



### **DIR-620S**

**Wireless N300 Router with 3G/LTE Support** and USB Port

#### **BEFORE YOU BEGIN**

#### **Delivery Package**

- Router DIR-620S
- Power adapter DC 12V/1A
- Ethernet cable (CAT 5)
- "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 192.168.0.1

Username (login) admin

Password admin

Name of wireless network (SSID) DIR-620

see WPS PIN on the barcode label on the

Network key (PSK password)

barcode label on the bottom panel of the

device

Router DIR-620S with default settings cannot connect to the Internet. To get started, please set your own password for access to the webbased 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 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

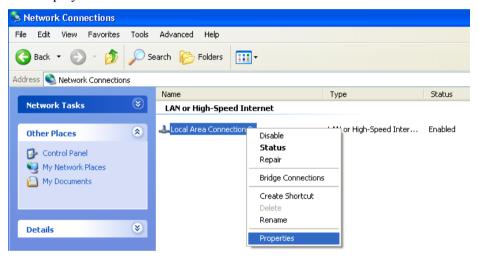
- 1. Make sure that your PC is powered off.
- 2. Connect an Ethernet cable between any of LAN ports located on the back panel of the router and the Ethernet port of your PC.
- 3. *To connect via USB modem*: connect your USB modem to the USB port<sup>2</sup> located on the back panel of the router.
- In some cases you will need to reboot the router after connection of the USB modem.
- 4. 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.

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

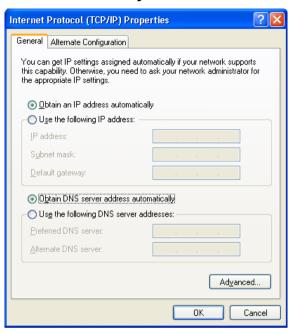
<sup>2</sup> It is recommended to use a USB extension cable to connect a USB modem to the router.

# Obtaining IP Address Automatically in OS Windows XP

- Click the Start button and proceed to the Control Panel > Network and Internet Connections > Network Connections window.
- In the Network Connections 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 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.

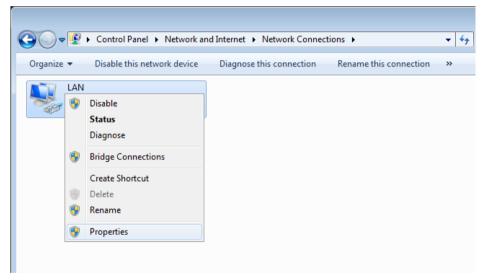


5. Click the **OK** button in the connection properties window.

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.
- 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.



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

- 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.



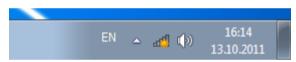
- 3 Search for available wireless networks
- 4. In the opened **Wireless Network Connection** window, select the wireless network **DIR-620** and click the **Connect** button.
- 5. In the opened window, enter the network key (see WPS PIN on the barcode label on the bottom panel of the device) in the **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.
- 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.
- To open the list of available wireless networks, select the icon of the wireless network connection and click the **Connect To** button or leftclick 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 **DIR-620** 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.

#### **CONFIGURING ROUTER**

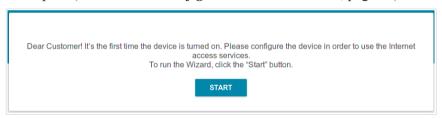
#### Connecting to Web-based Interface

Start a web browser. In the address bar of the web browser, enter the IP address of the router (by default, 192.168.0.1) 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.

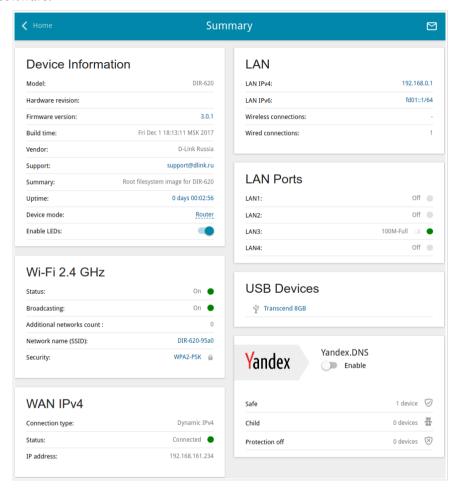
If the device has not been configured previously or the default settings have been restored, after access to the web-based interface the Initial Configuration Wizard opens (see the *Initial Configuration Wizard* section, page 18).



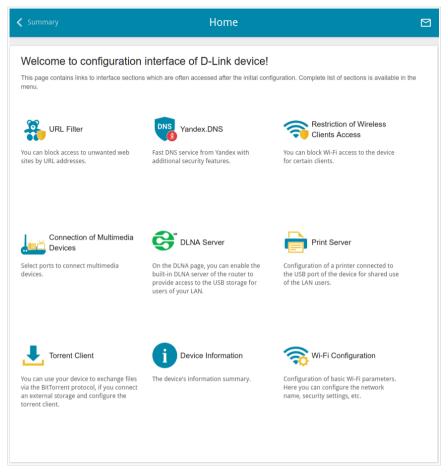
If you configured the device previously, after access to the web-based interface the login page opens. Enter the username (admin) in the **Username** field and the password you specified in the **Password** field, then click the **LOGIN** button.



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



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



The web-based interface of the router is bilingual (English/Russian). 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.

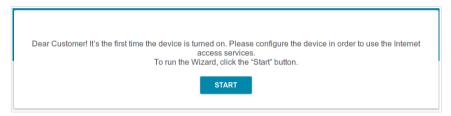
#### Initial Configuration Wizard

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.

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.



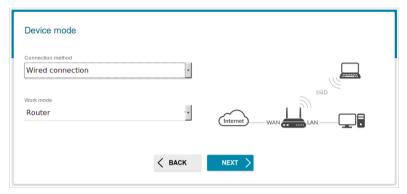
1. Click **YES** in order to leave the current language of the web-based interface or click **NO** to select the other language.



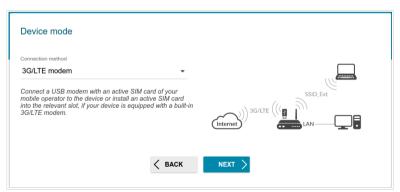
2. On the next page, click the **CONTINUE** button.

#### **Selecting Operation Mode**

In order to connect your device to a wired ISP, on the **Device mode** page, from the **Connection method** list, select the **Wired connection** value. Then from the **Work mode** list select the **Router** value. In this mode you can configure a WAN connection, set your own settings for the wireless network, 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.



In order to connect your device to a wireless ISP (WISP), on the **Device** mode page, from the **Connection method** list, select the **Wi-Fi** value. Then from the **Work mode** list select the **WISP Repeater** value. In this mode you can connect your device to another access point, configure a WAN connection, set your own settings for the wireless network, 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 a wired router for adding a wireless network to the existing local network, on the **Device mode** page, from the **Connection method** list, select the **Wired connection** value. Then from the **Work mode** list select the **Access point** value. In this mode you can change the LAN IP address, set your own settings for the wireless network and set your own password for access to the web-based interface of the device.

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

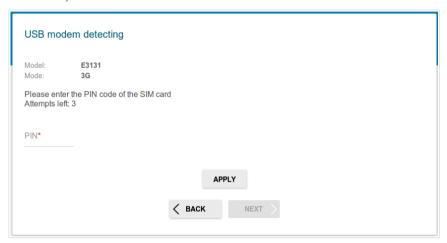
In order to let wired PCs connected to your device access the network of a wireless router, on the **Device mode** page, from the **Connection method** list, select the **Wi-Fi** value. Then from the **Work mode** list select the **Client** value. In this mode you can change the LAN IP address, connect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

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.



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



3. Click the **NEXT** button.

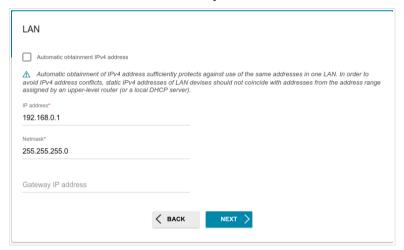
If the router failed to create a WAN connection automatically, click the **CONFIGURE MANUALLY** button. On the **Internet connection type** page, configure all needed settings and click the **NEXT** button.

#### **Changing LAN IPv4 Address**

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

- 1. Select the **Automatic obtainment of IPv4 address** to let DIR-620S automatically obtain the LAN IPv4 address.
- If the router obtains the LAN IPv4 address automatically, then after finishing the Wizard you can access the web-based interface using the domain name (by default, dlinkrouter.local) with a dot at the end.

If you want to manually assign the LAN IPv4 address for DIR-620S, do not select the **Automatic obtainment of IPv4 address** checkbox and fill in the **IP address** and **Netmask** fields and, if needed, the **Gateway IP address** field. Make sure that the assigned address does not coincide with the LAN IPv4 address of the router to which your device connects.



2. Click the **NEXT** button.

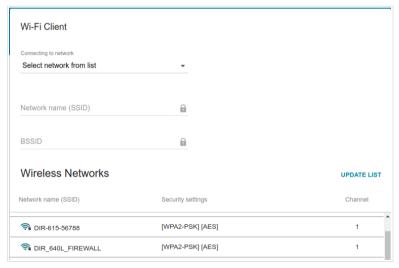
#### Wi-Fi Client

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

 On the Wi-Fi Client page, in the Wireless Networks section, select the network to which you want to connect. When you select a network, the Network name (SSID) and BSSID fields are filled in automatically.

If you cannot find the needed network in the list, click the **UPDATE LIST** button.

2. If a password is needed to connect to the selected network, fill in the relevant field.



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

3. Click the **NEXT** button.

#### **Configuring WAN Connection**

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

- You should configure your WAN connection in accordance with data provided by your Internet service provider (ISP). Make sure that you have obtained all necessary information prior to configuring your connection. Otherwise contact your ISP.
- 1. On the **Internet connection type** page, 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, PPPoE + Dynamic IP (PPPoE Dual Access):** 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, select the **Without authorization** checkbox.

Without authorization		
Username*		
Password*	<b>③</b>	

**PPPoE** + Static IP (PPPoE Dual Access): 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, select the **Without authorization** checkbox. Also fill in the following fields: **IP address**, **Netmask**, **Gateway IP address**, and **DNS IP address**.

Without authorization		
Username*		
Password*	<b>③</b>	
IP address*		
Netmask*		
Gateway IP address*		
DNS IP address*		

**PPTP** + **Dynamic IP or L2TP** + **Dynamic IP:** 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, select the **Without authorization** checkbox. In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server.

Without authorization	
Usemame*	
Password*	<b>③</b>
VPN server address*	

**PPTP** + Static IP or L2TP + Static IP: 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, select the **Without authorization** checkbox. In the **VPN server address** field, enter the IP or URL address of the PPTP or L2TP authentication server. Also fill in the following fields: **IP address**, **Netmask**, **Gateway IP address**, and **DNS IP address**.

Without authorization	
Username*	
Password*	<b>③</b>
VPN server address*	
IP address*	
Netmask*	
Gateway IP address*	
DNS IP address*	

- 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.

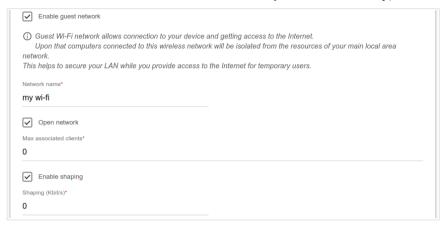
#### **Configuring Wireless Network**

This configuration step is available for the **3G/LTE modem**, **Router**, **Access point**, **WISP Repeater**, and **Repeater** modes.

- 1. On the **Wireless Network 2.4 GHz** page, in the **Network name** field, specify your own name for the wireless network 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.



4. If you want to create an additional wireless network isolated from your LAN, select the **Enable guest network** checkbox (available for the **3G/LTE modem**, **Router**, and **WISP Repeater** modes only).



- 5. In the **Network name** field, specify your own name for the guest wireless network or leave the value suggested by the router.
- 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

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

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. If the IPTV service is provided via a VLAN channel, select the **Use VLAN ID** checkbox and fill in the **VLAN ID** field.
- 4 Click the **NEXT** button
- 5. On the VoIP page, select the In an IP phone connected to the device checkbox



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

#### **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



3. 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



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).



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 address assignment drop-down list.



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

### **SPECIFICATIONS**\*

Hardware		
Processor	· RTL8196D (620MHz)	
RAM	· 64MB, DDR SDRAM	
Flash	· 8MB, SPI	
Interfaces	<ul><li>10/100BASE-TX WAN port</li><li>4 10/100BASE-TX LAN ports</li><li>USB 2.0 port</li></ul>	
LEDs	POWER WLAN WPS INTERNET LAN LEDS USB	
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 and enable/disable wireless network</li> </ul>	
Antenna	· Two external non-detachable antennas 5dBi gain	
МІМО	· 2 x 2	
Power connector	· Power input connector (DC)	

Software		
WAN connection types	<ul> <li>LTE</li> <li>3G</li> <li>PPPoE</li> <li>IPv6 PPPoE</li> <li>PPPoE Dual Stack</li> <li>Static IPv4 / Dynamic IPv4</li> <li>Static IPv6 / Dynamic IPv6</li> <li>PPPoE + Static IP (PPPoE Dual Access)</li> <li>PPPoE + Dynamic IP (PPPoE Dual Access)</li> <li>PPTP/L2TP + Static IP</li> <li>PPTP/L2TP + Dynamic IP</li> </ul>	

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

Software		
Network functions	<ul> <li>Support of IEEE 802.1X for Internet connection</li> <li>DHCP server/relay</li> <li>Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation</li> <li>Automatic obtainment of LAN IP address (for access point/repeater/client modes)</li> <li>DNS relay</li> <li>Dynamic DNS</li> <li>Static IP routing</li> <li>Static IPv6 routing</li> <li>IGMP Proxy</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> <li>Autonegotiation of speed, duplex mode, and flow control/Manual speed and duplex mode setup for each Ethernet port</li> <li>Setup of maximum TX rate for each port of the router</li> <li>Built-in UDPXY application</li> <li>XUPNPD plug-in</li> </ul>	
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     IPsec tunnels	

Software		
USB interface functions	USB modem 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 code <sup>5</sup> USB storage File browser Print server Access to storage via accounts Built-in Samba/FTP/DLNA server Built-in Transmission torrent client; uploading/downloading files from/to USB storage	
Management	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 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	· 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>	

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

Wireless Module Parameters	
Advanced functions	<ul> <li>Support of client mode</li> <li>WMM (Wi-Fi QoS)</li> <li>Information on connected Wi-Fi clients</li> <li>Advanced settings</li> <li>Smart adjustment of Wi-Fi clients</li> <li>Guest Wi-Fi / support of MBSSID</li> <li>Rate limitation for wireless network/separate MAC addresses</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	· 802.11b (typical at room temperature 25 °C) 15dBm at 1, 2, 5.5, 11Mbps
The maximum value of the transmitter output power depends upon the radio frequency regulations applied in your country	· 802.11g (typical at room temperature 25 °C) 15dBm at 6, 9, 12, 18, 24, 36, 48, 54Mbps
	<ul> <li>802.11n (typical at room temperature 25 °C)</li> <li>HT20/HT40</li> <li>15dBm at MCS0/1/2/3/4/5/6/8/9/10/11/12/13/14</li> <li>14dBm at MCS0/7</li> </ul>

Wireless Module Parameters		
Receiver sensitivity	<ul> <li>802.11b (typical at PER = 8% at room temperature 25 °C) -82dBm at 1Mbps -80dBm at 2Mbps -78dBm at 5.5Mbps -76dBm at 11Mbps</li> <li>802.11g (typical at PER = 10% at room temperature 25 °C) -85dBm at 6Mbps -84dBm at 9Mbps -82dBm at 12Mbps -80dBm at 18Mbps -77dBm at 24Mbps -77dBm at 24Mbps</li> </ul>	
	-73dBm at 36Mbps -69dBm at 48Mbps -68dBm at 54Mbps  • 802.11n (typical at PER = 10% at room temperature)	
	25 °C) HT20  -82dBm at MCS0/8 -79dBm at MCS1/9 -77dBm at MCS2/10 -74dBm at MCS2/10 -74dBm at MCS3/11 -70dBm at MCS4/12 -66dBm at MCS5/13 -65dBm at MCS6/14 -64dBm at MCS7/15  -61dBm at MCS7/15	
Modulation schemes	<ul> <li>802.11b: DQPSK, DBPSK, DSSS, CCK</li> <li>802.11g: BPSK, QPSK, 16QAM, 64QAM with OFDM</li> <li>802.11n: BPSK, QPSK, 16QAM, 64QAM with OFDM</li> </ul>	

Physical Parameters	
Dimensions (L x W x H)	· 174 x 115 x 30 mm (6.85 x 4.53 x 1.18 in)

Operating Environment		
Power	· Output: 12V DC, 1A	
Temperature	<ul> <li>Operating: from 0 to 40 °C</li> <li>Storage: from -20 to 65 °C</li> </ul>	
Humidity	<ul><li>Operating: from 10% to 90% (non-condensing)</li><li>Storage: from 5% to 95% (non-condensing)</li></ul>	

Supported USB modems <sup>6</sup>		
GSM	- Alcatel X500 - D-Link DWM-152C1 - D-Link DWM-156A6 - D-Link DWM-156A7 - D-Link DWM 156A8 - D-Link DWM-156C1 - D-Link DWM-157B1 - D-Link DWM-157B1 - D-Link DWM-157B1 (Velcom) - D-Link DWM-158D1 - D-Link DWR-710 - Huawei E150 - Huawei E156 - Huawei E166G - Huawei E166G - Huawei E169G - Huawei E171 - Huawei E173 (Megafon) - Huawei E3131 (MTS 420S) - Huawei E352 (Megafon) - Prolink PHS600 - Prolink PHS901 - ZTE MF12 - ZTE MF626 - ZTE MF627 - ZTE MF667 - ZTE MF667 - ZTE MF668 - ZTE MF752	

<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 M150-1</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/