.4GHz (SSID)** and **Network name 5GHz (SSID)** fields correspondingly.

A screenshot of a web-based interface titled "Defaults". Below the title, there is a message: "In order to start up, please change several default settings." There are three input fields: "Admin password*" with a password icon, "Network name 2.4GHz (SSID)*" with the value "DPN-XXXX-dce2", and "Network name 5GHz (SSID)*" with the value "DPN-XXXX-5G-dce2". At the bottom, there are two buttons: a light gray button labeled "< BACK" and a blue button labeled "APPLY".

! 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 gateway only after restoring the factory default settings via the hardware **RESET** button. This procedure wipes out all settings that you have configured for your gateway.

3. Click the **APPLY** button.

Configuring Connection to the Internet

When the gateway connects to a fiber optic line, a WAN connection is created and configured automatically.



When the gateway connects to an Ethernet line or a mobile network, 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.

LTE WAN Connection*

If the PIN code check is enabled for the SIM card inserted into your USB modem, then prior to creating an LTE WAN connection, go to the **USB Modem / PIN** page and enter the PIN code.

If the PIN code check for the SIM card inserted into your USB modem is disabled, an active LTE WAN connection will be automatically created on the **Connections Setup / WAN** page when connecting a USB modem to the gateway. If the connection has not been created automatically, create a new connection manually.



For the USB modem Megafon M100-1, please reboot the gateway after creating the WAN connection.

1. Go to the **Connections Setup / WAN** page.
2. Click the **ADD** button.
3. On the opened page, on the **All Settings** tab, select the **LTE** value from the **Connection type** drop-down list.

* For correct operation of USB modems you may need to update the gateway's firmware.


4. Specify a name for your connection (any name for easier identification) in the **Connection name** field.

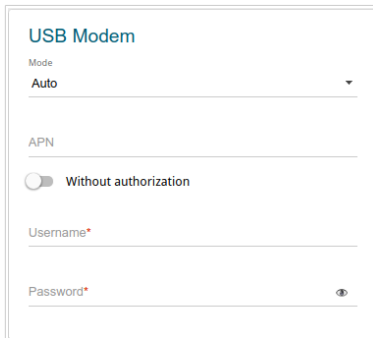


Connection type
LTE

Enable connection

Connection name*
LTE

5. If your operator requires to specify the access point name, in the **USB Modem** section, fill in the **APN** field. If the operator has provided a username (login) and password, fill in the **Username** and **Password** fields correspondingly. Click the **Show** icon () to display the entered password. If authorization is not required, move the **Without authorization** switch to the right.




USB Modem

Mode
Auto

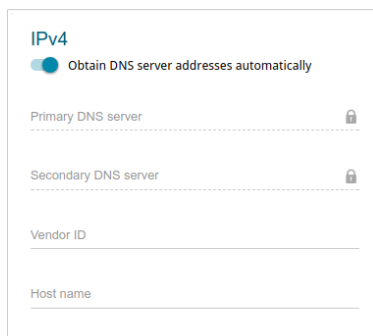
APN

Without authorization

Username*


Password* 


6. If your operator has provided the address of the DNS server, in the **IPv4** section, move the **Obtain DNS server addresses automatically** switch to the left and fill in the **Primary DNS server** field.



IPv4

Obtain DNS server addresses automatically

Primary DNS server 

Secondary DNS server 

Vendor ID

Host name

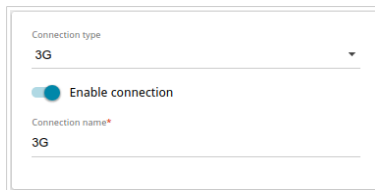
7. Click the **APPLY** button.
8. On the **Connections Setup / WAN** page, select the choice of the **Default Gateway** radio button corresponding to the new LTE WAN connection.

3G WAN Connection*

If the PIN code check is enabled for the SIM card inserted into your USB modem, then prior to creating a 3G WAN connection, go to the **USB Modem / PIN** page and enter the PIN code.

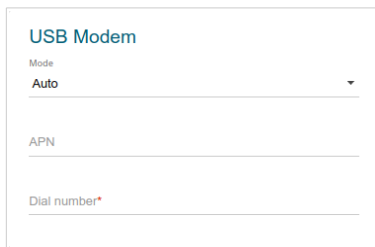
If the PIN code check for the SIM card inserted into your USB modem is disabled, an active 3G WAN connection will be automatically created on the **Connections Setup / WAN** page when connecting a USB modem to the gateway. If the connection has not been created automatically, create a new connection manually.

1. Go to the **Connections Setup / WAN** page.
2. Click the **ADD** button.
3. On the opened page, on the **All Settings** tab, select the **3G** value from the **Connection type** drop-down list.
4. Specify a name for your connection (any name for easier identification) in the **Connection name** field.




The screenshot shows a configuration form for a 3G WAN connection. It includes a dropdown menu for 'Connection type' set to '3G', a toggle switch for 'Enable connection' which is turned on, and a text input field for 'Connection name*' containing the text '3G'.

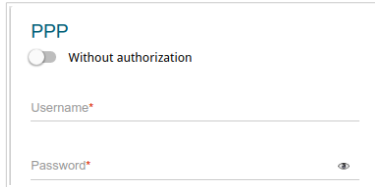
5. If your operator requires to specify the access point name, in the **USB Modem** section, fill in the **APN** field. In the **Dial number** field, enter the number dialed to connect to the authorization server of the operator.



The screenshot shows the 'USB Modem' section of the configuration page. It features a dropdown menu for 'Mode' set to 'Auto', and two text input fields: 'APN' and 'Dial number*'. The 'Dial number*' field has a red asterisk indicating it is a required field.

* For correct operation of USB modems you may need to update the gateway's firmware.


6. If you need to specify other settings, in the **PPP** section, enter authorization data provided by your operator (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon () to display the entered password. If authorization is not required, move the **Without authorization** switch to the right.



PPP

Without authorization

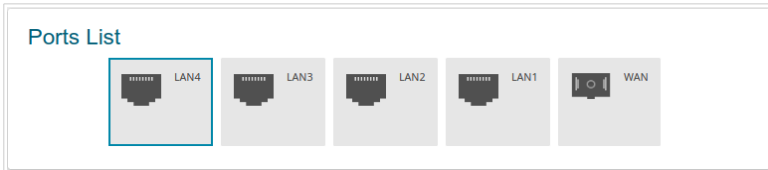
Username*

Password* 

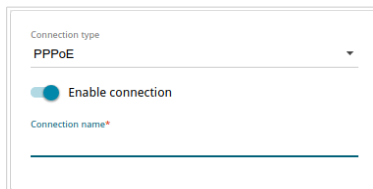
7. Click the **APPLY** button.
8. On the **Connections Setup / WAN** page, select the choice of the **Default Gateway** radio button corresponding to the new 3G WAN connection.

Wired WAN Connection

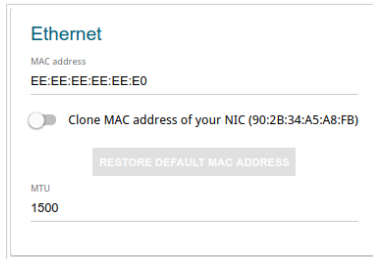
1. If you configure a connection to an Ethernet line, go to the **Advanced / EtherWAN** page. On the page, click the icon corresponding to the LAN port to which the IPS's Ethernet cable will be connected and click the **APPLY** button.



2. Reboot the gateway and access the web-based interface again.
3. Go to the **Connections Setup / WAN** page.
4. Click the **ADD** button.
5. On the opened page, on the **All Settings** tab, select the needed value from the **Connection type** drop-down list.
6. Specify a name for your connection (any name for easier identification) in the **Connection name** field.



- If your ISP uses MAC address binding, in the **Ethernet** section, in the **MAC address** field, enter the MAC address registered by your ISP upon concluding the agreement. To set the MAC address of the network interface card (of the computer that is being used to configure the gateway at the moment) as the MAC address of the WAN interface, click the **Clone MAC address of your NIC** switch to the right. To set the gateway's MAC address, click the **RESTORE DEFAULT MAC ADDRESS** button.



Ethernet

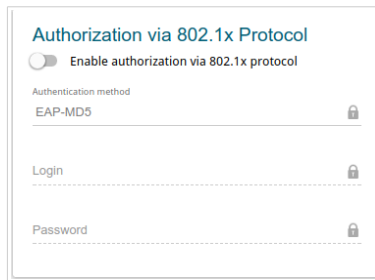
MAC address
EE:EE:EE:EE:EE:E0

Clone MAC address of your NIC (90:2B:34:A5:A8:FB)

RESTORE DEFAULT MAC ADDRESS

MTU
1500

- If your ISP uses authorization via the 802.1x protocol, in the **Authorization via 802.1x Protocol** section, move the **Enable authorization via 802.1x protocol** switch to the right. Fill in the fields of the section in accordance with data provided by your ISP. *The section is displayed for the connection of Dynamic IPv4 and Static IPv4 types only.*



Authorization via 802.1x Protocol

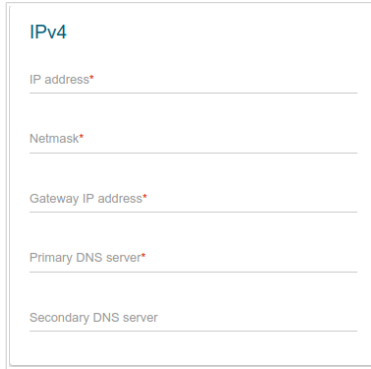
Enable authorization via 802.1x protocol

Authentication method
EAP-MD5

Login

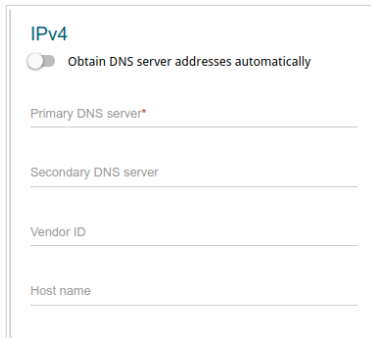
Password

9. **Static IPv4:** In the **IPv4** section, fill in the following fields: **IP address**, **Netmask**, **Gateway IP address**, and **Primary DNS server**.



The screenshot shows a form titled "IPv4" with five input fields. The first four fields are marked with a red asterisk, indicating they are required. The fields are: "IP address*", "Netmask*", "Gateway IP address*", and "Primary DNS server*". The fifth field, "Secondary DNS server", is not marked as required.

10. **Dynamic IPv4:** If your ISP has provided the address of the DNS server, in the **IPv4** section, move the **Obtain DNS server addresses automatically** switch to the left and fill in the **Primary DNS server** field.



The screenshot shows a form titled "IPv4" with a toggle switch and four input fields. The toggle switch is labeled "Obtain DNS server addresses automatically" and is currently turned off. The input fields are: "Primary DNS server*" (required), "Secondary DNS server", "Vendor ID", and "Host name".

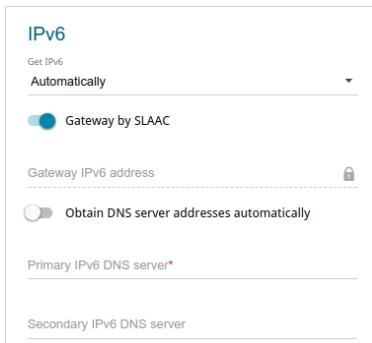
11. **Static IPv6:** In the **IPv6** section, fill in the following fields: **IPv6 Address**, **Prefix**, **Gateway IPv6 address**, and **Primary IPv6 DNS server**.



The screenshot shows a form titled "IPv6" with the following fields:


- IPv6 Address*
- Prefix*
- Gateway IPv6 address*
- Primary IPv6 DNS server*
- Secondary IPv6 DNS server

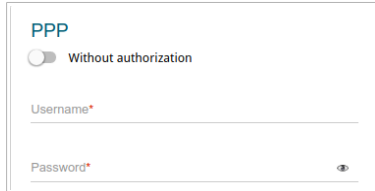
12. **Dynamic IPv6:** If your ISP has provided the address of the DNS server, in the **IPv6** section, move the **Obtain DNS server addresses automatically** switch to the left and fill in the **Primary IPv6 DNS server** field. If you need to specify the gateway address manually, in the **IPv6** section, move the **Gateway by SLAAC** switch to the left and fill in the **Gateway IPv6 address** field.



The screenshot shows a form titled "IPv6" with the following fields and controls:

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


13. **PPPoE:** In the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon () to display the entered password. If authorization is not required, move the **Without authorization** switch to the right.




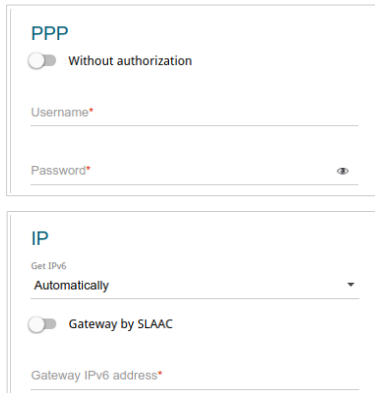
PPP

Without authorization

Username*

Password* 


14. **PPPoE IPv6 or PPPoE Dual Stack:** In the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon () to display the entered password. If authorization is not required, move the **Without authorization** switch to the right. If you need to specify the gateway address manually, in the **IP** section, move the **Gateway by SLAAC** switch to the left and fill in the **Gateway IPv6 address** field.



PPP

Without authorization

Username*


Password* 

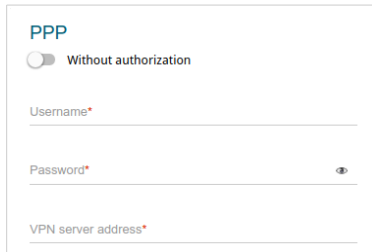
IP

Get IPv6
Automatically ▼

Gateway by SLAAC

Gateway IPv6 address*


15. **PPTP or L2TP:** In the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** field). Click the **Show** icon () to display the entered password. If authorization is not required, move the **Without authorization** switch to the right. In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server.



PPP

Without authorization

Username*

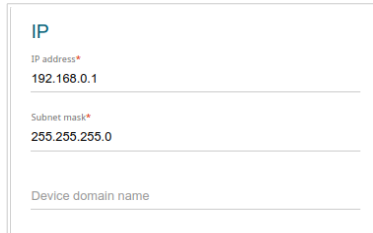
Password* 

VPN server address*

16. If needed, fill in other fields on the page in accordance with data provided by the ISP.
17. Click the **APPLY** button.

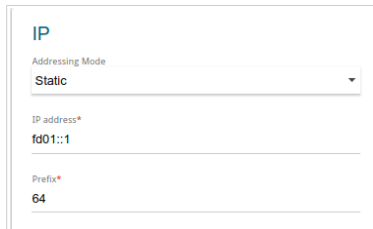
Configuring Local Area Network

1. Go to the **Connections Setup / LAN** page.
2. If needed, change the IPv4 address of the gateway's LAN interface and the mask of the local subnet. To do this, click the **IPv4** tab and specify needed values in the **IP address** and **Subnet mask** fields in the **IP** section.



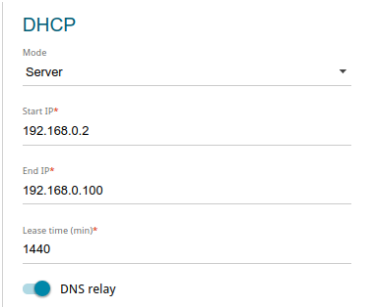
The screenshot shows the 'IP' configuration section for IPv4. It includes three input fields: 'IP address*' with the value '192.168.0.1', 'Subnet mask*' with the value '255.255.255.0', and 'Device domain name' which is currently empty.

3. If needed, specify your own IPv6 address of the gateway's LAN interface. To do this, click the **IPv6** tab and select the **Static** value from the **Addressing Mode** drop-down list in the **IP** section. Then specify the needed value in the **IP address** field.



The screenshot shows the 'IP' configuration section for IPv6. It includes a dropdown menu for 'Addressing Mode' set to 'Static', an 'IP address*' field with the value 'fd01::1', and a 'Prefix*' field with the value '64'.

4. **IPv4 address assignment.** By default, the built-in DHCP server of the gateway assigns IPv4 addresses to the devices of the LAN. If you want to manually assign IPv4 addresses, disable the DHCP server (click the **IPv4** tab and select the **Disable** value from the **Mode** drop-down list in the **DHCP** section).



DHCP

Mode
Server

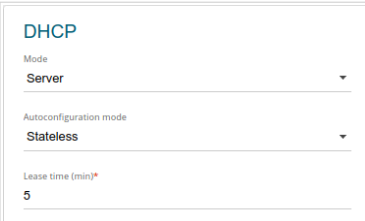
Start IP*
192.168.0.2

End IP*
192.168.0.100

Lease time (min)*
1440

DNS relay

5. **IPv6 address assignment.** By default, the devices of the LAN automatically assign IPv6 addresses to themselves (the **Stateless** value is selected from the **Autoconfiguration mode** drop-down list in the **DHCP** section on the **IPv6** tab). If the devices of the LAN do not support IPv6 address autoconfiguration, enable the built-in DHCPv6 server of the gateway (select the **Stateful** value from the **Autoconfiguration mode** drop-down list). If you want to manually assign IPv6 addresses to devices of the LAN, select the **Disable** value from the **Mode** drop-down list.



DHCP

Mode
Server

Autoconfiguration mode
Stateless

Lease time (min)*
5

6. After specifying the needed parameters on the **Connections Setup / LAN** page, click the **APPLY** button.

Configuring VoIP via SIP

1. Go to the **VoIP / Basic Settings** page.
2. In the **SIP Proxy** section, fill in the **Address** field.



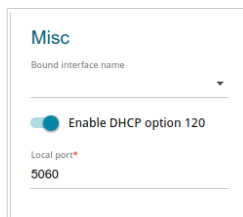
The screenshot shows the 'SIP Proxy' configuration section. It has a title 'SIP Proxy' in blue. Below it, there is a text input field labeled 'Address*' with a red asterisk. Underneath that is another text input field labeled 'Port*' with a red asterisk, containing the value '5060'.

3. If your provider uses a SIP domain, in the **SIP Domain** section, fill in the **SIP domain name** field and, if needed, move the **Use domain to register** switch to the right (contact your ISP to clarify if the setting is required).



The screenshot shows the 'SIP Domain' configuration section. It has a title 'SIP Domain' in blue. Below it, there is a toggle switch labeled 'Use domain to register' which is currently turned off. Underneath that is a text input field labeled 'SIP domain name'.

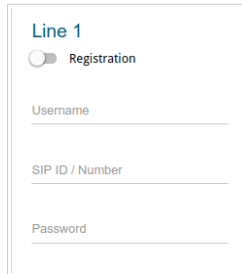
4. In the **Misc** section, from the **Bound interface name** drop-down list, select the interface which will be used by VoIP.



The screenshot shows the 'Misc' configuration section. It has a title 'Misc' in blue. Below it, there is a drop-down menu labeled 'Bound interface name'. Underneath that is a toggle switch labeled 'Enable DHCP option 120' which is currently turned on. At the bottom, there is a text input field labeled 'Local port*' with a red asterisk, containing the value '5060'.

5. If your provider does not require automatic obtainment of the SIP proxy server address, move the **Enable DHCP option 120** switch to the left.

- In the section corresponding to the port to which the analog phone is connected, move the **Registration** switch to the right, fill in the **SIP ID / Number** field, enter the username in the **Username** field (as a rule, the username and the phone number are the same), and fill in the **Password** field.



The screenshot shows a configuration window titled "Line 1". It contains a "Registration" toggle switch that is currently turned off. Below the switch are three input fields: "Username", "SIP ID / Number", and "Password".

- If needed, fill in other fields on the page in accordance with data provided by the ISP.
- Click the **APPLY** button.

SPECIFICATIONS*

Hardware	
Processor	<ul style="list-style-type: none"> · RTL9607
RAM	<ul style="list-style-type: none"> · 128MB, DDR3
Flash	<ul style="list-style-type: none"> · 128MB, NAND
Interfaces	<ul style="list-style-type: none"> · GPON port (SC/APC connector) · 4 10/100/1000BASE-T LAN ports · 2 RJ-11 FXS ports · USB 2.0 port
LEDs	<ul style="list-style-type: none"> · Power · PON · LOS · 4 LAN LEDs · 2 Phone LEDs · WIFI 2.4GHz · WIFI 5GHz · WPS · USB · Internet
Buttons	<ul style="list-style-type: none"> · POWER ON/OFF button to power on/power off · RESET button to restore factory default settings · WPS button to set up wireless connection and enable/disable wireless network
Antenna	<ul style="list-style-type: none"> · Two internal antennas (3.5dBi gain for 2.4GHz and 5GHz)

* The device features are subject to change without notice. For the latest versions of the firmware and relevant documentation, visit www.dlink.ru.

PON	
GPON features	<ul style="list-style-type: none"> · Class B+ GPON optical transceiver · Upstream (transmitter): 1310nm \pm 50nm, 1.244Gbps upstream burst data rate · Downstream (digital receiver): 1490nm \pm 10nm, 2.488Gbit/s downstream continuous data rate · Single mode fiber cable · AES encryption · Support of IGMP v1/v2 Snooping, 16 entries, enable/disable, Fast leaving · MAC learning · UNI port configuration (rate, duplex mode, flow control, disable/enable, auto mode) · Maximum frame length to 1522 bytes · Compliance to ONT dying gasp · ONT authentication

Phone	
General SIP features	<ul style="list-style-type: none"> · Individual account per port · Invite with Challenge · Register by IP address or domain name of SIP server · Backup proxy support · Support of DHCP option 120 · RFC3986 SIP URI format support · Outbound proxy support · STUN client · NAT keep-alive · Call types: voice/modem/fax · User programmable Dial Plan · Manual peer table (P2P) · E.164 Numbering, ENUM support
Call features	<ul style="list-style-type: none"> · Direct IP-to-IP call without SIP proxy · Call hold/retrieve · Call awaiting · Forwarding (unconditional, busy, no answer) · Do Not Disturb · Blocking hidden number calls · Speed dialing · Phone book · Hotline · Vertical service codes · Filtering by IP address (white/black list) · Alarm clock

Phone	
Voice features	<ul style="list-style-type: none"> • Codecs: G.711 a/μ-law, G.729A, G.726, G.722, G.723.1 • DTMF detection and generation • In-band DTMF, out-of-band DTMF (RFC2833, SIP-INFO) • Comfort Noise Generation (CNG) • Voice Activity Detection (VAD) • Dynamic Jitter Buffer • Call progress tone generation (FXS) • DTMF/PULSE dial support • Caller ID detection and generation • T.30 FAX bypass to G.711, T.38 Real Time FAX Relay • Adjustable Flash Time • Volume control (speaker/microphone)

Software	
WAN connection types	<ul style="list-style-type: none"> • Static IPv4 / Dynamic IPv4 • Static IPv6 / Dynamic IPv6 • PPPoE • PPPoE IPv6 • PPPoE Dual Stack • PPTP/L2TP • 3G/LTE⁴
Network functions	<ul style="list-style-type: none"> • Support of IEEE 802.1X for Internet connection • DHCP server/relay • Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation • DNS relay • Dynamic DNS • Static IP routing • Static IPv6 routing • IGMP Proxy • RIP • Support of UPnP IGD • Support of VLAN • Support of MVR • WAN ping respond • Support of SIP ALG • Support of RTSP • Autonegotiation of speed, duplex mode, and flow control/Manual speed and duplex mode setup for each Ethernet port

⁴ In the next firmware versions.

Software	
Firewall functions	<ul style="list-style-type: none"> · Network Address Translation (NAT) · Stateful Packet Inspection (SPI) · IP filter · IPv6 filter · MAC filter · URL filter · DMZ · Prevention of ARP and DDoS attacks · Virtual servers · Built-in Yandex.DNS web content filtering service
VPN	<ul style="list-style-type: none"> · IPsec/PPTP/L2TP/PPPoE pass-through · IPsec tunnels
USB interface functions	<ul style="list-style-type: none"> · USB modem⁵ Auto connection to available type of supported network (4G/3G/2G) Auto configuration of connection upon plugging in USB modem · Enabling/disabling PIN code check, changing PIN code⁶ · USB storage File browser Print server Access to storage via accounts Built-in Samba server Built-in FTP server Built-in DLNA server Built-in Transmission torrent client; uploading/downloading files from/to USB storage
Management	<ul style="list-style-type: none"> · Local and remote access to settings through TELNET/WEB (HTTP/HTTPS) · Bilingual web-based interface for configuration and management (Russian/English) · Notification on connection problems and auto redirect to settings · Firmware update via web-based interface · Automatic notification on new firmware version · Saving/restoring configuration to/from file · Support of remote logging · Automatic synchronization of system time with NTP server and manual time/date setup · Ping utility · Traceroute utility · TR-069 client

⁵ In the next firmware versions.

⁶ For GSM USB modems and some models of LTE USB modems.

Wireless Module Parameters	
Standards	<ul style="list-style-type: none"> • IEEE 802.11a/n/ac • IEEE 802.11b/g/n
Frequency range	<ul style="list-style-type: none"> • 2400 ~ 2483.5MHz • 5150 ~ 5350MHz • 5650 ~ 5725MHz
Wireless connection security	<ul style="list-style-type: none"> • WEP • WPA/WPA2 (Personal/Enterprise) • MAC filter • WPS (PBC/PIN)
Advanced functions	<ul style="list-style-type: none"> • Support of client mode • WMM (Wi-Fi QoS) • Information on connected Wi-Fi clients • Advanced settings • Smart adjustment of Wi-Fi clients • Guest Wi-Fi / support of MBSSID • Limitation of wireless network rate • Periodic scan of channels, automatic switch to least loaded channel
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 (from MCS0 to MCS15) • IEEE 802.11ac (5GHz): from 6.5 to 867Mbps (from MCS0 to MSC9)

Physical Parameters	
Dimensions (L x W x H)	<ul style="list-style-type: none"> • 228 x 160 x 41 mm (9 x 6.3 x 1.6 in)

Operating Environment	
Power	<ul style="list-style-type: none"> • Output: 12V DC, 2.5A
Temperature	<ul style="list-style-type: none"> • Operating: from 0 to 40 °C • Storage: from -40 to 70 °C
Humidity	<ul style="list-style-type: none"> • Operating: from 10% to 90% (non-condensing) • Storage: from 5% to 95% (non-condensing)

Supported USB modems⁷

GSM

- Alcatel X500
- D-Link DWM-152C1
- D-Link DWM-156A6
- D-Link DWM-156A7
- D-Link DWM-156C1
- D-Link DWM-157B1
- D-Link DWM-157B1 (Velcom)
- D-Link DWM-158D1
- D-Link DWR-710
- Huawei E150
- Huawei E1550
- Huawei E156G
- Huawei E160G
- Huawei E169G
- Huawei E171
- Huawei E173 (Megafon)
- Huawei E220
- Huawei E3131 (MTS 420S)
- Huawei E352 (Megafon)
- Prolink PHS600
- Prolink PHS901
- ZTE MF112
- ZTE MF192
- ZTE MF626
- ZTE MF627
- ZTE MF652
- ZTE MF667
- ZTE MF668
- ZTE MF752

⁷ The manufacturer does not guarantee proper operation of the gateway with every modification of the firmware of USB modems.

Supported USB modems	
LTE	<ul style="list-style-type: none"> · Huawei E3131 · Huawei E3272 · Huawei E3351 · Huawei E3372 · Huawei E367 · Huawei E392 · Megafon M100-1 · Megafon M100-2 · Megafon M100-3 · Megafon M100-4 · Megafon M150-1 · Megafon M150-2 · Quanta 1K6E (Beeline 1K6E) · MTS 824F · MTS 827F · Yota LU-150 · Yota WLTUBA-107 · ZTE MF823 · ZTE MF827
Smartphones tethering mode	<ul style="list-style-type: none"> · Some models of Android smartphones

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.

TECHNICAL SUPPORT

You can find software updates and user documentation on our website.

D-Link provides its customers with free support within the product's warranty period.

Customers can contact the technical support group by phone or by e-mail/Internet.

FOR TELEPHONE NUMBERS AND ADDRESSES OF D-LINK OFFICES WORLDWIDE VISIT

<http://www.dlink.com/corporate/worldwideoffices/>