



DVG-N5402G/ACF

Wireless AC1200 Dual Band Gigabit Router with Fiber WAN Port, 3G/LTE Support, 2 FXS Ports, 1 PSTN (lifeline) Port, and USB Port

BEFORE YOU BEGIN

Delivery Package

- Router DVG-N5402G/ACF
- Power adapter DC 12V/2A
- Ethernet cable (CAT 5E)
- Two RJ-11 telephone cables
- “*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 wireless router		192.168.8.254
Username (login)		admin
Password		admin
Name of wireless network (SSID)	2.4GHz	DVG-N5402G
	5GHz	DVG-N5402G-5G
Network key (PSK)		see WPS PIN on the barcode label on the bottom panel of the device



Router DVG-N5402G/ACF with default settings cannot connect to the Internet. To get started, please set your own password for access to the web-based interface and change the WLAN name (SSID); 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 router:
 - Apple Safari 5 and later
 - Google Chrome 10 and later
 - Microsoft Internet Explorer 9 and later
 - Microsoft Edge 20.10240 and later
 - Mozilla Firefox 10 and later
 - Opera 10 and later.
- A NIC (Ethernet or Wi-Fi adapter) to connect to the router.
- An 802.11a, b, g, n, or ac Wi-Fi adapter to create a wireless network.
- SFP transceiver to connect to a fiber optic line.
- 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 LTE or CDMA USB modems, it is required to disable the PIN code check on the identification card prior to connecting the USB modem to the router.

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

CONNECTING TO PC

PC with Ethernet Adapter

1. Make sure that your PC is powered off.
2. Connect an Ethernet cable between any of LAN ports located on the back panel of the router and the Ethernet port of your PC.
3. ***To connect via USB modem***: connect your USB modem to the USB port² located on the back panel of the router.



If you need to connect or change a USB modem to another one when the router is powered on, power off the router, connect the modem to the USB port, and power on the router.

4. ***To connect the device to a fiber optic line***: connect your SFP transceiver to the SFP port, then connect the fiber optic cable to the SFP transceiver.
5. ***To connect the device to an Ethernet line***: in the web-based interface of the router, select the router'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 router and the Ethernet line.



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

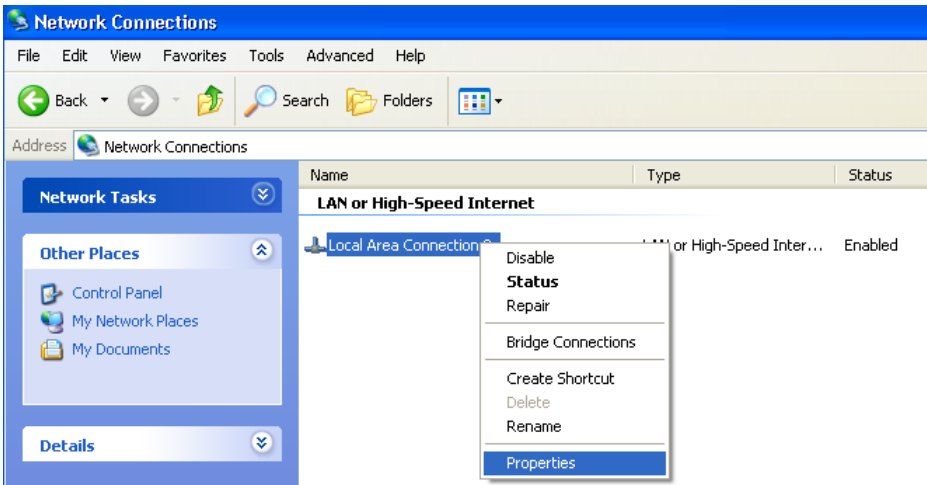
6. Connect the power cord to the power connector port on the back panel of the router, then plug the power adapter into an electrical outlet or power strip.
7. Turn on the router by pressing the **ON/OFF** button on its back panel.
8. Turn on your PC and wait until your operating system is completely loaded.

Now you should configure your PC to obtain an IP address automatically (as DHCP client).

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

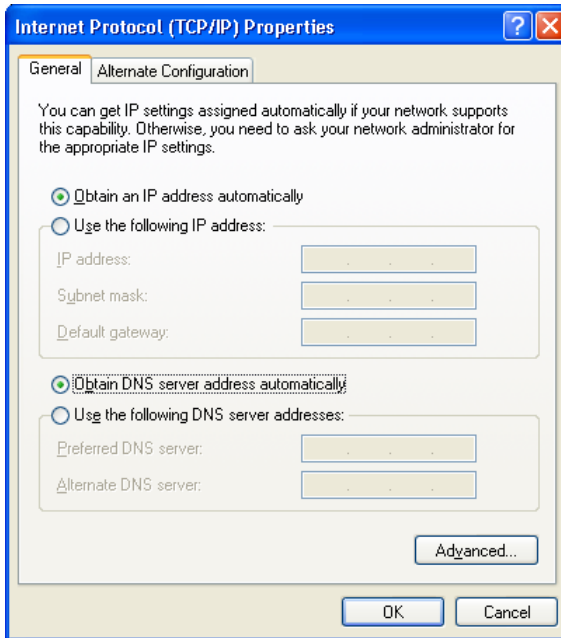
Obtaining IP Address Automatically in OS Windows XP

1. Click the **Start** button and proceed to the **Control Panel > Network and Internet Connections > Network Connections** window.
2. In the **Network Connections** window, right-click the relevant **Local Area Connection** icon and select the **Properties** line in the menu displayed.



3. In the **Local Area Connection Properties** window, on the **General** tab, select the **Internet Protocol (TCP/IP)** line. Click the **Properties** button.

4. Select the **Obtain an IP address automatically** and **Obtain DNS server address automatically** radio buttons. Click the **OK** button.

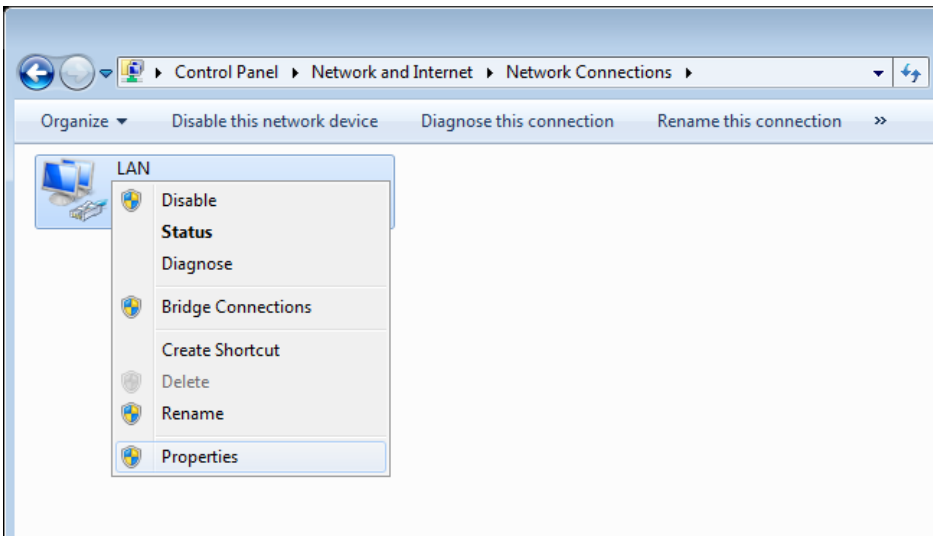


5. Click the **OK** button in the connection properties window.

Now your computer is configured to obtain an IP address automatically.

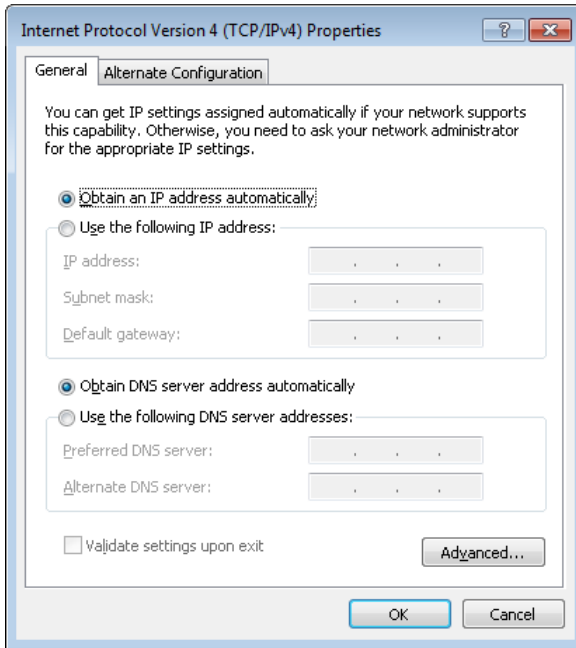
Obtaining IP Address Automatically in OS Windows 7

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. Select the **Obtain an IP address automatically** and **Obtain DNS server address automatically** radio buttons. Click the **OK** button.



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

Now your computer is configured to obtain an IP address automatically.

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 router.

! If you need to connect or change a USB modem to another one when the router is powered on, power off the router, connect the modem to the USB port, and power on the router.

2. **To connect the device to a fiber optic line:** connect your SFP transceiver to the SFP port, then connect the fiber optic cable to the SFP transceiver.
3. **To connect the device to an Ethernet line:** in the web-based interface of the router, select the router'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 router and the Ethernet line.

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

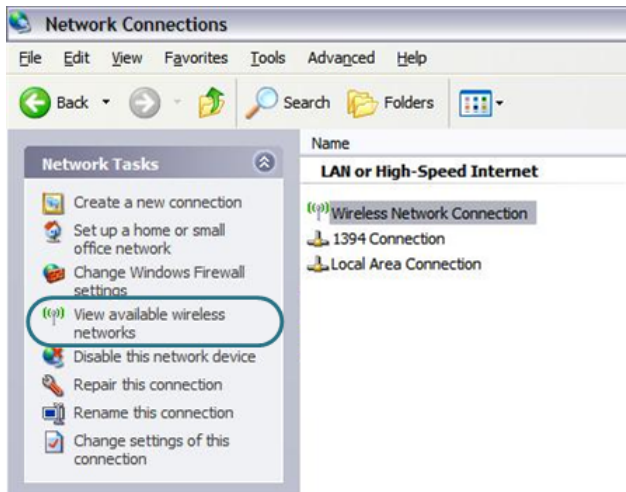
4. Connect the power cord to the power connector port on the back panel of the router, then plug the power adapter into an electrical outlet or power strip.
5. Turn on the router by pressing the **ON/OFF** button on its back panel.
6. Turn on your PC and wait until your operating system is completely loaded.
7. Turn on your Wi-Fi adapter. 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.

Now you should configure your Wi-Fi adapter.

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

Configuring Wi-Fi Adapter in OS Windows XP

1. Click the **Start** button and proceed to the **Control Panel > Network and Internet Connections > Network Connections** window.
2. Select the icon of the wireless network connection and make sure that your Wi-Fi adapter is on.



3. Search for available wireless networks.
4. In the opened **Wireless Network Connection** window, select the wireless network **DVG-N5402G** (for operating in the 2.4GHz band) or **DVG-N5402G-5G** (for operating in the 5GHz band) and click the **Connect** button.
5. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) in the **Network key** and **Confirm network key** fields and click the **Connect** button.

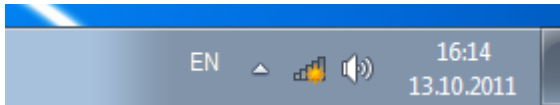
After that the **Wireless Network Connection Status** window appears.



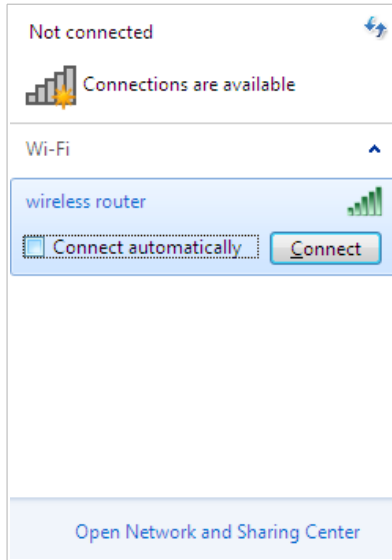
If you perform initial configuration of the router via Wi-Fi connection, note that immediately after changing the wireless default settings of the router you will need to reconfigure the wireless connection using the newly specified settings.

Configuring Wi-Fi Adapter in 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, select the icon of the wireless network connection and make sure that your Wi-Fi adapter is on.
5. 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, wireless network **DVG-N5402G** (for operating in the 2.4GHz band) or **DVG-N5402G-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.

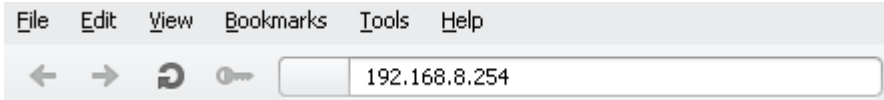


If you perform initial configuration of the router via Wi-Fi connection, note that immediately after changing the wireless default settings of the router you will need to reconfigure the wireless connection using the newly specified settings.

CONFIGURING ROUTER

Connecting to Web-based Interface

Start a web browser. In the address bar of the web browser, enter the IP address of the router (by default, the following IP address is specified: **192.168.8.254**). 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 router, make sure that you have properly connected the router to your computer.

After the first access to the web-based interface you need to change the default administrator password. Enter the new password in the **Password** and **Confirmation** fields. You may set any password except **admin**. Use digits, Latin letters (uppercase and/or lowercase), and characters available on the keyboard. Also you need to change the default name of the wireless network. To do it, in the **Network name (SSID)** and **5GHz Network name (SSID)** fields, enter a new name for the router's wireless network in the 2.4GHz and 5GHz band correspondingly or leave the values suggested by the router: **DVG-N5402G-XXXX** and **DVG-N5402G-5G-XXXX** where **XXXX** are the last 4 characters of the device's MAC address. Then click the **Apply** button.

Please, change default password

Password

Confirmation

Please, change default SSID

Network name (SSID)

5 GHz Network name (SSID)

! 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.

When the web-based interface is accessed the next time and after, the login page opens. Enter the username (**admin**) in the **Login** field and the password you specified in the **Password** field, then click the **Enter** button.



The image shows a screenshot of a web-based login interface for a D-Link device. The interface is titled "D-LINK DEVICE" in a blue header. Below the header, there are two input fields: "Login" and "Password". The "Login" field is currently empty. Below the input fields, there are two buttons: "Clear" and "Enter".

After successful registration the **Home / Information** page opens. The page displays general information on the router and its software.

1

Home / Information

Device information

Vendor	D-Link Russia
Model	DVG-N5402G
Firmware version	2.5.50
Build time	Tue Sep 13 11:54:57 MSK 2016
Summary	Root filesystem image for DVG-N5402G
Web revision	1b45602cd47b41dc9152724a078b251e1fb74227
Support	support@dlink.ru

Network information

LAN IPv4	192.168.8.254
LAN IPv6	fd01::1/64
LAN MAC	ee:ee:ee:ee:e1
Wi-Fi 2.4 GHz Status	● On
2.4 GHz Network name (SSID)	DVG-N5402G-eee0
2.4 GHz security	WPA2-PSK
Wi-Fi 5 GHz Status	● On
5 GHz Network name (SSID)	DVG-N5402G-5G-eee0
5 GHz security	WPA2-PSK
WAN connection status (IPv4)	WAN type: Dynamic IP; Unknown error;
WAN connection status (IPv6)	No connection is created or no installed default gateway

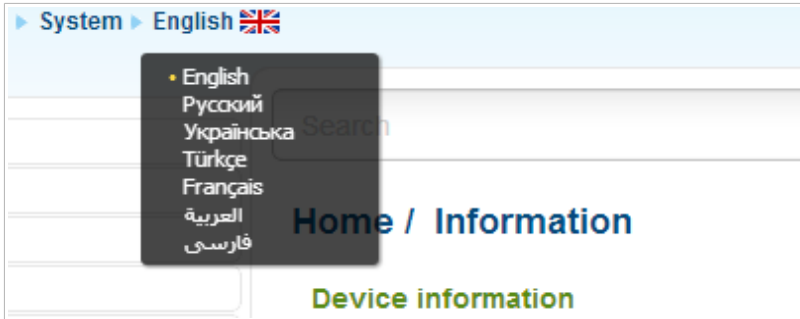
VoIP lines status

Line 1 status	Registration off ●
Phone 1 status	Handset is put down ☑
Line 2 status	Registration off ●
Phone 2 status	Handset is put down ☑

USB

Status	● Disconnected
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The web-based interface of the router is multilingual. If you need to select another language for the web-based interface, place the mouse pointer over the **English** caption in the top part of the page and select a language from the menu displayed.



To configure the router use the menu in the left part of the page. Go to the relevant section and select the needed page or run the needed Wizard in the **Home** section.

Also you can find a specific page via search. To do this, enter the name of the page, wholly or partly, in the search bar in the top part of the web-based interface page, and then select a needed link in the search results.

Configuring Connection to the Internet

! 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 LTE USB modem, it is required to disable the PIN code check on the identification card prior to connecting the USB modem to the router.⁴

An active LTE WAN connection will be automatically created on the **Net / WAN** page when connecting a USB modem to the router. If the connection has not been created automatically, create a new connection manually.

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

1. Go to the **Net / WAN** page and click the **Add** button.
2. In the **General settings** section, in the **Provider** drop-down list, leave the **Manually** value.
3. From the **Connection Type** drop-down list, select the **LTE** value.
4. Make sure that the **USB** value is selected from the **Interface** drop-down list.
5. Specify a name for your connection (any name for easier identification) in the **Name** field.

⁴ Some models of LTE USB modems allow disabling the PIN code check in the web-based interface of the router.

General settings

Provider:	Manually ▼
Connection Type:	LTE ▼
Interface:	USB ▼
Name:*	<input type="text"/>
Enable:	<input checked="" type="checkbox"/>
Direction:	WAN

- 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, select the **Set username and password** checkbox and fill in the corresponding fields.

USB modem

Mode:

APN:

Set username and password:

Username:

Password:

- If your operator has provided the address of the DNS server, in the **IP** section, deselect the **Obtain DNS server addresses automatically** checkbox and fill in the **Primary DNS server** field.

IP

Obtain DNS server addresses automatically:

Primary DNS server:*

Secondary DNS server:

Vendor ID:

Hostname:

- Click the **Apply** button.
- On the **Net / 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, proceed to the **3G/LTE modem / PIN** menu and enter the PIN code on the page displayed⁵.

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 **Net / WAN** page when connecting a USB modem to the router⁶. If the connection has not been created automatically, create a new connection manually.

1. Go to the **Net / WAN** page and click the **Add** button.
2. In the **General settings** section, from the **Provider** drop-down list, select your country and operator to automatically specify all settings required to connect to the Internet. To specify all settings independently, leave the **Manually** value.
3. From the **Connection Type** drop-down list, select the **3G** value.
4. Make sure that the **USB** value is selected from the **Interface** drop-down list.
5. Specify a name for your connection (any name for easier identification) in the **Name** field.



The screenshot shows a web interface titled "General settings" with the following fields:

Provider:	Manually
Connection Type:	3G
Interface:	USB
Name:*	<input type="text"/>
Enable:	<input checked="" type="checkbox"/>
Direction:	WAN

-
- 5 For GSM USB modems only. For CDMA USB modems, it is required to disable the PIN code check on the identification card prior to connecting the USB modem to the router.
 - 6 For GSM USB modems only.

- 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** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required. If you need to specify the access point name, fill in the **APN** field. In the **Dial number** field, enter the number dialed to connect to the authorization server of the operator.

PPP

Username:*

Without authorization:

Password:*

Password confirmation:*

APN:

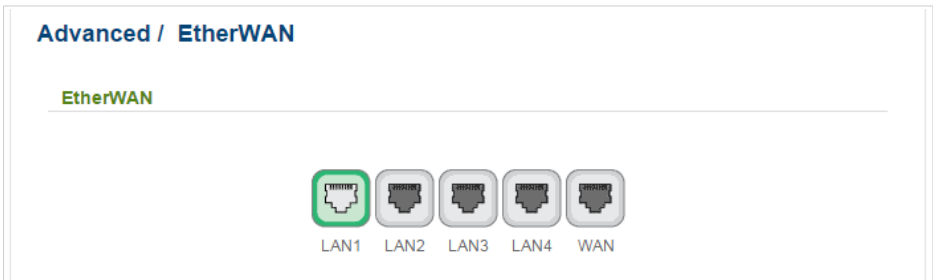
Dial number:*

Authentication algorithm: ▼



- Click the **Apply** button.
- On the **Net / 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. If you configure a connection to a fiber optic line, skip this step.





2. Go to the **Net / WAN** page and delete the default connection. To do this, select the checkbox located to the left of the relevant line in the table and click the **Delete** button.
3. Click the **Add** button.
4. In the **General settings** section, in the **Provider** drop-down list, leave the **Manually** value.
5. From the **Connection Type** drop-down list, select the needed value.
6. From the **Interface** drop-down list, select the **Internet** value.
7. Specify a name for your connection (any name for easier identification) in the **Name** field.

8. If your ISP uses MAC address binding, in the **Ethernet** section, in the **MAC** 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 router at the moment) as the MAC address of the WAN interface, click the **Clone MAC address of your computer** icon (). To set the address of 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). To set the router's MAC address as the MAC address of the WAN interface, click the **Restore default MAC address** icon ().

Ethernet

MTU:*

MAC:  

9. If your ISP uses authorization via the 802.1x protocol, in the **Authorization via 802.1x protocol** section, select the **Authorization in the ISP's network via 802.1x protocol** checkbox. Fill in the fields of the section in accordance with data provided by your ISP. *The section is not displayed for the connection of PPPoE, IPv6 PPPoE, PPPoE Dual Stack, Static IPv6, and Dynamic IPv6 types.*

Authorization via 802.1x protocol

Authorization in the ISP's network via 802.1x protocol:

Authentication method:

Username:

Password:

10. **For connection of PPPoE type:** in the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required.

PPP

Username:*

Without authorization:

Password:*

Password confirmation:*

11. **For connection of IPv6 PPPoE or PPPoE Dual Stack type:** in the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required. If you need to specify the gateway address manually, in the **IPv6 gateway** section, deselect the **SLAAC** checkbox and fill in the **Static IPv6 gateway address** field.

PPP

Username:*

Without authorization:

Password:*

Password confirmation:*

IPv6 gateway

SLAAC:

Static IPv6 gateway address:

12. *For connection of Static IP type:* in the **IP** section, fill in the **IP Address**, **Netmask**, **Gateway IP address**, and **Primary DNS server** fields.

IP

IP Address:*

Netmask:*

Gateway IP address:*

Primary DNS server:*

Secondary DNS server:

13. *For connection of Dynamic IP type:* if your ISP has provided the address of the DNS server, in the **IP** section, deselect the **Obtain DNS server addresses automatically** checkbox and fill in the **Primary DNS server** field.

IP

Obtain DNS server addresses automatically:

Primary DNS server:*

Secondary DNS server:

Vendor ID:

Hostname:

14. **For connection of Static IPv6 type:** in the **IP** section, fill in the **IPv6 address** and **Gateway IPv6 address** fields.

IP

IPv6 address:*

Gateway IPv6 address:*

Primary IPv6 DNS server:

Secondary IPv6 DNS server:

15. **For connection of Dynamic IPv6 type:** if your ISP has provided the address of the DNS server, in the **IP** section, deselect the **Obtain DNS server addresses automatically** checkbox and fill in the **Static primary DNS server** field.

IP

Get IPv6:

Gateway by SLAAC:

Static IPv6 gateway address:

Obtain DNS server addresses automatically:

Static primary DNS server:

Static secondary DNS server:

16. *For connection of PPPoE + Static IP type*: in the **IP** section, fill in the **IP Address**, **Netmask**, **Gateway IP address**, and **Primary DNS server** fields. Then in the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required.

IP

IP Address:*	<input type="text"/>
Netmask:*	<input type="text"/>
Gateway IP address:*	<input type="text"/>
Primary DNS server:*	<input type="text"/>
Secondary DNS server:	<input type="text"/>

PPP

Username:*	<input type="text"/>
Without authorization:	<input type="checkbox"/>
Password:*	<input type="password"/>
Password confirmation:*	<input type="password"/>

17. *For connection of PPPoE + Dynamic IP type:* if your ISP has provided the address of the DNS server, in the **IP** section, deselect the **Obtain DNS server addresses automatically** checkbox and fill in the **Primary DNS server** field. Then in the **PPP** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required.

IP

Obtain DNS server addresses automatically:

Primary DNS server:*

Secondary DNS server:

Vendor ID:

Hostname:

PPP

Username:*

Without authorization:

Password:*

Password confirmation:*

18. **For connection of PPTP + Static IP or L2TP + Static IP type:** in the **IP** section, fill in the **IP Address**, **Netmask**, **Gateway IP address**, and **Primary DNS server** fields. Then in the **VPN** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required. In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server. If your ISP applies encryption, select a needed value from the **Encryption** drop-down list.

IP

IP Address:*

Netmask:*

Gateway IP address:*

Primary DNS server:*

Secondary DNS server:

VPN

Connect automatically:

Username:*

Without authorization:

Password:*

Password confirmation:*

VPN server address:*

Encryption:

19. **For connection of PPTP + Dynamic IP or L2TP + Dynamic IP type:** if your ISP has provided the address of the DNS server, in the **IP** section, deselect the **Obtain DNS server addresses automatically** checkbox and fill in the **Primary DNS server** field. Then in the **VPN** section, enter authorization data provided by your ISP (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields), or select the **Without authorization** checkbox if authorization is not required. In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server. If your ISP applies encryption, select a needed value from the **Encryption** drop-down list.

IP

Obtain DNS server addresses automatically:

Primary DNS server:*

Secondary DNS server:

Vendor ID:

Hostname:

VPN

Connect automatically:

Username:*

Without authorization:

Password:*

Password confirmation:*

VPN server address:*

Encryption:

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

Example of Connection via VLANs

If your ISP provides:

- access to the Internet via the VLAN with the tag (VLAN ID) **2**, the **PPPoE** connection type, the login **user**, and the password **user_password**,
- access to IPTV service via the VLAN with the tag (VLAN ID) **10**,

and your set-top box is connected to the LAN port 3, then follow the next steps to configure the router.

1. Go to the **Net / WAN** page, select the default connection and click the **Delete** button.
2. Go to the **Advanced / VLAN** page.
3. Select the **lan** group.
4. Deselect the **port3** checkbox.
5. Click the **Apply** button.
6. Select the **wan** group and click the **Delete** button.
7. Click the **Add** button.
8. In the **Name** field, enter a name for the group (**INTERNET**).
9. From the **Type** drop-down list, select the **Tagged NAT** value.
10. From the **Tagged port** drop-down list, select the value **internet**.
11. In the **VLAN ID** field, enter **2**.
12. Click the **Apply** button.

You have created the group of ports for connection to the Internet.

13. Click the **Add** button.
14. In the **Name** field, enter a name for the new group (**IPTV**).
15. From the **Type** drop-down list, select the **Bridge** value.
16. From the **Tagged port** drop-down list, select the **internet** value.
17. Select the **port3** checkbox.
18. In the **VLAN ID** field, enter **10**.
19. Click the **Apply** button.

You have created the group of ports for IPTV service.

Advanced / VLAN

Name	Type	Untagged ports	Tagged port	VLAN ID	Enable
lan	LAN	port1,port2,port4,wifi1			Yes
INTERNET	Tagged NAT		internet	2	Yes
IPTV	Bridge	port3	internet	10	Yes

20. Log into the web-based interface and go to the **Net / WAN** page.
21. Click the **Add** button.
22. On the opened page, select the **PPPoE** value from the **Connection Type** drop-down list.
23. From the **Interface** drop-down list, select the **Internet.2** value.
24. In the **Username** field, enter **user**.
25. Deselect the **Without authorization** checkbox.
26. In the **Password** and **Password confirmation** fields, enter **user_password**.
27. Click the **Apply** button.

Configuring Local Area Network

1. Go to the **Net / LAN** page. If needed, change the IP address of the router's LAN interface and the mask of the local subnet in the **IP Address** and **Netmask** fields. If you need to change the IPv6 address of the router's LAN interface, deselect the **DHCP PD** checkbox in the **IPv6 address assignment** section and specify the relevant value in the **IPv6 address** field.

IP Address:*	<input type="text" value="192.168.8.254"/>
Netmask:*	<input type="text" value="255.255.255.0"/>
IPv6 address:	<input type="text" value="fd01::1/64"/>

2. **DHCP server.** By default, the built-in DHCP server of the router assigns IPv4 addresses to the devices of the LAN. If you want to manually assign IPv4 addresses, disable the DHCP server (select the **Disable** value from the **Mode** drop-down list).

DHCP server	
Mode:	<input type="text" value="Enable"/>
DNS Relay:	<input checked="" type="checkbox"/>
Start IP:*	<input type="text" value="192.168.8.1"/>
End IP:*	<input type="text" value="192.168.8.253"/>
Lease time (min):*	<input type="text" value="1440"/>

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

IPv6 address assignment

DHCP PD:

Mode:

DNS Relay:



Leased Time (min):*

4. After specifying the needed parameters on the **Net / LAN** page, click the **Apply** button.

Voice Functions of Router

Configuring VoIP via SIP

1. Connect the phone to an FXS port of the router using an RJ-11 cable.
2. Go to the **VoIP / Basic settings** page.
3. If your provider requires to specify a domain name upon registration on the SIP proxy server, in the **Basic settings** section, fill in the **SIP domain name** field.
4. Fill in the **SIP proxy** and **SIP registrar** fields (as a rule, these addresses are the same).
5. If your provider does not require automatic obtainment of the SIP proxy server address, deselect the **Enable DHCP option 120** checkbox.
6. From the **Bound interface name** drop-down list, select the interface which will be used by VoIP.
7. In the section corresponding to the port to which the analog phone is connected, select the **Registration** checkbox, 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.

Registration:	<input type="checkbox"/>
Username:	<input type="text"/>
SIP ID / Number:	<input type="text"/>
Password:	<input type="text"/>
Line status:	Registration off 
Phone status:	Handset is put down 

8. Click the **Apply** button.

Communication Using PSTN

Connect an RJ-11 cable to the **Line** port of the router and a phone jack. If the router is connected to a PSTN line, an incoming call comes to the phone connected to the **Phone 1** port.

To configure outgoing calls, go to the **VoIP / Advanced settings** page.

PSTN options

PSTN Routing Prefix:

In the **PSTN options** section, fill in the **PSTN Routing Prefix** field (enter the prefix which you will use in order to access the PSTN line from analog phones connected to the router).

Configuring Guest Wireless Network

1. Go to the **Wi-Fi / Basic settings** page of the band for which you configure the guest network.
2. Select **2** from the **MBSSID** drop-down list.

Wi-Fi / Basic settings / 2.4 GHz

Enable Wireless:

Broadcast wireless network:

i This function allows you to enable or disable broadcasting wireless network without disconnecting the radio router. Can be used in conjunction with a "Client Wi-Fi"

MBSSID:

BSSID:

3. Click the **Apply** button.
4. From the **BSSID** drop-down list, select the created part of the network (the second value in the list).
5. Select the **Enable guest network** checkbox.
6. If needed, specify a new name for the guest network in the **Network name (SSID)** field.
7. Click the **Apply** button.
8. Go to the **Wi-Fi / Security settings** page of the band for which you configure the guest network.
9. From the **BSSID** drop-down list, select the guest network (the second value in the list).
10. Select the **WPA2-PSK** value from the **Network Authentication** drop-down list.

BSSID:	<input type="text" value="E4:6F:13:3C:4E:61"/>
Network Authentication:	<input type="text" value="WPA2-PSK"/>
Encryption Key PSK:*	<input type="text"/>
WPA Encryption settings	
WPA Encryption:	<input type="text" value="AES"/>
WPA renewal:*	<input type="text" value="3600"/>

11. Enter a key (a password that will be used to access your guest network) in the **Encryption Key PSK** field. Use digits and Latin characters.
12. Select the **AES** value from the **WPA Encryption** drop-down list.
13. Click the **Apply** button.

If needed, you can also configure a guest network for the other band of the wireless network.

Saving Settings to Non-volatile Memory

In order to avoid losing the new settings upon hardware reboot (accidental or intentional power-off of the device), it is recommended to save the settings to the non-volatile memory of the router.

Place the mouse pointer over the **System** caption in the top part of the page



and click the icon (**Save**) in the menu displayed. Then again place the



mouse pointer over the **System** caption and click the icon (**Reboot device**).

Wait until the router is rebooted. Now you can use it to access the Internet or access the web-based interface of the router to configure additional parameters. For detailed description of every page of the web-based interface, see the “*User Manual*” document (see www.dlink.ru).

SPECIFICATIONS*

Hardware	
Interfaces	<ul style="list-style-type: none"> · 1000BASE-X SFP WAN port · 4 10/100/1000BASE-T LAN ports · 2 RJ-11 FXS ports · 1 RJ-11 PSTN (lifeline) port · USB 2.0 port
LEDs	<ul style="list-style-type: none"> · POWER · 2.4GHz · 5GHz · SFP · 4 LAN LEDs · USB · LINE · 2 PHONE LEDs · WPS
Buttons	<ul style="list-style-type: none"> · ON/OFF button to power on/power off · RESET button to restore factory default settings · WPS button to set up secure wireless connection and enable/disable wireless network
Antenna	<ul style="list-style-type: none"> · Two external non-detachable antennas (5dBi gain for 2.4GHz and 5GHz)
MIMO	<ul style="list-style-type: none"> · 2 x 2
Power connector	<ul style="list-style-type: none"> · Power input connector (DC)

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

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)
Call Features	<ul style="list-style-type: none"> · Direct IP-to-IP call without SIP proxy · Lifeline (PSTN-backup) · PSTN call by prefix · 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 · Intercom (internal calls without SIP server) · Filtering by IP address (white/black list) · Alarm clock
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"> · LTE · 3G · PPPoE · IPv6 PPPoE · PPPoE Dual Stack · Static IP / Dynamic IP · Static IPv6 / Dynamic IPv6 · PPPoE + Static IP / Dynamic IP · PPTP/L2TP · PPTP/L2TP + Static IP · PPTP/L2TP + Dynamic IP
Network functions	<ul style="list-style-type: none"> · Support of IEEE 802.1X for Internet connection · DHCP server/relay · DHCPv6 server (Stateful/Stateless), IPv6 prefix delegation · DNS relay · Support of DNSv6 AAAA records · Dynamic DNS · Static IP routing · Static IPv6 routing · IGMP Proxy · RIP · Support of UPnP IGD · Support of VLAN · 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
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
VPN	<ul style="list-style-type: none"> · IPsec/PPTP/L2TP/PPPoE pass-through · IPsec tunnels

Software	
USB interface functions	<ul style="list-style-type: none"> · USB modem Auto connection to available type of supported network (4G/3G/2G)⁷ Auto configuration of connection upon plugging in USB modem⁸ · Enabling/disabling PIN code check, changing PIN code⁹ · 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) · Multilingual web-based interface for configuration and management · Notification on connection problems and auto redirect to settings · Firmware update via web-based interface · Automatic notification on new firmware version · Saving/restoring configuration to/from file · Support of logging to remote host/connected USB storage · Automatic synchronization of system time with NTP server and manual time/date setup · Ping utility · Traceroute utility · TR-069 client
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

7 For LTE and GSM USB modems.

8 For LTE and GSM USB modems.

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

Wireless Module Parameters	
Wireless 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 · Guest Wi-Fi / support of MBSSID · Limitation of wireless network rate
Wireless 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)
Transmitter power <i>The maximum value of the transmitter output power depends upon the radio frequency regulations applied in your country</i>	<ul style="list-style-type: none"> · 802.11a (typical at room temperature 25 °C) 15dBm at 6, 54Mbps · 802.11b (typical at room temperature 25 °C) 14dBm at 1, 2, 5.5, 11Mbps · 802.11g (typical at room temperature 25 °C) 14dBm at 6, 9, 12, 18, 24, 36, 48, 54Mbps · 802.11n (typical at room temperature 25 °C) 2.4GHz, HT20 13dBm at MCS0~15 2.4GHz, HT40 12dBm at MCS0~15 5GHz, HT20/HT40 15dBm at MCS0 15dBm at MCS7 · 802.11ac (typical at room temperature 25 °C) VHT20/VHT40/VHT80 15dBm at MCS0 15dBm at MCS9

Wireless Module Parameters

Receiver sensitivity

- 802.11a (typical at PER < 10% at room temperature 25 °C)
 - 87dBm at 6Mbps
 - 86dBm at 9Mbps
 - 84dBm at 12Mbps
 - 82dBm at 18Mbps
 - 79dBm at 24Mbps
 - 76dBm at 36Mbps
 - 71dBm at 48Mbps
 - 70dBm at 54Mbps

- 802.11b (typical at PER = 10% at room temperature 25 °C)
 - 84dBm at 1, 2Mbps
 - 82dBm at 5.5Mbps
 - 79dBm at 11Mbps

- 802.11g (typical at PER = 10% at room temperature 25 °C)
 - 82dBm at 6Mbps
 - 81dBm at 9Mbps
 - 79dBm at 12Mbps
 - 77dBm at 18Mbps
 - 74dBm at 24Mbps
 - 70dBm at 36Mbps
 - 66dBm at 48Mbps
 - 65dBm at 54Mbps

- 802.11n (typical at PER < 10% at room temperature 25 °C)
 - 2.4GHz, HT20
 - 82dBm at MCS0/8
 - 79dBm at MCS1/9
 - 77dBm at MCS2/10
 - 74dBm at MCS3/11
 - 70dBm at MCS4/12
 - 66dBm at MCS5/13
 - 65dBm at MCS6/14
 - 64dBm at MCS7/15
 - 2.4GHz, HT40
 - 79dBm at MCS0/8
 - 76dBm at MCS1/9
 - 74dBm at MCS2/10
 - 71dBm at MCS3/11
 - 67dBm at MCS4/12
 - 63dBm at MCS5/13
 - 62dBm at MCS6/14
 - 61dBm at MCS7/15

Wireless Module Parameters

	<p>5GHz, HT20 -86dBm at MCS0/8 -83dBm at MCS1/9 -81dBm at MCS2/10 -77dBm at MCS3/11 -75dBm at MCS4/12 -70dBm at MCS5/13 -69dBm at MCS6/14 -68dBm at MCS7/15</p> <p>5GHz, HT40 -83dBm at MCS0/8 -80dBm at MCS1/9 -78dBm at MCS2/10 -75dBm at MCS3/11 -72dBm at MCS4/12 -67dBm at MCS5/13 -66dBm at MCS6/14 -65dBm at MCS7/15</p> <ul style="list-style-type: none"> · 802.11ac (typical at PER < 10% at room temperature 25 °C) HT20 -61dBm at MCS8 -59dBm at MCS9 HT40 -58dBm at MCS8 -56dBm at MCS9 HT80 -80dBm at MCS0 -77dBm at MCS1 -75dBm at MCS2 -71dBm at MCS3 -69dBm at MCS4 -64dBm at MCS5 -62dBm at MCS6 -61dBm at MCS7 -56dBm at MCS8 -53dBm at MCS9
<p>Modulation schemes</p>	<ul style="list-style-type: none"> · 802.11a: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11b: DQPSK, DBPSK, 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)	· 227 x 159 x 38 mm (8.93 x 6.26 x 1.5 in)
Weight	· 160 g (0.35 lb)
Operating Environment	
Power	· Output: 12V DC, 2A
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)
Supported USB modems¹⁰	
GSM	<ul style="list-style-type: none"> · 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 E352 (Megafon) · Prolink PHS600 · ZTE MF112 · ZTE MF192 · ZTE MF626 · ZTE MF627 · ZTE MF652 · ZTE MF667 · ZTE MF668 · ZTE MF752

¹⁰ The manufacturer does not guarantee proper operation of the router with every modification of the firmware of USB modems.

Supported USB modems	
CDMA	<ul style="list-style-type: none"> · Airplus MCD-650 · Airplus MCD-800 · AnyDATA ADU-300A · AnyDATA ADU-500A · AnyDATA ADU-510A · Huawei EC306 · ZTE AC5710 · ZTE AC5730
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 in USB 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/>