



## DSL-2650U

**3G/ADSL/Ethernet Router with Wi-Fi  
and Built-in Switch**

## BEFORE YOU BEGIN

### *Delivery Package*

- Router DSL-2650U
- Power adapter DC 12V/1A
- RJ-11 telephone cable
- Ethernet cable (CAT 5E)
- Splitter
- “*Quick Installation Guide*” (brochure).

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

The “*User Manual*” and “*Quick Installation Guide*” documents in Russian and English are available on D-Link website (see <ftp.dlink.ru/pub/ADSL/DSL-2650U/Description/>).

**!** 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 router	192.168.1.1
Username (login)	admin
Password	admin
Name of wireless network (SSID)	DSL-2650U

## ***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: Windows Internet Explorer, Mozilla Firefox, or Opera.
- A NIC (Ethernet or Wi-Fi adapter) to connect to the router.
- A 802.11b, g, or n Wi-Fi adapter to create a wireless network.
- A 3G USB modem to connect to the Internet via 3G GSM or CDMA network<sup>1</sup>.

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



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.

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

## ***Supported USB Modems***

### **GSM modems:**

- Huawei E150
- Huawei E1550
- Huawei E160G
- Huawei E169G
- Huawei E220
- ZTE MF112
- ZTE MF626
- ZTE MF627.

### **CDMA modems<sup>2</sup>:**

- Airplus MCD-650
- Airplus MCD-800
- AnyDATA ADU-300A
- AnyDATA ADU-310A.



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

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2 Performance of CDMA USB modems is not tested for the current firmware version.

## 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 3G network:** connect your USB modem to the USB port<sup>3</sup> 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 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:** connect the Ethernet cable between any of four Ethernet ports 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.

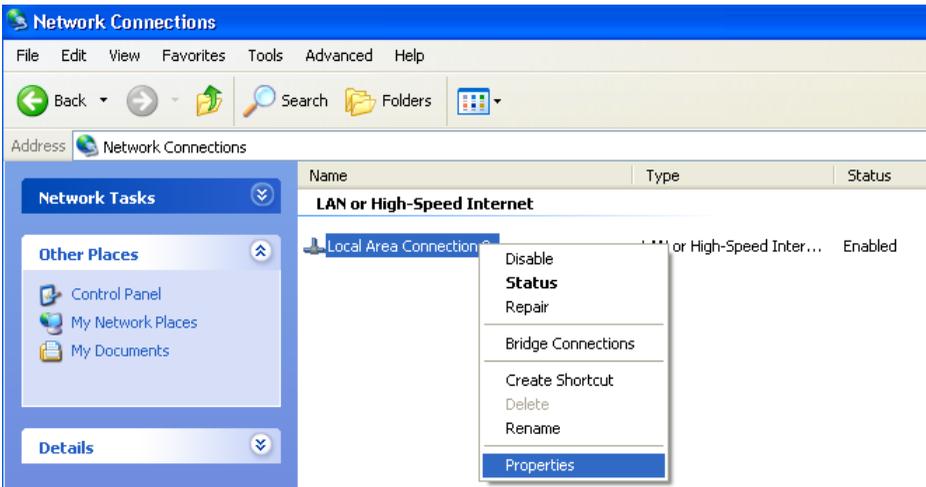
Now you should configure your PC to obtain an IP address automatically (as DHCP client).

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

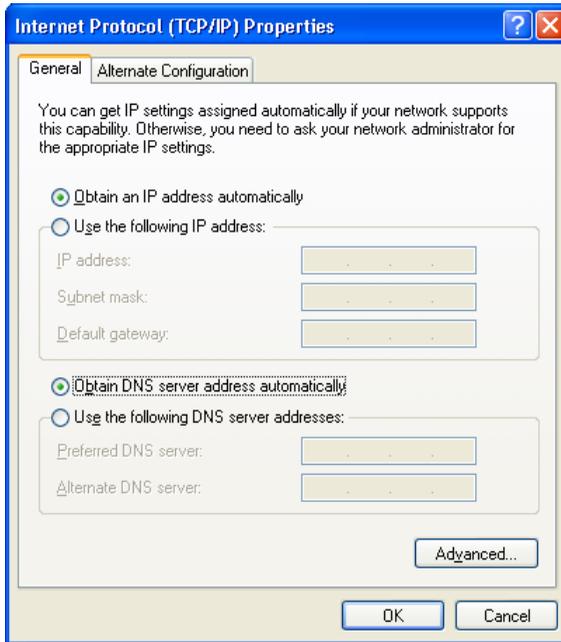
## Obtaining IP Address Automatically in OS Windows XP

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.

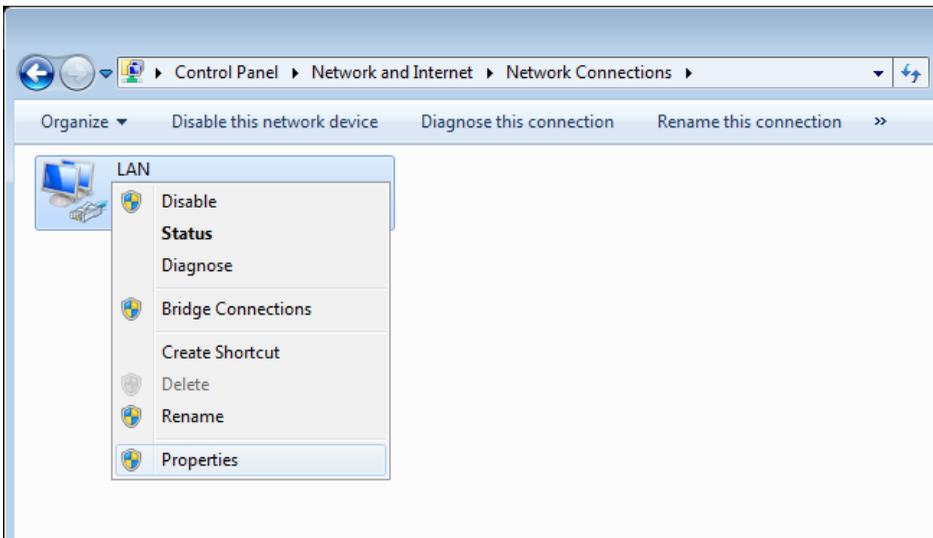


5. Click the **OK** button in the connection properties window.

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

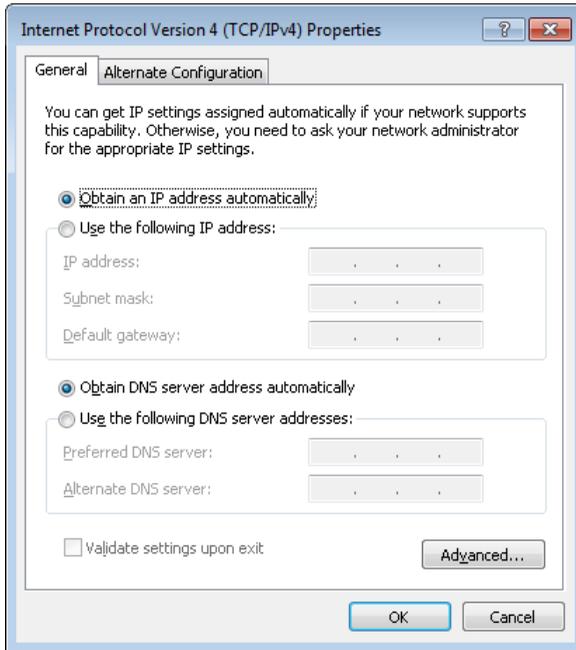
## Obtaining IP Address Automatically in OS Windows 7

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 3G network:** connect your USB modem to the USB port<sup>4</sup> 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 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:** connect the Ethernet cable between any of four Ethernet ports 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 Wi-Fi by pressing the relevant button on the back panel of the router.
7. Turn on your PC and wait until your operating system is completely loaded.
8. 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.

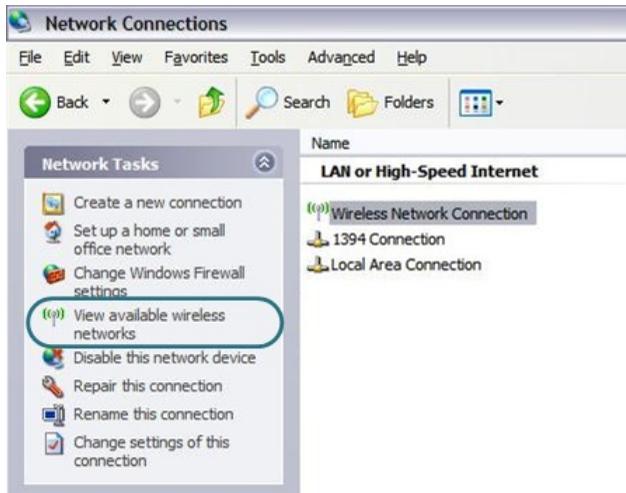
Now you should configure your Wi-Fi adapter.

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4 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-2650U** and click the **Connect** button.

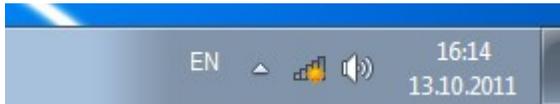
After that the **Wireless Network Connection Status** window appears.



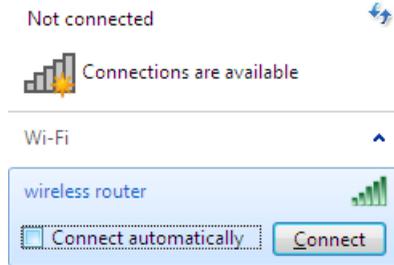
If you perform initial configuration of the router via Wi-Fi connection, note that immediately after changing the wireless default settings of the router you will need to reconfigure the wireless connection using the newly specified settings.

## 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, select the wireless network **DSL-2650U** and click the **Connect** button.



Open Network and Sharing Center

- 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

1. Start a web browser.
2. In the address bar of the web browser, enter the IP address of the router (by default, the following IP address is specified: **192.168.1.1**). Press the **Enter** key.



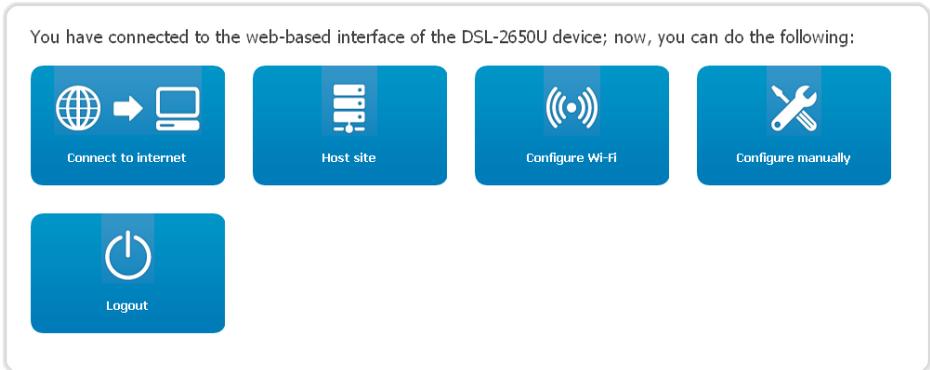
3. On the opened page, enter the username (login) and password for the administrator account (by default, the following username and password are specified: **admin**, **admin**). Then click the **Enter** link.

A screenshot of the D-Link DSL-2650U login page. The page features the D-Link logo and the model number "DSL-2650U". There is a "Language" dropdown menu. Below that, there are two input fields: "Login:" with the text "admin" entered, and "Password:" with "\*\*\*\*\*" entered. At the bottom, there are two links: "Enter" and "Clear".

**!** 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.

**!** It is strongly recommended to change the administrator password upon initial configuration of the router. To do this, click the **Configure manually** button and proceed to the **System / Administrator password** page.

After successful registration the router's quick settings page opens.



On the page, you can proceed to the Wizards (use the **Connect to internet**, **Host site**, and **Configure Wi-Fi** buttons) or switch to the standard web-based interface of the router by clicking the **Configure manually** button. After clicking the button, the system statistics page opens. The page displays general information on the router and its software, and data on the DSL connection state.

To get back to the quick settings page from any Wizard or web-based interface menu section, left-click the D-Link logo in the top left corner of the page.

The web-based interface of the router is multilingual. Select a needed language from the menu displayed when the mouse pointer is over the **Language** caption. You can change the language of the web-based interface in any menu item.



After selecting the language, the notification on unsaved changes will be displayed. Click the **Save** button to save the current language of the web-based interface as the default language.

## 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 WAN connection. Otherwise contact your ISP.

### 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 **USB modem** menu and enter the PIN code on the page displayed<sup>5</sup>.

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 **Port** drop-down list.

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<sup>5</sup> 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.

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

### General settings

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Provider:	<input type="text" value="Manually"/>
Connection Type:	<input type="text" value="3G"/>
Port:	<input type="text" value="usb"/>
Name:	<input type="text"/>
Enable:	<input checked="" type="checkbox"/>
Direction:	<i>WAN</i>

- 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.

### PPP

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Username:	<input type="text"/>
Without authorization:	<input type="checkbox"/>
Password:	<input type="text"/>
Password confirmation:	<input type="text"/>
APN:	<input type="text"/>
Dial number:	<input type="text"/>

- In the **APN** field, enter the access point name (for GSM USB modems only), and in the **Dial number** field, enter the number dialed to connect to the authorization server of the operator.
- Click the **Save** button.

## ADSL WAN Connection

1. Go to the **Net / WAN** page and click the **Add** button.
2. In the **General settings** section, from the **Provider** drop-down list, leave the **Manually** value.
3. From the **Connection Type** drop-down list, select the needed value.
4. From the **Port** drop-down list, select the **DSL(new)** value.
5. Specify a name for your connection (any name for easier identification) in the **Name** field.
6. In the **ATM** section, specify the **VPI** and **VCI** in the relevant fields, and then select a method of encapsulation from the **Encapsulation Mode** drop-down list.

### ATM

VPI (0-255):	<input type="text" value="0"/>
VCI (32-65535):	<input type="text" value="35"/>
Encapsulation Mode:	<input type="text" value="LLC"/>
QoS:	<input type="text" value="UBR"/>

7. For the **PPPoE** and **PPPoA** connection types, enter authorization data provided by your ISP in the **PPP** section (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields). If these data have not been provided by your ISP, select the **Without authorization** checkbox.

### PPP

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

- For the **IPoA** and **Static IP** connection types, fill in the **IP Address**, **Netmask**, and **Gateway IP address** fields in the **IP** section.

### IP

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IP Address:

Netmask:

Gateway IP address:

- Deselect the **NAT** checkbox in the **Miscellaneous** section if your ISP requires you to disable the network address translation function.
- Click the **Save** button.

## Ethernet WAN Connection

1. Go to the **Advanced / Interface grouping** page.
2. Select the choice corresponding to the LAN port that will be used as the WAN port of the **Ethernet WAN port** radio button, and click the **Save** button.

Ethernet WAN port:

No  
 LAN1  
 LAN3  
 LAN4  
 LAN2

3. Go to the **Net / WAN** page and click the **Add** button.
4. In the **General settings** section, from the **Provider** drop-down list, leave the **Manually** value.
5. From the **Connection Type** drop-down list, select the needed value.
6. From the **Port** drop-down list, select the value corresponding to the LAN port that will be used as the WAN port.

### General settings

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Provider:

Connection Type:

Port:

Name:

Enable:

Direction: *WAN*

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

- For the **PPPoE** connection type, enter authorization data provided by your ISP in the **PPP** section (the username (login) in the **Username** field and the password in the **Password** and **Password confirmation** fields). If these data have not been provided by your ISP, select the **Without authorization** checkbox.

### PPP

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

- For the **Static IP** connection type, fill in the **IP Address**, **Netmask**, and **Gateway IP address** fields in the **IP** section.

### IP

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IP Address:	<input type="text"/>
Netmask:	<input type="text"/>
Gateway IP address:	<input type="text"/>

- Deselect the **NAT** checkbox in the **Miscellaneous** section if your ISP requires you to disable the network address translation function.
- Click the **Save** button.

## Configuring WAN Backup Function

1. Go to the **Net / WAN** page and create the main WAN connection. In the **General settings** section, select the **Enable** checkbox.

### General settings

Provider:	Manually ▼
Connection Type:	PPPoE ▼
Port:	DSL (new) ▼
Name:	DSL
Enable:	<input checked="" type="checkbox"/>
Direction:	WAN

2. On the **Net / WAN** page, create the reserve WAN connection. In the **General settings** section, deselect the **Enable** checkbox.

### General settings

Provider:	Manually ▼
Connection Type:	3G ▼
Port:	usb ▼
Name:	3G
Enable:	<input type="checkbox"/>
Direction:	WAN

3. Proceed to the **Net / Watchdog** page and select the **Enable** checkbox.

4. In the **Primary connection settings** section, from the **Connection name** drop-down list, select a WAN connection which will be used as the main one.

#### Primary connection settings

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Connection name:

Connection quality level:

5. In the **Reserve connection settings** section, from the **Connection name** drop-down list, select a WAN connection which will be used as the reserve one.

#### Reserve connection settings

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Connection name:

Connection quality level:

6. If needed, specify new values in the fields displayed on the page.
7. Click the **Change** 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. Then click the **Save** button.

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IP Address:   
Netmask:

2. By default, the DHCP server of the router is enabled. In the **DHCP server** section, you can change the parameters of the DHCP server. If you want to manually assign IP addresses to devices of your LAN, disable the DHCP server (select the **Disable** value from the **Mode** drop-down list).

### DHCP server

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Mode:   
Start IP:   
End IP:   
Lease time (min):

3. After specifying the DHCP server settings, click the **Save** button.

## Configuring Wireless Network

By default, the wireless network of the router is open (it requires no password to access it). To avoid unauthorized access to your wireless local area network, change the default settings of the router.

### Example of Wireless Settings

1. Go to the **Wi-Fi / Security settings** page.
2. Select the **WPA2-PSK** value from the **Network Authentication** drop-down list.

Network Authentication:	<input type="text" value="WPA2-PSK"/>
Encryption Key PSK:	<input type="text"/>
WPA2 Pre-authentication:	<input type="checkbox"/>

#### WPA Encryption settings

WPA Encryption:	<input type="text" value="AES"/>
WPA renewal:	<input type="text" value="3600"/>

3. Enter a key (a password that will be used to access your wireless network) in the **Encryption Key PSK** field. Use digits and Latin characters.
4. Select the **AES** value from the **WPA Encryption** drop-down list.
5. Click the **Change** button.



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

## Changing Administrator Password

It is highly recommended to change the administrator password upon initial configuration. This helps you to improve your network security.

1. Go to the **System / Administrator password** page.
2. Enter a new password for the administrator account in the **Password** and **Confirmation** fields.
3. Click the **Save** button.

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

## 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.

Click the **Save&Reboot** line in the top-page menu displayed when the mouse pointer is over the **System** caption.



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 (<ftp.dlink.ru/pub/ADSL/DSL-2650U/Description/>).

## 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/>