



# **DSL-2750U**

Wireless ADSL2+ Router with **3G/LTE/Ethernet WAN Support** and USB Port

# **BEFORE YOU BEGIN**

#### **Delivery Package**

- Router DSL-2750U
- Power adapter DC 12V/1A
- RJ-11 telephone cable
- Ethernet cable
- Splitter
- "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 <u>www.dlink.ru</u>).

# **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	192.168.1.1
Username (login)	admin
Password	admin
Name of wireless network (SSID)	DSL-2750U
Network key (PSK)	see WPS PIN on the barcode label on the bottom panel of the device

### 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 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 router.
- An 802.11b, g, or n Wi-Fi adapter to create a wireless network.
- A USB modem (when it is necessary to connect to the Internet via mobile operators' networks)<sup>1</sup>.

Your USB modem should be equipped with an active SIM card 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 USB modems, it is required to disable the PIN code check on the SIM card prior to connecting the USB modem to the router.

<sup>1</sup> Contact your operator to get information on the service coverage and fees.

# **CONNECTING TO PC**

#### PC with Ethernet Adapter

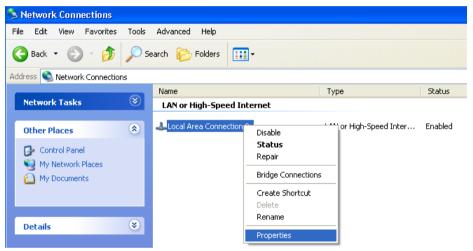
- 1. Make sure that your PC is powered off.
- 2. Connect an Ethernet cable between any of four Ethernet ports located on the back panel of the router and the Ethernet port of your PC.
- 3. *To connect via USB modem:* connect your USB modem to the USB port<sup>2</sup> located on the back panel of the router.
- In some cases you will need to reboot the router after connection of the USB modem.
- 4. *To connect the router to a DSL line:* connect a phone cable between the DSL port of the router and the ADSL OUT port of the splitter. Connect your phone to the PHONE port of the splitter. Then connect another phone cable between a phone jack and the ADSL IN port of the splitter.
- 5. *To connect the router to an Ethernet line:* run the Initial Configuration Wizard and select the router's LAN port that will be used as the WAN port. Then connect the Ethernet cable between the selected Ethernet port located on the back panel of the router and the Ethernet line.
- 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).

<sup>2</sup> 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.

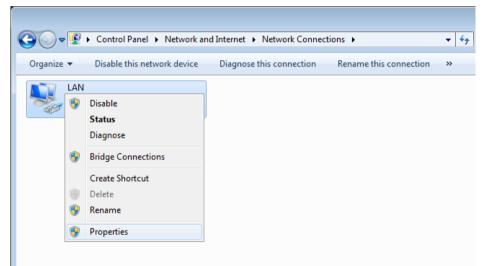
Internet Protocol (TCP/IP) Prope	erties 🛛 🛛 🛛 🛛
General Alternate Configuration	
You can get IP settings assigned auto this capability. Otherwise, you need to the appropriate IP settings.	
Obtain an IP address automatical	ly
Use the following IP address: —	
IP address:	
S <u>u</u> bnet mask:	
Default gateway:	
⊙ Obtain DNS server address autor	natically
OUse the following DNS server ad	dresses:
Preferred DNS server:	
<u>A</u> lternate DNS server:	
	Ad <u>v</u> anced
	OK Cancel

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.



 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.

Internet Protocol Version 4 (TCP/IPv4)	Properties ? 🔀
General Alternate Configuration	
You can get IP settings assigned auto this capability. Otherwise, you need to for the appropriate IP settings.	
) Obtain an IP address automatica	ly l
Use the following IP address: —	
IP address:	
S <u>u</u> bnet mask:	· · · ·
Default gateway:	
Obtain DNS server address autor	matically
OUse the following DNS server add	dresses:
Preferred DNS server:	· · · · ·
Alternate DNS server:	· · ·
Vaļidate settings upon exit	Ad <u>v</u> anced
	OK Cancel

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 port<sup>3</sup> located on the back panel of the router.
- In some cases you will need to reboot the router after connection of the USB modem.
- 2. *To connect the router to a DSL line:* connect a phone cable between the DSL port of the router and the ADSL OUT port of the splitter. Connect your phone to the PHONE port of the splitter. Then connect another phone cable between a phone jack and the ADSL IN port of the splitter.
- 3. *To connect the router to an Ethernet line:* run the Initial Configuration Wizard and select the router's LAN port that will be used as the WAN port. Then connect the Ethernet cable between the selected Ethernet port located on the back panel of the router and the Ethernet line.
- 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.

<sup>3</sup> 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 **DSL-2750U** 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.



6. In the opened window, in the list of available wireless networks, select the wireless network DSL-2750U and click the Connect button.



- 7. 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.
- 8. 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. Г

# **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, **192.168.1.1**) or its domain name (by default, **dlinkrouter.local**) with a dot at the end. 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.

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 Wizard opens (see the *Initial Configuration Wizard* 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

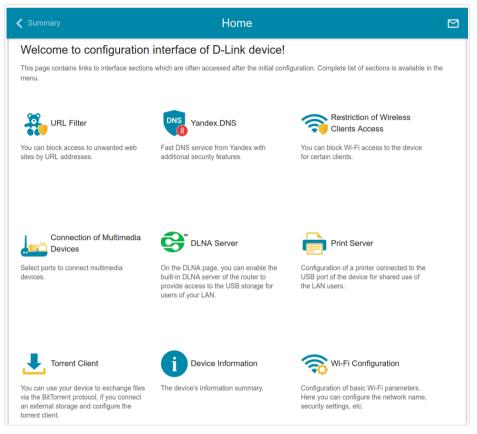
If you configured the device previously, after access to the web-based interface the login page opens. Enter the username (admin) in the **Username** field and the password you specified in the **Password** field, then click the **LOGIN** button.

Login		
Username		
Password		٩
	LOGIN	CLEAR

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

Configuration	Sun	imary	[
Device Information	n	LAN	
Model:	DSL-2750U	LAN IPv4:	192.168.1
Hardware revision:	U3	LAN IPv6:	fd01::1/6
Firmware version:	3.0.1	Wireless connections:	
Build time:	Tue Feb 20 17:19:01 MSK 2018	Wired connections:	
Vendor:	D-Link Russia		
Support:	support@dlink.ru		
Summary:	Root filesystem image for DSL-2750U	LAN Ports	
Uptime:	0 days 00:20:32	LAN1:	Off
		LAN2:	Off
Wi-Fi 2.4 GHz		LAN3:	
		LAN4:	<b></b>
Status:	On 🕒		
Broadcasting:	On 🌘		
Additional networks:	0	DSL Status	
Network name (SSID):	DSL-2750U-80ff	Line status:	Off
Security:	WPA2-PSK		
WAN IPv4		USB Devices	
Connection type:	Dynamic IPv4	No connected devices	
Status:	Off 😑		
		Yandex.DN	
		Safe	8 devices 🛛
		Child	0 devices
		Protection off	0 devices

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



The web-based interface of the router is multilingual. You can select the needed language upon the initial configuration of the web-based interface of the router or in the **System / Configuration** section of the menu.

Other settings of the router are available in the menu in the left part of the page. Go to the relevant section and select the needed page or run the wizard in the **Initial Configuration** section.

# Initial Configuration Wizard

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



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

If the device has not been configured previously or the default settings have been restored, the Initial Configuration Wizard starts 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 another language.



2. On the next page, click the **CONTINUE** button.

#### **Selecting Operation Mode**

In order to connect your device to an ADSL line, on the **Device mode** page, from the **Connection method** list, select the **ADSL** value. In this mode you can configure a WAN connection, set your own settings for the wireless network, configure LAN ports to connect an STB or VoIP phone, and set your own password for access to the web-based interface of the device.

ADSL  Connect the ISP's cable according to the connection scheme. The Internet will be accesses via ADSL.  Work mode Router	Connection method		
Connect the ISP's cable according to the connection scheme. The Internet will be accesses via ADSL.  Nork mode	ADSL	-	
	cheme. The Internet will be acces		Splitter SSID

In order to connect your device to an Ethernet line, on the **Device mode** page, from the **Connection method** list, select the **Ethernet (LAN)** value. In this mode you can configure a LAN port as a WAN port, configure a WAN connection, set your own settings for the wireless network, configure LAN ports to connect an STB or VoIP phone, and set your own password for access to the web-based interface of the device.

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

Device mode		
Connection method		
3G/LTE modem	-	
① Connect a USB modem with an aumobile operator to the device or instal into the relevant slot, if your device is 3G/LTE modem.	I an active SIM card	

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

#### **Creating 3G/LTE WAN Connection**

This configuration step is available for the **3G/LTE modem** mode.

1. If the PIN code check is enabled for the SIM card inserted into your USB modem, enter the PIN code in the **PIN** field and click the **APPLY** button.

USB mode	em detecting
Vendor: Model: Mode:	MOBILE E3372 LTE
Please enter Attempts left:	the PIN code of the SIM card 3
PIN*	
	APPLY
	<b>C BACK</b>

2. Please wait while the router automatically creates a WAN connection for your mobile operator.

USB mod	dem detecting
	MOBILE E3372 LTE ction has been created automatically. " to continue configuration

3. Click the **NEXT** button.

If the router failed to create a WAN connection automatically, click the **CONFIGURE MANUALLY** button. On the **Internet connection type** page, configure all needed settings and click the **NEXT** button.

#### **Selecting Ethernet WAN Port**

This configuration step is available for the **Ethernet (LAN)** connection method.

1. On the **Device connection** page, select a LAN port that will be used as the WAN port.

Device connection
Select a port which will be used to connect to the Internet; then plug in the WAN cable to the selected port of the device:
DSL 4 3 LAN 2 1
< BACK NEXT >

2. Click the **NEXT** button.

#### **Configuring Ethernet WAN Connection**

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

1. On the **Internet connection type** page, from the **Connection type** list, select the connection type used by your ISP and fill in the fields displayed on the page.

*Static IPv4:* Fill in the following fields: IP address, Netmask, Gateway IP address, and DNS IP address.

IP address*		
Netmask*		
Gateway IP address*		
DNS IP address*		

*Static IPv6:* Fill in the following fields: IP address, Prefix, and Gateway IP address.

IP address*	
Prefix*	
Gateway IP address*	

**PPPOE, IPv6 PPPOE, PPPOE Dual Stack:** 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 ( O ) to display the entered password. If authorization is not required, select the **Without authorization** checkbox.

- 2. If your ISP uses MAC address binding, select the **Clone MAC address** of your device checkbox.
- 3. If the Internet access is provided via a VLAN channel, select the **Use VLAN** checkbox and fill in the **VLAN ID** field.

Clone MAC address of your device
In some ISP's networks, it is required to register a certain MAC address in order to get access to the Internet.
Use VLAN
Select the checkbox if the Internet access is provided via a VLAN channel.
VLAN ID*

4. Click the **NEXT** button.

#### **Configuring ADSL WAN Connection**

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

1. On the **Internet connection type** page, from the **Connection type** list, select the connection type used by your ISP and fill in the fields displayed on the page.

*Static IPv4, IPoA:* Fill in the following fields: IP address, Netmask, Gateway IP address, and DNS IP address.

IP address*		
Netmask*		
Gateway IP address*		
DNS IP address*		

*Static IPv6:* Fill in the following fields: IP address, Prefix, and Gateway IP address.

IP address*	
Prefix*	
Gateway IP address*	

**PPPOE, IPv6 PPPOE, PPPOE Dual Stack, PPPoA:** 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 ( O ) to display the entered password. If authorization is not required, select the **Without** authorization checkbox.

Without authorization		
Username*		
Password*	٩	

2. Specify the VPI and VCI values in the relevant fields.

VPI (0-255)\* VCI (32 - 65535)\*

3. Click the **NEXT** button.

#### **Configuring Wireless Network**

- 1. On the **Wireless Network 2.4 GHz** page, in the **Network name** field, specify your own name for the wireless network or leave the value suggested by the router.
- 2. In the **Password** field, specify your own password for access to the wireless network or leave the value suggested by the router (WPS PIN of the device, see the barcode label).
- 3. You can restore the parameters of the wireless network specified before resetting to factory defaults. To do this, click the **RESTORE** button.

Wireless Network 2.4	Hz
Enable	
Network name*	
mywifi_154	
() The number of characters	ould not exceed 32
Open network	
Password*	
76543210	•
<ol> <li>Password should be between</li> </ol>	8 and 63 ASCII characters
<b>RESTORE</b> You can restore	etwork name and security that was set before applying factory settings.

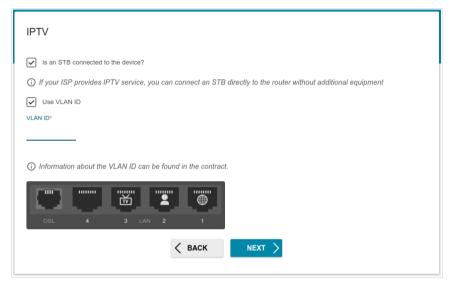
4. If you want to create an additional wireless network isolated from your LAN, select the **Enable guest network** checkbox.

EI	nable guest network
	uest Wi-Fi network allows connection to your device and getting access to the Internet. on that computers connected to this wireless network will be isolated from the resources of your main local area rk.
This he	elps to secure your LAN while you provide access to the Internet for temporary users.
Network	<pre>c name*</pre>
(i) Th	e number of characters should not exceed 32
✓ 0	pen network
Max as:	sociated clients*
0	
✓ E	nable shaping
Shaping	) (Mbit/s)*
0	

- 5. In the **Network name** field, specify your own name for the guest wireless network or leave the value suggested by the router.
- 6. If you want to create a password for access to the guest wireless network, deselect the **Open network** checkbox and fill in the **Password** field.
- 7. If you want to limit the bandwidth of the guest wireless network, select the **Enable shaping** checkbox and fill in the **Shaping** field.
- 8. Click the **NEXT** button.

#### **Configuring LAN Ports for IPTV/VoIP**

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



- 2. Select a free LAN port for connecting your set-top box.
- 3. For the **Ethernet** (LAN) connection method: If the IPTV service is provided via a VLAN channel, select the **Use VLAN ID** checkbox and fill in the **VLAN ID** field.
- 4. *For the ADSL connection method*: Specify the VPI and VCI values in the relevant fields.
- 5. Click the **NEXT** button.

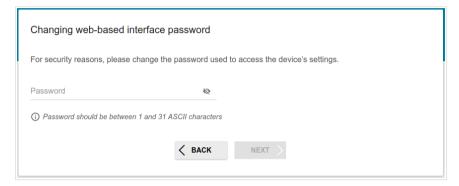
6. On the VoIP page, select the Is an IP phone connected to the device checkbox.

VoIP
✓ Is an IP phone connected to the device?
If your ISP provides VoIP service, you can connect an IP phone directly to the router without additional equipment
Use VLAN ID
VLAN ID*
Information about the VLAN ID can be found in the contract.

- 7. Select a free LAN port for connecting your IP phone.
- 8. For the **Ethernet (LAN)** connection method: If the VoIP service is provided via a VLAN channel, select the **Use VLAN ID** checkbox and fill in the **VLAN ID** field.
- 9. *For the ADSL connection method*: Specify the VPI and VCI values in the relevant fields.
- 10. Click the **NEXT** button.

#### **Changing Web-based Interface Password**

On this page you should change the default administrator password. You may set any password except **admin**. Use digits, Latin letters (uppercase and/or lowercase), and other characters available in the US keyboard layout.<sup>4</sup>



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

Click the **NEXT** button.

On the next page, check all the settings you have just specified.

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

To finish the Wizard, click the **APPLY** button. The router will apply settings, reboot, if needed, and check the Internet connection if the Wizard has configured a WAN connection.

<sup>4 0-9,</sup> A-Z, a-z, space, !"#\$%&'()\*+,-./:;<=>?@[\]^\_`{|}~.

## **Configuring Local Area Network**

- 1. Go to the **Connections Setup / LAN** page.
- If needed, change the IPv4 address of the router'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 Local IP Address section.

IP address*			
192.168.1.1			
Subnet mask*			
255.255.255.0			
Device domain name			
dlinkrouter.local			

 If needed, specify your own IPv6 address of the router's LAN interface. To do this, click the IPv6 tab and select the Static value from the Mode of local IPv6 address assignment drop-down list in the Local IPv6 Address section. Then specify the needed value in the IPv6 address field.

Local IPv6 Address	S	
Mode of local IPv6 address assignme	ent	
Static		•
IPv6 address*		
fd01::1		
Prefix*		
64		

4. IPv4 address assignment. 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 (click the IPv4 tab and select the Disable value from the Mode of dynamic IP address assignment drop-down list in the Dynamic IP Addresses section).

DHCP server		
Start IP*		
192.168.1.2		
End IP*		
192.168.1.254		
Lease time (in minut	es)*	
1440		

5. IPv6 address assignment. By default, the devices of the LAN automatically assign IPv6 addresses to themselves (the Stateless value is selected from the Mode of dynamic IPv6 address assignment drop-down list in the Dynamic IPv6 Addresses 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 router (select the Stateful value from the Mode of dynamic IPv6 address assignment drop-down list). If you want to manually assign IPv6 addresses to devices of the LAN, select the Disable value from the Mode of dynamic IPv6 addresses assignment drop-down list).

Dynamic IPv6 Addresses	
Mode of dynamic IPv6 address assignment	
Stateless	•
Lease time (in minutes)*	
5	

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

# **SPECIFICATIONS**<sup>\*</sup>

Hardware	
Processor	· RTL8676S
RAM	· 32MB, SDRAM
Flash	· 8MB, SPI
Interfaces	<ul> <li>RJ-11 ADSL port</li> <li>4 10/100BASE-TX LAN ports</li> <li>USB 2.0 port</li> </ul>
LEDs	<ul> <li>POWER</li> <li>4 LAN LEDs</li> <li>WLAN</li> <li>WPS</li> <li>USB</li> <li>DSL</li> <li>INTERNET</li> </ul>
Buttons	<ul> <li>ON/OFF button to power on/power off</li> <li>RESET button to restore factory default settings</li> <li>WPS button to set up wireless connection</li> <li>WIRELESS ON/OFF button to enable/disable wireless network</li> </ul>
Antenna	<ul> <li>Two external non-detachable omnidirectional antennas (5dBi gain)</li> </ul>
МІМО	· 2x2
Power connector	Power input connector (DC)

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

DSL Parameters	
ADSL Standards	<ul> <li>ADSL: Multi-mode, ANSI T1.413 Issue 2, ITU-T G.992.1 (G.dmt) Annex A, ITU-T G.992.2 (G.lite) Annex A, ITU-T G.994.1 (G.hs)</li> <li>ADSL2: ITU-T G.992.3 (G.dmt.bis) Annex A/L/M, ITU-T G.992.4 (G.lite.bis) Annex A</li> <li>ADSL2+: ITU-T G.992.5 Annex A/L/M</li> </ul>
ATM/PPP Protocols	<ul> <li>Bridged and routed Ethernet encapsulation</li> <li>VC-based or LLC-based multiplexing</li> <li>ATM Forum UNI3.1/4.0 PVC (up to 8 PVCs)</li> <li>ATM Adaptation Layer Type 5 (AAL5)</li> <li>ITU-T I.610 OAM F4/F5 loopback</li> <li>ATM QoS</li> <li>PPP over ATM (RFC 2364)</li> <li>PPP over Ethernet (PPPoE)</li> <li>Keep-alive for PPP connections</li> </ul>

Software	
WAN connection types	<ul> <li>LTE</li> <li>3G</li> <li>PPPoA</li> <li>PPPoE</li> <li>IPv6 PPPoE</li> <li>PPPoE Dual Stack</li> <li>IPoA</li> <li>Static IPv4 / Dynamic IPv4</li> <li>Static IPv6 / Dynamic IPv6</li> <li>Bridge</li> </ul>
Network functions	<ul> <li>DHCP server/relay</li> <li>Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation</li> <li>DNS relay</li> <li>Dynamic DNS</li> <li>Static IP routing</li> <li>Static IPv6 routing</li> <li>IGMP Proxy</li> <li>IGMP snooping</li> <li>RIP</li> <li>Support of UPnP IGD</li> <li>Support of VLAN</li> <li>WAN ping respond</li> <li>Support of RTSP</li> <li>WAN reservation</li> </ul>

Software	
Firewall functions	<ul> <li>Network Address Translation (NAT)</li> <li>Stateful Packet Inspection (SPI)</li> <li>IP filter</li> <li>IPv6 filter</li> <li>MAC filter</li> <li>URL filter</li> <li>DMZ</li> <li>Prevention of ARP and DDoS attacks</li> <li>Virtual servers</li> <li>Built-in Yandex.DNS web content filtering service</li> </ul>
VPN	IPsec/PPTP/L2TP/PPPoE pass-through
QoS	<ul> <li>Interface grouping</li> <li>VLAN priority (802.1p)</li> </ul>
USB interface functions	<ul> <li>USB modem         <ul> <li>Auto connection to available type of supported network (4G/3G/2G)</li> <li>Auto configuration of connection upon plugging in USB modem</li> <li>Enabling/disabling PIN code check, changing PIN code<sup>5</sup></li> <li>USB storage</li> <li>File browser</li> <li>Print server</li> <li>Access to storage via accounts</li> <li>Built-in Samba/FTP/DLNA server</li> <li>Built-in Transmission torrent client;</li> <li>uploading/downloading files from/to USB storage</li> </ul> </li> </ul>
Management	<ul> <li>Local and remote access to settings through TELNET/WEB (HTTP/HTTPS)</li> <li>Multilingual web-based interface for configuration and management</li> <li>Firmware update via web-based interface</li> <li>Automatic notification on new firmware version</li> <li>Saving/restoring configuration to/from file</li> <li>Support of logging to remote host/connected USB storage</li> <li>Automatic synchronization of system time with NTP server and manual time/date setup</li> <li>Ping utility</li> <li>Traceroute utility</li> <li>TR-069 client</li> </ul>

<sup>5</sup> For some models of USB modems.

Wireless Module Parame	Wireless Module Parameters	
Standards	· IEEE 802.11b/g/n	
Frequency range	· 2400 ~ 2483.5MHz	
Wireless connection security	<ul> <li>WEP</li> <li>WPA/WPA2 (Personal/Enterprise)</li> <li>MAC filter</li> <li>WPS (PBC/PIN)</li> </ul>	
Advanced functions	<ul> <li>WMM (Wi-Fi QoS)</li> <li>Information on connected Wi-Fi clients</li> <li>Advanced settings</li> <li>Guest Wi-Fi / support of MBSSID</li> <li>Limitation of wireless network rate</li> <li>Periodic scan of channels, automatic switch to least loaded channel</li> <li>Autonegotiation of channel bandwidth in accordance with environment conditions (20/40 Coexistence)</li> </ul>	
Wireless connection rate	<ul> <li>IEEE 802.11b: 1, 2, 5.5, and 11Mbps</li> <li>IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps</li> <li>IEEE 802.11n: from 6.5 to 300Mbps (from MCS0 to MCS15)</li> </ul>	
Transmitter output power	<ul> <li>802.11b (typical at room temperature 25 °C)</li> <li>15dBm</li> </ul>	
The maximum value of the transmitter output power	<ul> <li>802.11g (typical at room temperature 25 °C)</li> <li>13.5 ~ 15dBm</li> </ul>	
depends upon the radio frequency regulations applied in your country	<ul> <li>802.11n (typical at room temperature 25 °C)</li> <li>13.5 ~ 15dBm</li> </ul>	
Receiver sensitivity	<ul> <li>802.11b (typical at room temperature 25 °C)</li> <li>-84dBm</li> </ul>	
	<ul> <li>802.11g (typical at room temperature 25 °C)</li> <li>-72dBm</li> </ul>	
	<ul> <li>802.11n (typical at room temperature 25 °C)</li> <li>HT20</li> <li>-70dBm</li> <li>HT40</li> <li>-67dBm</li> </ul>	
Modulation schemes	<ul> <li>802.11b: CCK (11, 5.5Mbps), DQPSK (2Mbps), DBPSK (1Mbps), DSSS</li> <li>802.11g: PSK/CCK, DBPSK, DQPSK, OFDM, BPSK, QPSK, 16QAM, 64QAM</li> <li>802.11n: PSK/CCK, DBPSK, DQPSK, OFDM, etc.</li> </ul>	

Physical Parameters	
Dimensions (L x W x H)	· 174 x 119 x 32 mm (6.6 x 4.7 x 1.3 in)
Weight	· 197 g (0.43 lb)

Operating Environment	
Power	· Output: 12V DC, 1A
Temperature	<ul> <li>Operating: from 0 to 40 °C</li> <li>Storage: from -20 to 70 °C</li> </ul>
Humidity	From 5% to 95% (non-condensing)

Supported USB modems <sup>6</sup>	
GSM	<ul> <li>Alcatel X500</li> <li>D-Link DWM-152C1</li> <li>D-Link DWM-156A6</li> <li>D-Link DWM-156A7</li> <li>D-Link DWM-156C1</li> <li>D-Link DWM-157B1</li> <li>D-Link DWM-157B1 (Velcom)</li> <li>D-Link DWM-158D1</li> <li>D-Link DWR-710</li> <li>Huawei E1550</li> <li>Huawei E156G</li> <li>Huawei E16GG</li> <li>Huawei E173 (Megafon)</li> <li>Huawei E3131 (MTS 420S)</li> <li>Huawei E352 (Megafon)</li> <li>Prolink PHS600</li> <li>Prolink PHS901</li> <li>ZTE MF122</li> <li>ZTE MF626</li> <li>ZTE MF627</li> <li>ZTE MF667</li> <li>ZTE MF668</li> <li>ZTE MF668</li> <li>ZTE MF752</li> </ul>

<sup>6</sup> The manufacturer does not guarantee proper operation of the router with every modification of the firmware of USB modems.

Supported USB modems	
LTE	<ul> <li>Huawei E3131</li> <li>Huawei E3272</li> <li>Huawei E3351</li> <li>Huawei E3372</li> <li>Huawei E367</li> <li>Huawei E392</li> <li>Megafon M100-1</li> <li>Megafon M100-2</li> <li>Megafon M100-3</li> <li>Megafon M100-4</li> <li>Megafon M150-1</li> <li>Megafon M150-2</li> <li>Quanta 1K6E (Beeline 1K6E)</li> <li>MTS 824F</li> <li>MTS 827F</li> <li>Yota LU-150</li> <li>Yota WLTUBA-107</li> <li>ZTE MF823</li> <li>ZTE MF827</li> </ul>
Smartphones in USB tethering mode	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/