



# User Manual

## Wireless AC1000 Dual Band Cloud Router

DIR-820L

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# Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

## Manual Revisions

Revision	Date	Description
1.0	June 20, 2013	• Initial release for Revision A1
2.0	August 27, 2014	• Initial release for Revision B1

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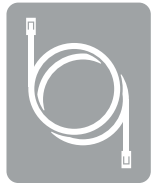
# Package Contents



DIR-820L Wireless AC1000 Dual Band Cloud Router



Power Adapter



Ethernet Cable



Wi-Fi Configuration Card



Quick Install Guide

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

**Note:** Using a power supply with a different voltage rating than the one included with the DIR-820L will cause damage and void the warranty for this product.

# System Requirements

<b>Network Requirements</b>	<ul style="list-style-type: none"><li>• An Ethernet-based broadband modem</li></ul>
<b>Web-based Configuration Utility Requirements</b>	<p><b>Computer with the following:</b></p> <ul style="list-style-type: none"><li>• Windows®, Macintosh, or Linux-based operating system</li><li>• An installed Ethernet adapter or wireless adapter</li></ul> <p><b>Supported Browsers:</b></p> <ul style="list-style-type: none"><li>• Internet Explorer 7 or higher</li><li>• Firefox</li><li>• Safari 4 or higher</li><li>• Chrome</li></ul> <p><b>Windows® Users:</b> Make sure you have the latest version of Java installed. Visit <a href="http://www.java.com">www.java.com</a> to download the latest version.</p>
<b>mydlink Requirements</b>	<ul style="list-style-type: none"><li>• iPhone/iPad/iPod Touch (iOS 3.0 or higher)</li><li>• Android device (1.6 or higher)</li><li>• Computer with the following browser requirements:<ul style="list-style-type: none"><li>• Internet Explorer 7 or higher</li><li>• Firefox</li><li>• Safari 5 or higher</li><li>• Chrome</li></ul></li></ul> <p><small>iPhone, iPad, and iPod touch are registered trademarks of Apple Inc. Android is a trademark of Google, Inc.</small></p>

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# Introduction

The DIR-820L Wireless AC1000 Dual Band Cloud Router provides revolutionary 802.11ac wireless speed - up to 1000Mbps – for flawless HD video streaming to multiple devices.

With ground-breaking mydlink Cloud Services, you can monitor your home network from anywhere on your iPhone, iPad, and Android device. See websites that are being visited, block unwanted devices and receive automatic e-mail alerts when unauthorized connections are attempted.

With SharePort Mobile, wirelessly access your media on your iPhone, iPad, or Android device from any connected USB drive. Best of all, the apps for network management and file access are free.

\* Maximum wireless signal rate derived from IEEE Standard 802.11ac, 802.11a, 802.11g, and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.



# Hardware Overview

## Connections



1	USB Port	Connect a USB flash drive to share content throughout your network.
2	WPS Button	Press to start the WPS process. The Power LED will blink during this process.
3	LAN Ports (1-4)	Connect Ethernet devices such as computers, switches, storage (NAS) devices, and game consoles.
4	Internet Port	Using an Ethernet cable, connect your broadband modem to this port.
5	Power Button	Press the power button to power on and off.
6	Power Port	Connect the supplied power adapter.
7	Reset Button	Press and hold until the Power LED turns orange to reset the device back to the default factory settings.

---

# Hardware Overview

## LEDs



<b>1</b>	Power LED	A solid green light indicates a proper connection to the power supply. The light will be solid orange during boot-up and will blink green during the WPS process.
<b>2</b>	Internet LED	A solid light indicates a connection to the Internet port. If the LED is orange, the connection is good but the router cannot connect to the Internet. If this LED is blinking orange, this indicates that the "on demand" connection type is set and the Internet connection is idle.

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# Installation

This section will walk you through the installation process. Placement of the router is very important. Do not place the router in an enclosed area such as a closet, cabinet, or in the attic or garage.

## Before you Begin

- Please configure the router with the computer that was last connected directly to your modem.
- **Users with DSL providers** - If you are using a PPPoE connection, you will need your PPPoE user name and password. If you do not have this information, contact your Internet provider. Do not proceed until you have this information.
- **Users with Cable providers** - Make sure you unplug the power to your modem. In some cases, you may need to turn it off for up to 5 minutes.
- **Advanced Users** - If your ISP provided you with a modem/router combo, you will need to set it to “bridge” mode so the DIR-820L router can work properly. Please contact your ISP or refer to the user manual for your modem/router device.

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# Wireless Installation Considerations

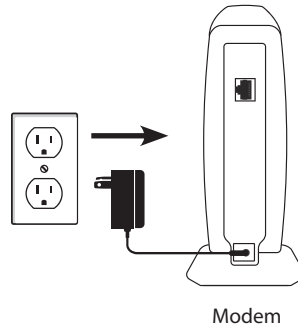
The D-Link wireless router lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the D-Link router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

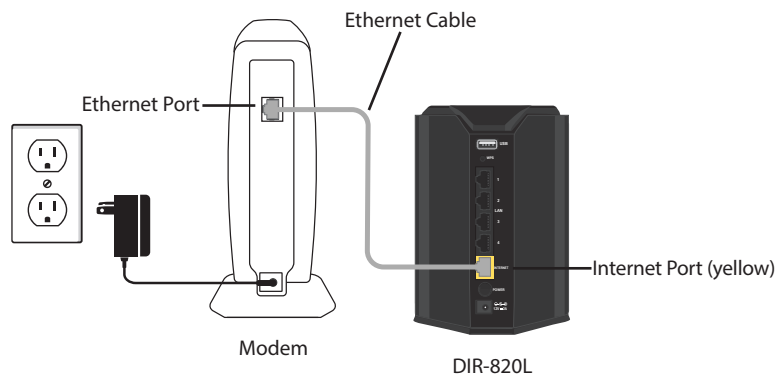
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# Connect to your Network

1. Turn off and unplug your DSL or Cable modem. This is required.

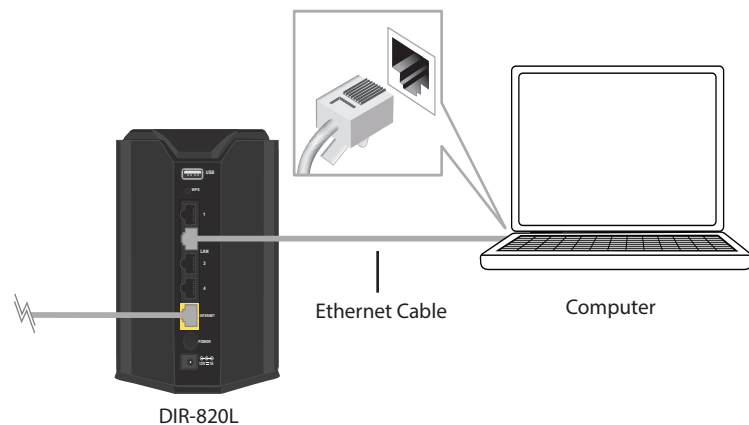


2. Connect an Ethernet cable from the Internet port of the router to the Ethernet port on your DSL or Cable modem.

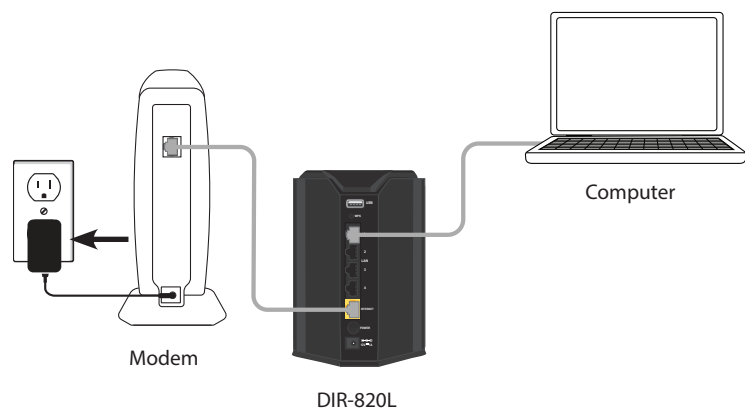


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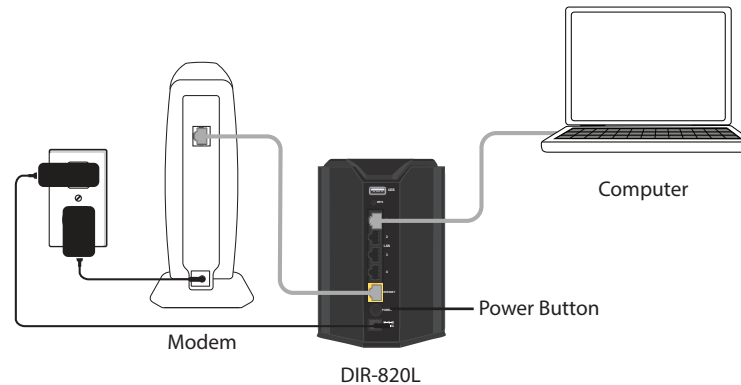
3. Connect another Ethernet cable from the Ethernet port on your computer to one of the LAN ports on the router.



4. Plug the power back into your DSL or Cable modem. Please wait about one minute before continuing.



- 
5. Plug the power adapter into your router and connect to an available power outlet or surge protector. If the Power LED does not light up, press the Power button on the back of the router.



6. After the router has powered up, verify that the power (green) and Internet (orange or green) LEDs are both lit. Please skip to page 13 to configure your router and use the manual setup procedure to configure your network and wireless settings. If you did not connect to the Internet, use the D-Link Setup Wizard (refer to page 14).

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# Connect to an Existing Router

**Note:** It is strongly recommended to replace your existing router with the DIR-820L instead of using both. If your modem is a combo router, you may want to contact your ISP or manufacturer's user guide to put the router into Bridge mode, which will 'turn off' the router (NAT) functions.

If you are connecting the DIR-820L router to an existing router to use as a wireless access point and/or switch, you will have to do the following to the DIR-820L before connecting it to your network:

- Disable UPnP™
- Disable DHCP
- Change the LAN IP address to an available address on your network. The LAN ports on the router cannot accept a DHCP address from your other router.

To connect to another router, please follow the steps below:

1. Plug the power into the router. Connect one of your computers to the router (LAN port) using an Ethernet cable. Make sure your IP address on the computer is 192.168.0.xxx (where xxx is between 2 and 254). Please see the **Networking Basics** section for more information. If you need to change the settings, write down your existing settings before making any changes. In most cases, your computer should be set to receive an IP address automatically in which case you will not have to do anything to your computer.
2. Open a web browser, enter **http://192.168.0.1** (or **http://dlinkrouter.local./**) and press **Enter**. When the login window appears, set the user name to **Admin** and leave the password box empty. Click **Log In** to continue.
3. Click on **Advanced** and then click **Advanced Network**. Uncheck the **Enable UPnP** checkbox. Click **Save Settings** to continue.
4. Click **Setup** and then click **Network Settings**. Uncheck the **Enable DHCP Server** checkbox. Click **Save Settings** to continue.



- 
5. Under Router Settings, enter an available IP address and the subnet mask of your network. Click **Save Settings** to save your settings. Use this new IP address to access the configuration utility of the router in the future. Close the browser and change your computer's IP settings back to the original values as in Step 1.
  6. Disconnect the Ethernet cable from the router and reconnect your computer to your network.
  7. Connect an Ethernet cable in one of the **LAN** ports of the router and connect it to your other router. Do not plug anything into the Internet (WAN) port of the D-Link router.
  8. You may now use the other 3 LAN ports to connect other Ethernet devices and computers. To configure your wireless network, open a web browser and enter the IP address you assigned to the router. Refer to the **Configuration** and **Wireless Security** sections for more information on setting up your wireless network.

---

# Configuration

There are several different ways you can configure your router to connect to the Internet and connect to your clients:

- **QRS Mobile App** - Use your iPhone, iPad, or Android device to configure your router. Refer to page 14.
- **Internet Connection Setup Wizard** - Log into the router and go to **Setup > Internet**. Refer to page 29.
- **Manual Setup** - Log into the router and manually configure your router (advanced users only). Refer to page 20.

# QRS Mobile App

D-Link offers an app for your iPad, iPhone (iOS 4.3 or higher) or Android device to install and configure your router.

## Step 1

From your iOS device, go to App Store, or from your Android device, go to Google Play and search for 'D-Link'. Select **QRS Mobile** and then download it.

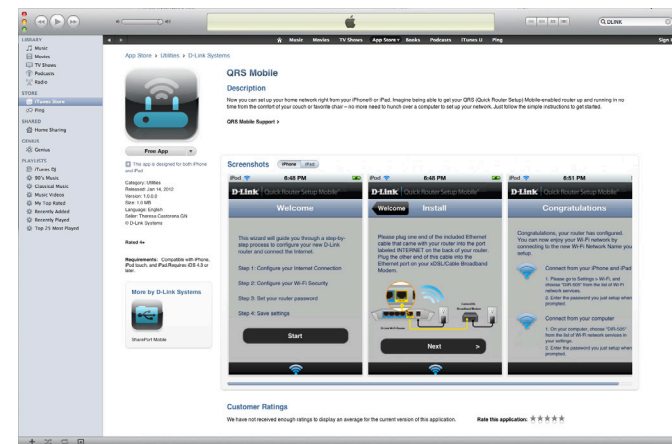
You may also scan this code to download.



iOS



Android



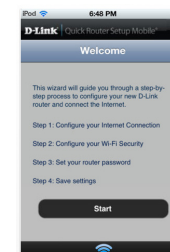
## Step 2

Once your app is installed, you may now configure your router. Connect to the router wirelessly by going to your wireless utility on your device. Scan for the wireless network name (SSID) as listed on the supplied info card. Select and then enter your security password (Wi-Fi Password).

D-Link Wi-Fi Configuration Card	
<b>Default Configuration</b>	
Wi-Fi Name(SSID) 2.4Ghz: dlink-2c19	Wi-Fi Name(SSID) 2.4Ghz: <input type="text"/>
Wi-Fi Name(SSID) 5Ghz: dlink-2c18-media	Wi-Fi Name(SSID) 5Ghz *: <input type="text"/>
Password:gccnu80856	Wi-Fi Password *: <input type="text"/>
<b>Your configuration</b>	
Username: "Admin"	
Password: <input type="text"/>	
*For applicable models	
DCW1900P010	

## Step 3

Once you connect to the router, launch the QRS mobile app and it will guide you through the installation of your router.



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# SharePort Mobile App

The SharePort Mobile app will allow you to access files from a USB thumb drive that is plugged into your router. You must enable file sharing from the **Setup > Storage** page (refer to page 49) for this app to work properly.

1. Insert your USB flash drive into DIR-820L.

2. Scan the bar code to download the **SharePort Mobile** app from the app store to your iPhone, iPad, or Android device.



iOS



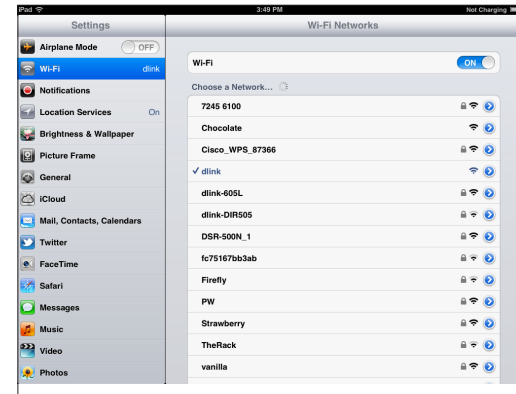
Android

3. From your iOS mobile device, click **Settings**.



Settings

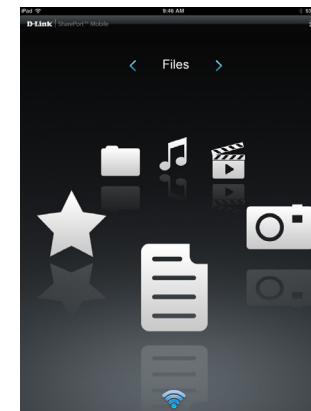
4. Click **Wi-Fi**, select the wireless network (SSID) that you created in the setup and then enter your Wi-Fi password.



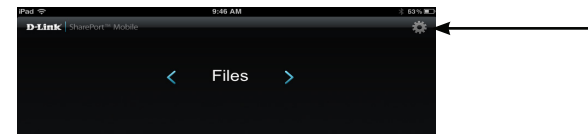
5. Once connected, click on the **SharePort Mobile** icon.



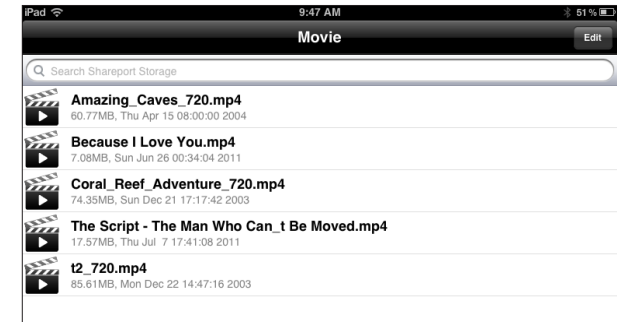
6. The following screen will appear.



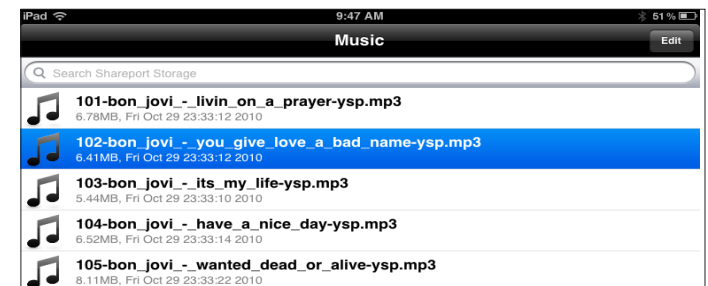
7. Click on **Settings** icon located on the right top corner of the screen. Click **Edit** to enter your User Name and Password. Once you finish, click **Done** to continue.



8. For the Movie section, click the movie icon to play your movie from your USB flash drive.



9. For the Music section, click the music icon to play your music from your USB flash drive.



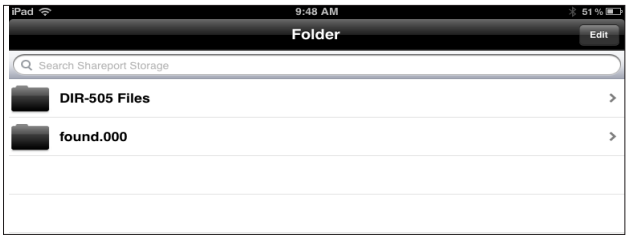
10. For the Photo section, click the photo icon to view your photos from your USB flash drive.



11. For the Files section, click on the files icon to view your files from your USB flash drive.



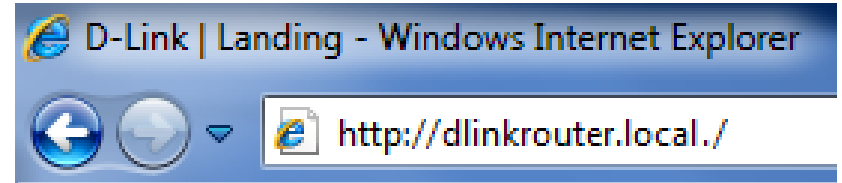
12. For the Folder section, click the folder icon to view your folders from your USB flash drive.



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# Web-based Configuration Utility

Open a web browser (e.g., Internet Explorer, Chrome, Firefox , or Safari) and enter **http://dlinkrouter.local./** or **http://192.168.0.1**.



Enter your password and click **Login**.

**Note:** *If you did not create a password with the Setup Wizard, leave the password blank by default.*

A screenshot of the D-Link router's login page. The page has an orange header with the word "LOGIN" in white. Below the header, the text "Login to the router :" is displayed. There are two input fields: "User Name" with "Admin" entered, and "Password" which is empty. To the right of the password field is a "Login" button.



# Internet Connection Setup

If you want to configure your router to connect to the Internet using the wizard, click **Internet Connection Setup Wizard**. Refer to page 29.

If you consider yourself an advanced user, click **Manual Internet Connection Setup** to configure your connection manually. (Instructions for manual setup begin below.)

The next few pages will explain each of the ISP connection types. You can select the type from the **My Internet Connection** is drop-down menu.

The screenshot shows the D-Link DIR-820L web interface. The left sidebar contains a menu with options: INTERNET, WIRELESS SETTINGS, NETWORK SETTINGS, STORAGE, IPV6, and MYDLINK SETTINGS. The main content area is titled 'INTERNET CONNECTION' and includes a 'Helpful Hints ...' section on the right. The central text explains two ways to set up the Internet connection: using the Web-based Internet Connection Setup Wizard or manually configuring the connection. Below this, the 'INTERNET CONNECTION SETUP WIZARD' section offers a button for the 'Internet Connection Setup Wizard' and a 'Note' about following the Quick Installation Guide. The 'MANUAL INTERNET CONNECTION OPTIONS' section provides a button for 'Manual Internet Connection Setup'.

The screenshot shows the D-Link DIR-820L web interface for the 'WAN' configuration. The left sidebar is the same as the previous screen. The main content area is titled 'WAN' and includes a 'Helpful Hints ...' section on the right. The central text explains that this section is used to configure the Internet Connection type, listing options like Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. Below this, the 'INTERNET CONNECTION TYPE' section features a dropdown menu for 'My Internet Connection is' set to 'Dynamic IP (DHCP)'. The 'DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE' section provides fields for 'Host Name' (DIR-820L), 'Use Unicast' (checked), 'Primary DNS Server' (0.0.0.0), 'Secondary DNS Server' (0.0.0.0), 'MTU' (1500), and 'MAC Address' (C8:D3:A3:60:4E:CD). A 'Copy Your PC's MAC Address' button is also present.

# Manual Internet Setup

## Static (assigned by ISP)

Select **Static IP** if all the Internet port's IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The Router will not accept the IP address if it is not in this format.

**My Internet Connection:** Select **Static IP** to manually enter the IP settings supplied by your ISP (Internet Service Provider).

**IP Address:** Enter the IP address assigned by your ISP.

**Subnet Mask:** Enter the Subnet Mask assigned by your ISP.

**Default Gateway:** Enter the Gateway assigned by your ISP.

**DNS Servers:** The DNS server information will be supplied by your ISP

**MTU:** Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

**MAC Address:** The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Copy Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows the WAN configuration interface. At the top, there's a 'WAN' header. Below it, a text block explains the purpose of the section and lists connection types: Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. A note mentions that PPPoE requires removing client software. Two buttons, 'Save Settings' and 'Don't Save Settings', are at the bottom of this section. The next section is 'INTERNET CONNECTION TYPE', which prompts the user to choose a mode. A dropdown menu shows 'Static IP' is selected. Below this is the 'STATIC IP ADDRESS INTERNET CONNECTION TYPE' section, which prompts for static address information. It contains input fields for IP Address, Subnet Mask, Default Gateway, Primary DNS Server, and Secondary DNS Server, all with '0.0.0.0' as the default. There's also an MTU field set to 1500 and a MAC Address field with 'C8:D3:A3:60:4E:CD'. A button labeled 'Copy Your PC's MAC Address' is located below the MAC field.

**WAN**

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. If you are unsure of your connection method, please contact your Internet Service Provider.

**Note:** If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

Save Settings Don't Save Settings

**INTERNET CONNECTION TYPE**

Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is : Static IP

**STATIC IP ADDRESS INTERNET CONNECTION TYPE**

Enter the static address information provided by your Internet Service Provider (ISP).

IP Address: 0.0.0.0

Subnet Mask: 0.0.0.0

Default Gateway: 0.0.0.0

Primary DNS Server: 0.0.0.0

Secondary DNS Server: 0.0.0.0

MTU: 1500 (bytes) MTU default = 1500

MAC Address: C8:D3:A3:60:4E:CD

Copy Your PC's MAC Address

# Internet Setup

## Dynamic (Cable)

**My Internet Connection:** Select **Dynamic IP (DHCP)** to obtain IP Address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for cable modem services.

**Host Name:** The Host Name is optional but may be required by some ISPs. Leave blank if you are not sure.

**Use Unicasting:** Check the box if you are having problems obtaining an IP address from your ISP.

**Primary/Secondary DNS Server:** Enter the Primary and Secondary DNS server IP addresses assigned by your ISP. These addresses are usually obtained automatically from your ISP. Leave blank if you did not specifically receive these from your ISP.

**MTU:** Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1500 is the default MTU.

**MAC Address:** The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Copy Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows the WAN configuration page. At the top, there's a 'WAN' header. Below it, a text box explains that this section is for configuring the Internet Connection type, listing options like Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. A note mentions that for PPPoE, existing client software must be removed. There are 'Save Settings' and 'Don't Save Settings' buttons. The 'INTERNET CONNECTION TYPE' section has a dropdown menu set to 'Dynamic IP (DHCP)'. Below that, the 'DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE' section provides fields for 'Host Name' (set to 'DIR-820L'), 'Use Unicasting' (checked), 'Primary DNS Server' (0.0.0.0), 'Secondary DNS Server' (0.0.0.0), 'MTU' (1500), and 'MAC Address' (C8:D3:A3:60:4E:CD). A 'Copy Your PC's MAC Address' button is located at the bottom of the MAC Address field.

**WAN**

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. If you are unsure of your connection method, please contact your Internet Service Provider.

**Note:** If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

[Save Settings](#) [Don't Save Settings](#)

**INTERNET CONNECTION TYPE**

Choose the mode to be used by the router to connect to the Internet.

**My Internet Connection is :** Dynamic IP (DHCP)

**DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE**

Use this Internet connection type if your Internet Service Provider (ISP) didn't provide you with IP Address information and/or a username and password.

**Host Name :**

**Use Unicasting :** ☒ (compatibility for some DHCP Servers)

**Primary DNS Server :**

**Secondary DNS Server :**

**MTU :**  (bytes) MTU default =1500

**MAC Address :**  [Copy Your PC's MAC Address](#)

# Internet Setup

## PPPoE (DSL)

Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

**My Internet Connection:** Select **PPPoE (Username/Password)** from the drop-down menu.

**Address Mode:** Select **Static IP** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

**IP Address:** Enter the IP address (Static PPPoE only).

**User Name:** Enter your PPPoE user name.

**Password:** Enter your PPPoE password and then retype the password in the next box.

**Service Name:** Enter the ISP Service Name (optional).

**Reconnect Mode:** Select either **Always-on**, **On-Demand**, or **Manual**.

**Maximum Idle Time:** Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

**DNS Servers:** Enter the Primary and Secondary DNS Server Addresses of your choice.

**MTU:** Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

**MAC Address:**

The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Copy Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

The screenshot shows the WAN configuration interface. At the top, there's a 'WAN' header. Below it, a text box explains the purpose of the section and lists connection types: Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. A note states that if using PPPoE, PPPoE client software on computers must be removed or disabled. There are 'Save Settings' and 'Don't Save Settings' buttons. The 'INTERNET CONNECTION TYPE' section shows 'My Internet Connection is : PPPoE (Username / Password)' selected in a dropdown. The 'PPPOE INTERNET CONNECTION TYPE' section prompts for information from the ISP. It includes fields for 'Address Mode' (Dynamic IP selected, Static IP unselected), 'IP Address' (0.0.0.0), 'Username', 'Password', 'Verify Password', 'Service Name' (optional), 'Reconnect Mode' (Always on, On demand selected, Manual unselected), 'Maximum Idle Time' (5 minutes, 0=infinite), 'Primary DNS Server' (0.0.0.0, optional), 'Secondary DNS Server' (0.0.0.0, optional), 'MTU' (1492 bytes, default = 1492), and 'MAC Address' (C8:D3:A3:60:4E:CD). A 'Copy Your PC's MAC Address' button is at the bottom right.

# Internet Setup

## PPTP

Choose PPTP (Point-to-Point-Tunneling Protocol ) if your ISP uses a PPTP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

**My Internet Connection:** Select **PPTP (Username/Password)** from the drop-down menu.

**Address Mode:** Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

**PPTP IP Address:** Enter the IP address (Static PPTP only).

**PPTP Subnet Mask:** Enter the Primary and Secondary DNS Server Addresses (Static PPTP only).

**PPTP Gateway IP Address:** Enter the Gateway IP Address provided by your ISP.

**PPTP Server IP Address:** Enter the Server IP provided by your ISP (optional).

**Username:** Enter your PPTP username.

**Password:** Enter your PPTP password and then retype the password in the next box.

**Reconnect Mode:** Select either **Always-on**, **On-Demand**, or **Manual**.

**Maximum Idle Time:** Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

**WAN**

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. If you are unsure of your connection method, please contact your Internet Service Provider.

**Note:** If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

[Save Settings](#) [Don't Save Settings](#)

**INTERNET CONNECTION TYPE**

Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is : PPTP (Username / Password)

**PPTP INTERNET CONNECTION TYPE**

Enter the information provided by your Internet Service Provider (ISP).

**Address Mode :** ☒ Dynamic IP ☐ Static IP

**PPTP IP Address :**

**PPTP Subnet Mask :**

**PPTP Gateway IP Address :**

**PPTP Server IP Address :**

**Username :**

**Password :**

**Verify Password :**

**Reconnect Mode :** ☐ Always on ☒ On demand ☐ Manual

**Maximum Idle Time :**  (minutes, 0=infinite)

**Primary DNS Server :**

**Secondary DNS Server :**

**MTU :**  (bytes) MTU default = 1400

**MAC Address :**

[Copy Your PC's MAC Address](#)

---

**DNS Servers:** The DNS server information will be supplied by your ISP (Internet Service Provider.)

**MTU:** Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1400 is the default MTU.

**MAC Address:** The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Copy Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

# Internet Setup

## L2TP

Choose L2TP (Layer 2 Tunneling Protocol) if your ISP uses a L2TP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

**My Internet Connection:** Select **L2TP (Username/Password)** from the drop-down menu.

**Address Mode:** Select **Static** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic**.

**L2TP IP Address:** Enter the L2TP IP address supplied by your ISP (Static only).

**L2TP Subnet Mask:** Enter the Subnet Mask supplied by your ISP (Static only).

**L2TP Gateway IP Address:** Enter the Gateway IP Address provided by your ISP.

**L2TP Server IP Address:** Enter the Server IP provided by your ISP (optional).

**Username:** Enter your L2TP username.

**Password:** Enter your L2TP password and then retype the password in the next box.

**Reconnect Mode:** Select either **Always-on**, **On-Demand**, or **Manual**.

**Maximum Idle Time:** Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

**WAN**

Use this section to configure your Internet Connection type. There are several connection types to choose from: Static IP, DHCP, PPPoE, PPTP, L2TP, and DS-Lite. If you are unsure of your connection method, please contact your Internet Service Provider.

**Note:** If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.

[Save Settings](#) [Don't Save Settings](#)

**INTERNET CONNECTION TYPE**

Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is : L2TP (Username / Password) ▼

**L2TP INTERNET CONNECTION TYPE**

Enter the information provided by your Internet Service Provider (ISP).

**Address Mode :** ☒ Dynamic IP ☐ Static IP

**L2TP IP Address :**

**L2TP Subnet Mask :**

**L2TP Gateway IP Address :**

**L2TP Server IP Address :**

**Username :**

**Password :**

**Verify Password :**

**Reconnect Mode :** ☐ Always on ☒ On demand ☐ Manual

**Maximum Idle Time :**  (minutes, 0=infinite)

**Primary DNS Server :**

**Secondary DNS Server :**

**MTU :**  (bytes) MTU default = 1400

**MAC Address :**

[Copy Your PC's MAC Address](#)

---

**DNS Servers:** Enter the Primary and Secondary DNS Server Addresses (Static L2TP only).

**MTU:** Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1400 is the default MTU.

**MAC Address:** The default MAC Address is set to the Internet port's physical interface MAC address on the Broadband Router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Copy Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.



# Internet Setup

## DS-Lite

DS-Lite is an IPv6 connection type. After selecting DS-Lite, the following parameters will be available for configuration:

**My Internet Connection is:** Select **DS-Lite** from the drop-down menu.

**DS-Lite Configuration:** Select the **DS-Lite DHCPv6 Option** to let the router allocate the AFTR IPv6 address automatically. Select the **Manual Configuration** option to enter the AFTR IPv6 address in manually.

**AFTR IPv6 Address:** After selecting the **Manual Configuration** option above, enter the AFTR IPv6 address used here.

**B4 IPv4 Address:** Enter the B4 IPv4 address value used here (optional).

**WAN IPv6 Address:** Once connected, the WAN IPv6 address will be displayed here.

**IPv6 WAN Default Gateway** Once connected, the IPv6 WAN Default Gateway address will be displayed here.

**IPv6**  
Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.  
[Save Settings](#) [Don't Save Settings](#)

**INTERNET CONNECTION TYPE**  
Choose the mode to be used by the router to connect to the Internet.  
My Internet Connection is : DS-Lite

**AFTR ADDRESS INTERNET CONNECTION TYPE :**  
Enter the AFTR address information provided by your Internet Service Provider(ISP).  
DS-Lite Configuration : ☒ DS-Lite DHCPv6 Option ☐ Manual Configuration  
AFTR IPv6 Address :   
B4 IPv4 Address : 192.0.0.  (optional)  
WAN IPv6 Address :   
IPv6 WAN Default Gateway :

# Internet Connection Setup Wizard

From the **Setup > Internet** screen, you can click on **Internet Connection Setup Wizard**.

This wizard is designed to guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

Click **Next** to continue.

## INTERNET CONNECTION

There are two ways to set up your Internet connection: you can use the Web-based Internet Connection Setup Wizard, or you can manually configure the connection.

## INTERNET CONNECTION SETUP WIZARD

If you would like to utilize our easy to use Web-based Wizards to assist you in connecting your new D-Link Systems Router to the Internet, click on the button below.

[Internet Connection Setup Wizard](#)

**Note:** Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

## MANUAL INTERNET CONNECTION OPTIONS

If you would like to configure the Internet settings of your new D-Link Systems Router manually, then click on the button below.

[Manual Internet Connection Setup](#)

## WELCOME TO THE D-LINK INTERNET CONNECTION SETUP WIZARD

This wizard will guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

- Step 1: Set your Password
- Step 2: Select your Time Zone
- Step 3: Configure your Internet Connection
- Step 4: Save Settings and Connect

[Prev](#)

[Next](#)

[Cancel](#)

[Connect](#)

In order to secure your router, enter a new password. Verify password and click **Next** to continue.

Select your time zone from the drop-down menu and click **Next** to continue.

Select your Internet connection type. You can select **DHCP Connection (Dynamic IP Address)** if your Internet connection automatically provides you with an IP Address. This option is commonly used for cable modem services. Click **Next** to continue.

**STEP 1: SET YOUR PASSWORD**

By default, your new D-Link Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below, and enabling CAPTCHA Graphical Authentication provides added security protection to prevent unauthorized online users and hacker software from accessing your network settings.

Password:

Verify Password :

**STEP 2: SELECT YOUR TIME ZONE**

Select the appropriate time zone for your location. This information is required to configure the time-based options for the router.

(GMT-08:00) Pacific Time (US/Canada), Tijuana

**STEP 3: CONFIGURE YOUR INTERNET CONNECTION**

Please select your Internet connection type below:

☒ **DHCP Connection (Dynamic IP Address)**  
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.

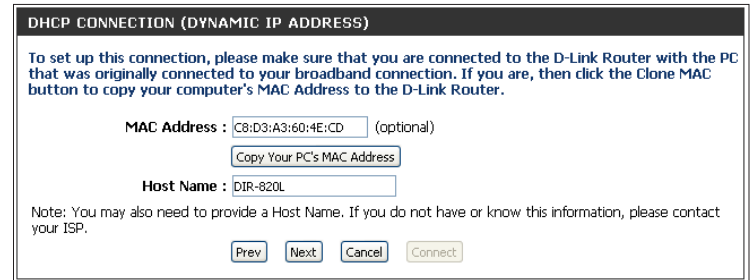
☐ **Username / Password Connection (PPPoE)**  
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.

☐ **Username / Password Connection (PPTP)**  
PPTP client.

☐ **Username / Password Connection (L2TP)**  
L2TP client.

☐ **Static IP Address Connection**  
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.

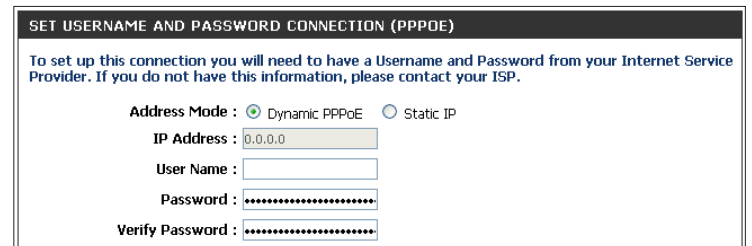
If you selected **DHCP Connection (Dynamic IP Address)** you can click on **Copy Your PC's MAC Address** to copy your computer's MAC address to your router. Click **Next** to continue.



The screenshot shows a window titled "DHCP CONNECTION (DYNAMIC IP ADDRESS)". It contains instructions: "To set up this connection, please make sure that you are connected to the D-Link Router with the PC that was originally connected to your broadband connection. If you are, then click the Clone MAC button to copy your computer's MAC Address to the D-Link Router." Below this, there is a "MAC Address" field with the value "C8:D3:A3:60:4E:CD" and a "(optional)" label. A button labeled "Copy Your PC's MAC Address" is next to it. Below the MAC field is a "Host Name" field with the value "DIR-820L". A note states: "Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP." At the bottom are four buttons: "Prev", "Next", "Cancel", and "Connect".

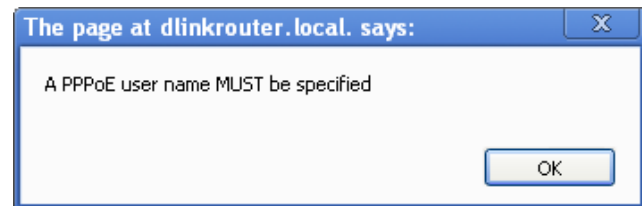
If you selected **PPPoE**, enter your PPPoE username and password and click **Next** to continue.

**Note:** Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.



The screenshot shows a window titled "SET USERNAME AND PASSWORD CONNECTION (PPPOE)". It contains instructions: "To set up this connection you will need to have a Username and Password from your Internet Service Provider. If you do not have this information, please contact your ISP." Below this, there is an "Address Mode" section with two radio buttons: "Dynamic PPPoE" (selected) and "Static IP". Below this is an "IP Address" field with the value "0.0.0.0". Below that are "User Name" and "Password" fields, both with masked input (dots). Below the password field is a "Verify Password" field, also with masked input.

If you did not enter a username and password, you will see a pop-up window that says, *A PPPoE user name MUST be specified.*



The screenshot shows a small pop-up window with a blue title bar that says "The page at dlinkrouter.local. says:". The main text area contains the message "A PPPoE user name MUST be specified". At the bottom right is an "OK" button.

If you selected **PPTP**, enter your PPTP username, password, and other information supplied by your ISP. Click **Next** to continue.

**SET USERNAME AND PASSWORD CONNECTION (PPTP)**

To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need PPTP IP address. If you do not have this information, please contact your ISP.

Address Mode : ☒ Dynamic IP ☐ Static IP

PPTP IP Address : 0.0.0.0

PPTP Subnet Mask : 0.0.0.0

PPTP Gateway IP Address : 0.0.0.0

PPTP Server IP Address (may be same as gateway) :

User Name :

Password : .....

Verify Password : .....

Prev Next Cancel Connect

If you selected **L2TP**, enter your L2TP username, password, and other information supplied by your ISP. Click **Next** to continue.

**SET USERNAME AND PASSWORD CONNECTION (L2TP)**

To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need L2TP IP address. If you do not have this information, please contact your ISP.

Address Mode : ☒ Dynamic IP ☐ Static IP

L2TP IP Address : 0.0.0.0

L2TP Subnet Mask : 0.0.0.0

L2TP Gateway IP Address : 0.0.0.0

L2TP Server IP Address (may be same as gateway) :

User Name :

Password : .....

Verify Password : .....

Prev Next Cancel Connect

If you selected **Static**, enter the IP and DNS settings supplied by your ISP. Click **Next** to continue.

SET STATIC IP ADDRESS CONNECTION

To set up this connection you will need to have a complete list of IP information provided by your Internet Service Provider. If you have a Static IP connection and do not have this information, please contact your ISP.

IP Address :

0.0.0.0

Subnet Mask :

0.0.0.0

Gateway Address :

0.0.0.0

Primary DNS Address :

0.0.0.0

Secondary DNS Address :

0.0.0.0

Prev

Next

Cancel

Connect

When the setup process is completed, you will see this screen. Click on **Connect** to save your settings.

SETUP COMPLETE!

The Internet Connection Setup Wizard has completed. Click the save button to save your settings and reboot the router.

Prev

Next

Cancel

Connect

# Wireless Settings

If you want to configure the wireless settings on your router using the wizard, click **Wireless Network Setup Wizard** and refer to the next page.

Click **Add Wireless Device with WPS** if you want to add a wireless device using Wi-Fi Protected Setup (WPS) and the WPS Wizard. Refer to page 37.

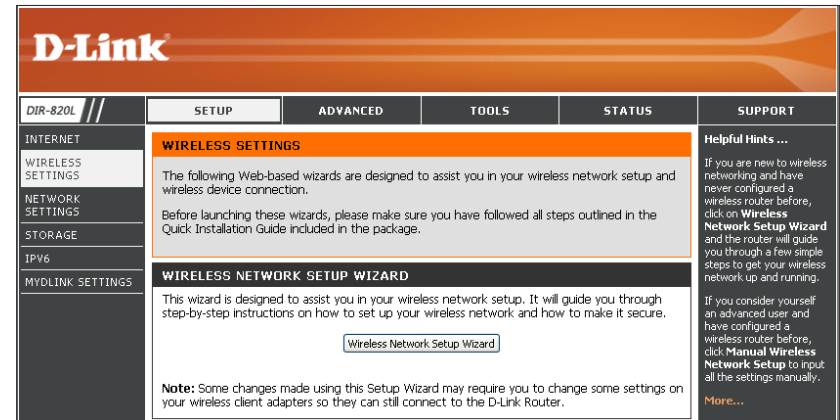
If you want to manually configure the wireless settings on your router click **Manual Wireless Network Setup** and refer to page 39.

The screenshot displays the D-Link DIR-820L web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various settings categories: INTERNET, WIRELESS SETTINGS, NETWORK SETTINGS, STORAGE, IPV6, and MYDLINK SETTINGS. The main content area is titled 'WIRELESS SETTINGS' and contains three sections: 1. 'WIRELESS NETWORK SETUP WIZARD' with a description and a 'Wireless Network Setup Wizard' button. 2. 'ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD' with a description and an 'Add Wireless Device With WPS' button. 3. 'MANUAL WIRELESS NETWORK SETUP' with a description and a 'Manual Wireless Network Setup' button. A 'Helpful Hints ...' section on the right provides additional guidance for new users and advanced users.

DIR-820L //	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
INTERNET	<b>WIRELESS SETTINGS</b>				<b>Helpful Hints ...</b>  If you are new to wireless networking and have never configured a wireless router before, click on <b>Wireless Network Setup Wizard</b> and the router will guide you through a few simple steps to get your wireless network up and running.  If you consider yourself an advanced user and have configured a wireless router before, click <b>Manual Wireless Network Setup</b> to input all the settings manually.  <a href="#">More...</a>
WIRELESS SETTINGS	The following Web-based wizards are designed to assist you in your wireless network setup and wireless device connection.  Before launching these wizards, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.				
NETWORK SETTINGS	<b>WIRELESS NETWORK SETUP WIZARD</b>  This wizard is designed to assist you in your wireless network setup. It will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.  <a href="#">Wireless Network Setup Wizard</a>				
STORAGE	<b>Note:</b> Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the D-Link Router.				
IPV6	<b>ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD</b>  This wizard is designed to assist you in connecting your wireless device to your router. It will guide you through step-by-step instructions on how to get your wireless device connected. Click the button below to begin.  <a href="#">Add Wireless Device With WPS</a>				
MYDLINK SETTINGS	<b>MANUAL WIRELESS NETWORK SETUP</b>  If your wireless network is already set up with Wi-Fi Protected Setup, manual configuration of the wireless network will destroy the existing wireless network. If you would like to configure the wireless settings of your new D-Link Systems Router manually, then click on the Manual Wireless Network Setup button below.  <a href="#">Manual Wireless Network Setup</a>				

# Wireless Network Setup Wizard

To run the *Wireless Network Setup Wizard*, go to **Setup > Wireless Settings**. Click on **Wireless Network Setup Wizard**.

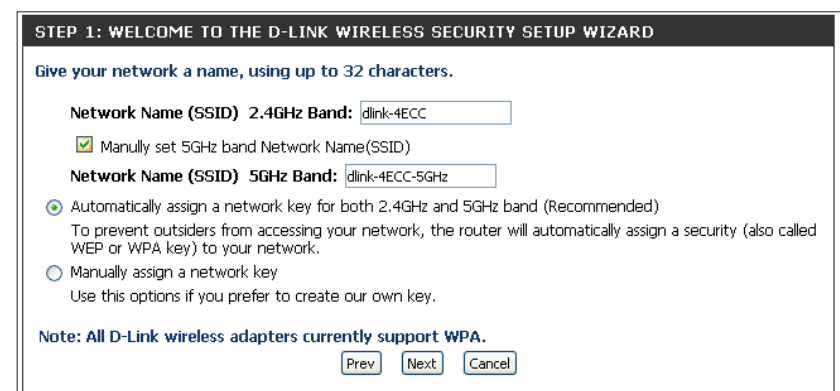
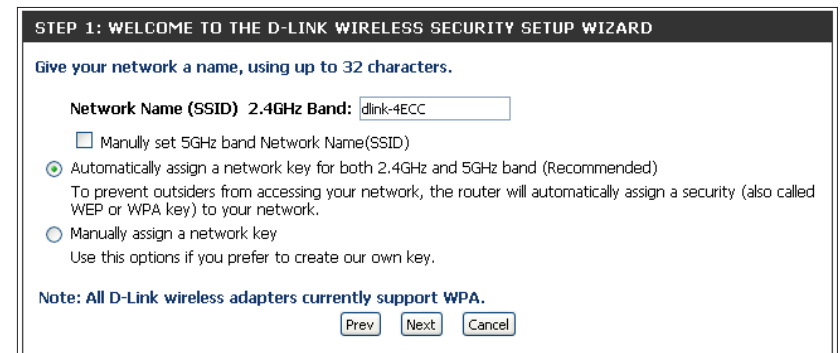


You can enter a **Network Name** for just the 2.4GHz band of your wireless network (SSID). If you click on the box where it says, *Manually set 5GHz band Network Name (SSID)*, you can enter a name for that as well.

**Note:** Do not use personal information as your SSID because users with wireless devices within range of your router will be able to see this information.

Next select one of the following options for the network key:

- Automatically:** Select this option to automatically generate the router's network key and click **Next**.
- Manually:** Select this option to manually enter your network key and click **Next**.





If you selected **Automatically**, the summary window will display your settings. Write down this information so you can enter these settings on your wireless clients. Click **Save** to save your settings. Skip to the next page for further instructions.

If you selected **Manually**, the following screen will appear.

Enter a password for your **Wireless Security Password**. Click **Next** to continue.

**Note:** The security password/passphrase must be between 8 and 63 characters and is case-sensitive. You will need to enter this password on your wireless clients exactly or it will not connect.

The summary window will display your settings. Write down this information so you can enter these settings on your wireless clients. Click **Save** to save your settings.

**SETUP COMPLETE!**

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

2.4GHz Band Wireless Network Name (SSID) :	dlink-4ECC
Security Mode :	Auto (WPA or WPA2) - Personal
Cipher Type :	TKIP and AES
Pre-Shared Key :	c9730e6228

5GHz Band Wireless Network Name (SSID) :	dlink-4ECC-5GHz
Security Mode :	Auto (WPA or WPA2) - Personal
Cipher Type :	TKIP and AES
Pre-Shared Key :	a59b756af3

**STEP 2: SET YOUR WIRELESS SECURITY PASSWORD**

You have selected your security level - you will need to set a wireless security password.

The WPA (Wi-Fi Protected Access) key must meet following guidelines

- Between 8 and 63 characters (A longer WPA key is more secure than a short one)
- Exactly 64 characters using 0-9 and A-F

☒ Use the same Wireless Security Password on both 2.4GHz and 5GHz band

Wireless Security Password :

Note: You will need to enter the same password as keys in this step into your wireless clients in order to enable proper wireless communication.

**SETUP COMPLETE!**

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

2.4GHz Band Wireless Network Name (SSID) :	dlink-4ECC
Security Mode :	Auto (WPA or WPA2) - Personal
Cipher Type :	TKIP and AES
Pre-Shared Key :	dlink12345

5GHz Band Wireless Network Name (SSID) :	dlink-4ECC-5GHz
Security Mode :	Auto (WPA or WPA2) - Personal
Cipher Type :	TKIP and AES
Pre-Shared Key :	dlink12345

## Add Wireless Device with WPS Wizard

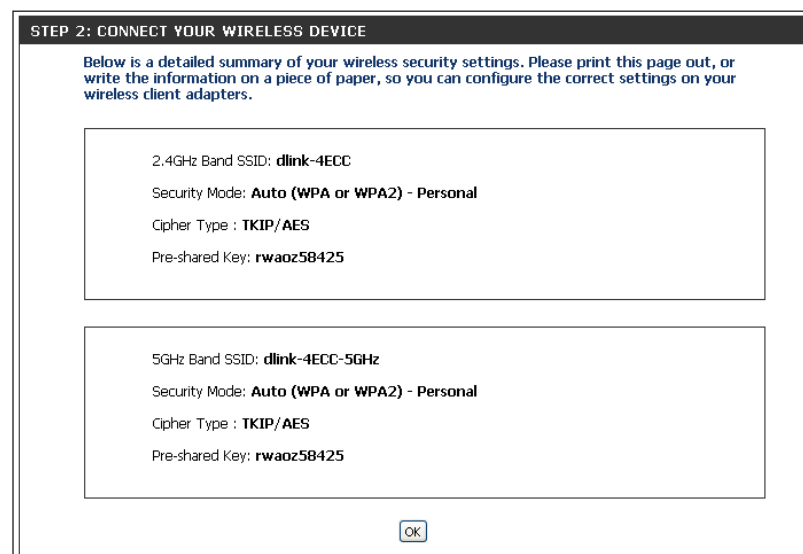
From the **Setup > Wireless Settings** screen, click **Add Wireless Device with WPS**.



Select **Auto** to add a wireless client using WPS (Wi-Fi Protected Setup) and then click **Next**. Skip to the next page of this manual.



If you select **Manual**, a settings summary screen will appear. Write down the security key and enter this on your wireless clients. Click **OK** to finish. This will take you to the *Wireless Status* screen.



**PIN:** Select this option to use PIN method. In order to use this method you must know the wireless client's eight digit PIN. Click **Connect**.

**PBC:** Select this option to use PBC (Push Button) method to add a wireless client. Click **Connect**.

Once you click **Connect**, you will have a 120 second time limit to apply the settings to your wireless client(s) and successfully establish a connection.

Click **Wireless Status** to finish. This will take you to *Wireless Status* screen.

**ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) WIZARD**

There are two ways to add wireless device to your wireless network:

- PIN (Personal Identification Number)
- PBC (Push Button Configuration)

☒ **PIN :**

please enter the PIN from your wireless device and click the below 'Connect' Button

☐ **PBC**

please press the push button on your wireless device and click the below 'Connect' Button within 120 seconds

**ADD WIRELESS DEVICE WITH WPS**

Please press down the Push Button (physical or virtual) on the wireless device you are adding to your wireless network within **113** seconds ...

**STEP 2: CONNECT YOUR WIRELESS DEVICE**

Adding wireless device: Succeeded. To add another device click on the Cancel button below or click on the Wireless Status button to check wireless status.

# Manual Wireless Settings

## 802.11n/g (2.4GHz)

**Enable Wireless:** Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.

**Schedule:** Select the time frame that you would like your wireless network enabled. The schedule may be set to **Always**. Any schedule you create will be available in the drop-down menu. Click **Add New** to create a schedule.

**Wireless Network Name:** Service Set Identifier (SSID) is the name of your wireless network. Create a name for your wireless network using up to 32 characters. The SSID is case-sensitive.

Select one of the following:

- 802.11 Mode:** **802.11b Only** - Select only if all of your wireless clients are 802.11b.  
**802.11g Only** - Select only if all of your wireless clients are 802.11g.  
**802.11n Only** - Select only if all of your wireless clients are 802.11n.  
**Mixed 802.11g and 802.11b** - Select if you are using both 802.11g and 802.11b wireless clients.  
**Mixed 802.11n and 802.11g** - Select if you are using both 802.11n and 802.11g wireless clients.  
**Mixed 802.11n, 802.11g, and 802.11b** - Select if you are using a mix of 802.11n, 802.11g, and 802.11b wireless clients.

**Enable Auto Channel Scan:** The **Auto Channel Scan** setting can be selected to allow the DIR-820L to choose the channel with the least amount of interference.

**Wireless Channel:** Indicates the channel setting for the DIR-820L. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you checked **Enable Auto Channel Scan**, this option will be greyed out.

Select the Channel Width:

- Channel Width:** **Auto 20/40MHz** - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.  
**20MHz** - Select if you are not using any 802.11n wireless clients.

**Visibility Status:** Select **Invisible** if you do not want the SSID of your wireless network to be broadcasted by the DIR-820L. If Invisible is selected, the SSID of the DIR-820L will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DIR-820L in order to connect to it.

**Security Mode:** Refer to page 41 for more information regarding wireless security.

**WIRELESS NETWORK SETTINGS**

**Wireless Band :** 2.4GHz Band

**Enable Wireless:** ☒ Always ☐ Add New

**Wireless Network Name:** dlink-4ECC (Also called the SSID)

**802.11 Mode:** Mixed 802.11n, 802.11g and 802.11b

**Enable Auto Channel Scan:** ☒

**Wireless Channel:** 2.437 GHz - CH 6

**Transmission Rate :** Best (automatic)

**Channel Width:** Auto 20/40 MHz

**Visibility Status:** ☒ Visible ☐ Invisible

**WIRELESS SECURITY MODE**

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

**Security Mode:** None

## 802.11ac/n/a (5GHz)

**Enable Wireless:** Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.

**Schedule:** Select the time frame that you would like your wireless network enabled. The schedule may be set to **Always**. Any schedule you create will be available in the drop-down menu. Click **Add New** to create a schedule.

**Wireless Network Name:** Service Set Identifier (SSID) is the name of your wireless network. Create a name for your wireless network using up to 32 characters. The SSID is case-sensitive.

Select one of the following:

- 802.11 Mode:**
- 802.11n Only** - Select if all of your wireless clients are 802.11n.
  - 802.11ac Only** - Select only if all of your wireless clients are 802.11ac.
  - Mixed 802.11n and 802.11a** - Select if you are using both 802.11n and 802.11a wireless clients.
  - Mixed 802.11ac, 802.11n, 802.11a** - Select if you are using 802.11ac, 802.11n and 802.11a wireless clients.

**Enable Auto Channel Scan:** The **Auto Channel Scan** setting can be selected to allow the DIR-820L to choose the channel with the least amount of interference.

**Wireless Channel:** Indicates the channel setting for the DIR-820L. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you checked **Enable Auto Channel Scan**, this option will be greyed out.

**Channel Width:** Select the Channel Width:

- 20MHz** - Select if you are not using any 802.11n wireless clients.
- Auto 20/40MHz** - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.
- Auto 20/40/80MHz** - Select if you are using 802.11ac, 802.11n and non-802.11n wireless devices. This option is only available when the 802.11 Mode is set to Mixed 802.11ac.

**Visibility Status:** Select **Invisible** if you do not want the SSID of your wireless network to be broadcasted by the DIR-820L. If Invisible is selected, the SSID of the DIR-820L will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DIR-820L in order to connect to it.

**Security Mode:** Refer to the next page for more information regarding wireless security.

**WIRELESS NETWORK SETTINGS**

Wireless Band : 5GHz Band

Enable Wireless : ☒ Always

Wireless Network Name :  (Also called the SSID)

802.11 Mode :

Enable Auto Channel Scan : ☒

Wireless Channel :

Channel Width :

Visibility Status : ☒ Visible ☐ Invisible

**WIRELESS SECURITY MODE**

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode :

---

# Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-820L offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

## What is WPA?

WPA (Wi-Fi Protected Access), is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?\*&\_) and spaces. This key must be the exact same key entered on your wireless router or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

## WPA/WPA2-Personal (PSK)

It is recommended to enable wireless security on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to **Security Mode**, select **WPA-Personal**.
3. Next to **WPA Mode**, select **Auto(WPA or WPA2)**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
4. Next to **Cipher Type**, select **TKIP and AES**, **TKIP**, or **AES**.
5. Next to **Group Key Update Interval**, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 seconds by default).
6. Next to **Pre-Shared Key**, enter a key (passphrase). The key is entered as a pass-phrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.
7. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the router.

**WIRELESS SECURITY MODE**

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode :

**WPA**

Use **WPA** or **WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode:

Cipher Type:

Group Key Update Interval:  (seconds)

**PRE-SHARED KEY**

Enter an 8- to 63-character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase.

Pre-Shared Key :

## Configure WPA/WPA2-Enterprise (RADIUS)

It is recommended that you enable wireless security on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Setup** and then click **Wireless Settings** on the left side.
2. Next to **Security Mode**, select **WPA-Enterprise**.
3. Next to **WPA Mode**, select **Auto(WPA or WPA2)**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
4. Next to **Cipher Type**, select **TKIP and AES**, **TKIP**, or **AES**.
5. Next to **Group Key Update Interval**, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 seconds by default).
6. Next to **Authentication Timeout**, enter amount of time in minutes before a time-out.
7. Next to **RADIUS Server IP Address** enter the IP Address of your RADIUS server.

**WIRELESS SECURITY MODE**

To protect your privacy you can configure wireless security features. This device supports three wireless security modes, including WEP, WPA-Personal, and WPA-Enterprise. WEP is the original wireless encryption standard. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.

Security Mode :

**WPA**

Use **WPA** or **WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode:

Cipher Type:

Group Key Update Interval:  (seconds)

**EAP (802.1X)**

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout:  (minutes)

RADIUS server IP Address:

RADIUS server Port:

RADIUS server Shared Secret:

MAC Address Authentication: ☒



8. Next to **RADIUS Server Port**, enter the port you are using with your RADIUS server. 1812 is the default port.
9. Next to **RADIUS Server Shared Secret**, enter the security key.
10. Check the box by **MAC Address Authentication** if you would like MAC Address authentication.
11. Click **Advanced** to enter settings for a secondary RADIUS Server.
12. Click **Save Settings** to save your settings.

**EAP (802.1X)**

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Authentication Timeout:  (minutes)

RADIUS server IP Address:

RADIUS server Port:

RADIUS server Shared Secret:

MAC Address Authentication: ☒

[<<Advanced](#)

**Optional backup RADIUS server:**

Second RADIUS server IP Address:

Second RADIUS server Port:

Second RADIUS server Shared Secret:

Second MAC Address Authentication: ☒

# Network Settings

This section will allow you to change the local network settings of the router and to configure the DHCP settings.

## Router Settings

**Router IP Address:** Enter the IP address of the router. The default IP address is 192.168.0.1.

If you change the IP address, once you click **Save Settings**, you will need to enter the new IP address in your browser to get back into the configuration utility.

**Subnet Mask:** Enter the Subnet Mask. The default subnet mask is 255.255.255.0.

**Device Name:** Enter a name for the router.

**Local Domain Name:** Enter the Domain name (Optional).

**Enable DNS Relay:** Uncheck the box to transfer the DNS server information from your ISP to your computers. If checked, your computers will use the router for a DNS server.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various settings categories: INTERNET, WIRELESS SETTINGS, NETWORK SETTINGS (which is highlighted), STORAGE, IPV6, and MYDLINK SETTINGS. The main content area is titled 'NETWORK SETTINGS' and contains two sections: 'NETWORK SETTINGS' and 'ROUTER SETTINGS'. The 'NETWORK SETTINGS' section provides instructions on configuring internal network settings and includes 'Save Settings' and 'Don't Save Settings' buttons. The 'ROUTER SETTINGS' section provides instructions on configuring the router's internal network settings and includes input fields for 'Router IP Address' (192.168.0.1), 'Subnet Mask' (255.255.255.0), 'Device Name' (dlinkrouter), and 'Local Domain Name'. The 'Enable DNS Relay' checkbox is checked. A 'Helpful Hints ...' section on the right provides additional information about DHCP server configuration and device reservations.

DIR-820L //	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
INTERNET	<b>NETWORK SETTINGS</b> Use this section to configure the internal network settings of your router and also to configure the built-in DHCP Server to assign IP addresses to the computers on your network. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again. <a href="#">Save Settings</a> <a href="#">Don't Save Settings</a>				
WIRELESS SETTINGS	<b>ROUTER SETTINGS</b> Use this section to configure the internal network settings of your router. The IP Address that is configured here is the IP Address that you use to access the Web-based management interface. If you change the IP Address here, you may need to adjust your PC's network settings to access the network again. <b>Router IP Address:</b> <input type="text" value="192.168.0.1"/> <b>Subnet Mask:</b> <input type="text" value="255.255.255.0"/> <b>Device Name:</b> <input type="text" value="dlinkrouter"/> <b>Local Domain Name:</b> <input type="text"/> <b>Enable DNS Relay:</b> <input checked="" type="checkbox"/>				
NETWORK SETTINGS	<b>Helpful Hints ...</b> If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck <b>Enable DHCP Server</b> to disable this feature. If you have devices on your network that should always have fixed IP addresses, add a <b>DHCP Reservation</b> for each such device. <a href="#">More...</a>				
STORAGE					
IPV6					
MYDLINK SETTINGS					

## DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DIR-820L has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DIR-820L. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.

**Enable DHCP** Check this box to enable the DHCP server on your router.  
**Server:** Uncheck to disable this function.

**DHCP IP Address Range:** Enter the starting and ending IP addresses for the DHCP server's IP assignment.

**Note:** If you statically (manually) assign IP addresses to your computers or devices, make sure the IP addresses are outside of this range or you may have an IP conflict.

**DHCP Lease Time:** The length of time for the IP address lease. Enter the Lease time in minutes.

**Always Broadcast:** Enable this feature to broadcast from your DHCP server to LAN/WLAN clients.

**NetBIOS Announcement:** NetBIOS allows LAN hosts to discover all other computers within the network, enable this feature to allow the DHCP Server to offer NetBIOS configuration settings.

**Learn NetBIOS from WAN:** Enable this feature to allow WINS information to be learned from the WAN side; disable to allow manual configuration.

**NetBIOS Scope:** This feature allows the configuration of a NetBIOS 'domain' name under which network hosts operates. This setting has no effect if the *Learn NetBIOS information from WAN* is activated.

**DHCP SERVER SETTINGS**

Use this section to configure the built-in DHCP Server to assign IP addresses to the computers on your network.

**Enable DHCP Server:** ☒

**DHCP IP Address Range:**  to

**DHCP Lease Time:**  (minutes)

**Always broadcast:** ☐ (compatibility for some DHCP Clients)

**NetBIOS announcement:** ☐

**Learn NetBIOS from WAN:** ☐

**NetBIOS Scope:**  (optional)

**NetBIOS node type:**

- ☐ Broadcast only (use when no WINS servers configured)
- ☐ Point-to-Point (no broadcast)
- ☒ Mixed-mode (Broadcast then Point-to-Point)
- ☐ Hybrid (Point-to-Point then Broadcast)

**Primary WINS IP Address:**

**Secondary WINS IP Address:**

---

**NetBIOS Node Type:** Select the type of NetBIOS node; **Broadcast only, Point-to-Point, Mixed-mode,** and **Hybrid.**

**WINS IP Address:** Enter your WINS Server IP address(es).

## DHCP Reservation

If you want a computer or device to always have the same IP address assigned, you can create a *DHCP Reservation*. The router will assign the IP address only to that computer or device.

**Note:** This IP address must be within the DHCP IP Address Range.

**Enable:** Check this box to enable the reservation.

**Computer Name:** Enter the computer name or select from the drop-down menu and click <<.

**IP Address:** Enter the IP address you want to assign to the computer or device. This IP Address must be within the DHCP IP Address Range.

**MAC Address:** Enter the MAC address of the computer or device.

**Copy Your PC's MAC Address:** You can use the **Copy Your PC's MAC Address** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

**Save:** Click **Save** to save your entry. You must click **Save Settings** at the top to activate your reservations.

### DHCP Reservations List

**DHCP Reservations List:** Displays any reservation entries. Displays the *Host Name* (name of your computer or device), *MAC Address*, and *IP Address*.

**Enable:** Check to enable the reservation.

**Edit:** Click the edit icon to make changes to the reservation entry.

**Delete:** Click the trash icon to remove the reservation from the list.

**ADD DHCP RESERVATION**

**Enable :** ☒

**Computer Name :** DLINKTESTPC << DLINKTESTPC ▼

**IP Address :** 192.168.0.100

**MAC Address :** 00:0C:F1:87:74:2B

[Copy Your PC's MAC Address](#)

[Save](#) [Clear](#)

DHCP RESERVATIONS LIST				
Enable	Host Name	MAC Address	IP Address	

NUMBER OF DYNAMIC DHCP CLIENTS 1					
Hardware Address	Assigned IP	Hostname	Expires		
00:0C:F1:87:74:2B	192.168.0.100	DLINKTESTPC	0 Day, 21:52:01	<a href="#">Revoke</a>	<a href="#">Reserve</a>

DHCP RESERVATIONS LIST				
Enable	Host Name	MAC Address	IP Address	
<input checked="" type="checkbox"/>	DLINKTESTPC	00:0C:F1:87:74:2B	192.168.0.100	 

NUMBER OF DYNAMIC DHCP CLIENTS 1					
Hardware Address	Assigned IP	Hostname	Expires		
00:0C:F1:87:74:2B	192.168.0.100	DLINKTESTPC	0 Day, 21:52:01	<a href="#">Revoke</a>	<a href="#">Reserve</a>

# Storage

From this page you can set up shared access to files that are on a USB external hard drive or thumb drive that is plugged into the router. You can access from your local network or from the Internet, using either a web browser or an app for your smartphone or tablet. You can create users and assign permissions to shared files (**Read Only** or **Read/Write**).

If you would like to set up access using the wizard, click on **SharePort™ Mobile/Web Access Setup Wizard**. Skip to page 51.

If you consider yourself an advanced user and would like to set up access manually, click **SharePort™ Mobile/Web Access Manual Setup**. See instructions on the next page.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various settings categories: INTERNET, WIRELESS SETTINGS, NETWORK SETTINGS, STORAGE (highlighted), IPV6, and MYDLINK SETTINGS. The main content area is titled 'STORAGE' and contains the following text: 'SharePort™ Mobile/Web Access is an easy to use shared access from any computer or mobile device in your home network to an external USB storage drive connected to your router. It allows you and other guest users to access files stored on a USB storage drive via the user account you create. You can use the Setup Wizard or manually configure for the SharePort™ Mobile/Web Access.' Below this text are two sections: 'SHAREPORT™ MOBILE SETUP WIZARD' with a button 'SharePort™ Mobile/Web Access Setup Wizard', and 'SHAREPORT™ MOBILE MANUAL SETUP' with a button 'SharePort™ Mobile/Web Access Manual Setup'. On the right side, there is a 'Helpful Hints ...' section with additional information and a 'More...' link.

# SharePort Mobile/Web Access Manual Setup

Below are step-by-step instructions on how to access files that are on your USB thumb drive or external hard drive that is connected to your router:

## Step 1 - Enable SharePort Web Access

Check the **Enable SharePort Web Access** checkbox to enable. Enter the port(s) you want to use. The default for HTTP is 8181 and HTTPS is 4433. Check the box if you want to **Allow Remote Access**.

## Step 2 - Create a User Account

Under *User Creation*, enter a **User Name** and **Password**, and verify your password. Click **Add/Edit**.

## Step 3 - Configure your Access Path

Under *User List*, click the **Modify** icon for the user you just created. Here you can locate the folder on your USB storage device for which you want to assign access. (Refer to screen shot at bottom of page.\*)

## Step 4 - Save Settings

If you want to add more users, repeat steps 2 and 3. Once you are finished, click the **Save Settings** button at the top to save your settings.

## Step 5 - Connect

At the bottom of the screen, you will see the link you can use to connect to the USB drive. Remember to use *HTTPS* to get a secure connection.



**Note:** If you changed the *HTTPS Access Port* to 3200, and your WAN IP address is 1.2.3.4, then you must enter *HTTPS://1.2.3.4:3200* to connect.


\*Append/New Folder window opens when you click the **Modify** icon from the *User List*. Click on **Browse** to locate the folder on the USB storage device. Select **Permission** from the drop-down menu and click **OK**.

**STORAGE**  
Share Port Web Access allows you to use a web browser to access files stored on an USB storage drive plugged into the router. To use this feature, check the **Enable SharePort Web Access** checkbox, then create user accounts to manage access to your storage devices or use the Guest account (guest/guest) to access the Guest Folder. After plugging in an USB storage drive, the new device will appear in the list with a link to it. You can then use this link to connect to the drive and log in with a user account.  
[Save Settings](#) [Don't Save Settings](#)

**SHAREPORT WEB ACCESS**  
Enable SharePort Web Access : ☒  
HTTP Access Port :   
HTTPS Access Port :   
Allow Remote Access : ☐

**10 -- USER CREATION**  
User Name :  << User Name   
Password :   
Verify Password :  [Add/Edit](#) [Delete](#)

**USER LIST**  
 : Modify  : Delete  

No.	User Name	Access Path	Permission
1	admin	/	Read/Write
2	guest	None	Read Only 

**NUMBER OF DEVICES:**  

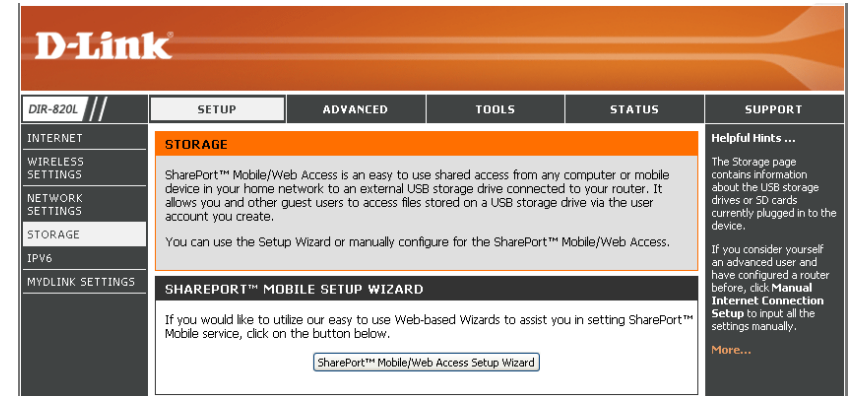
Device	Total Space	Free Space
--------	-------------	------------

**SHAREPORT WEB ACCESS LINK**  
You can use this link to connect to the drive remotely after logging with a user account.

**Append New Folder**  
User Name :   
Device Link :   
Folder :  [Browse](#)  
Permission :    
[Append](#)  
[OK](#) [Cancel](#)

# SharePort Mobile/Web Access Setup Wizard

If you would like to set up access to your USB external hard drive or thumb drive using the wizard, click on **SharePort™ Mobile/Web Access Setup Wizard**.



**Note:** You must have a USB storage device plugged into the router, or you will see this error message.



Create a *User Account* by entering an **Account Name** and **Password**. Click **Next**.

The screenshot shows a form titled 'Create a User Account to manage the storage accessibility.' It contains three input fields: 'Account Name:', 'Password:', and 'Verify Password:'. Below the fields are three buttons: 'Prev', 'Next', and 'Cancel'.

Click on the **Select** button and select a folder on the USB drive for shared access. Click **Next**.

The screenshot shows a form titled 'Select/Create a folder in the USB drive for accessing the contents.' It features a text input field with a '/' character and a 'Select' button. Below the input field are three buttons: 'Prev', 'Next', and 'Cancel'.



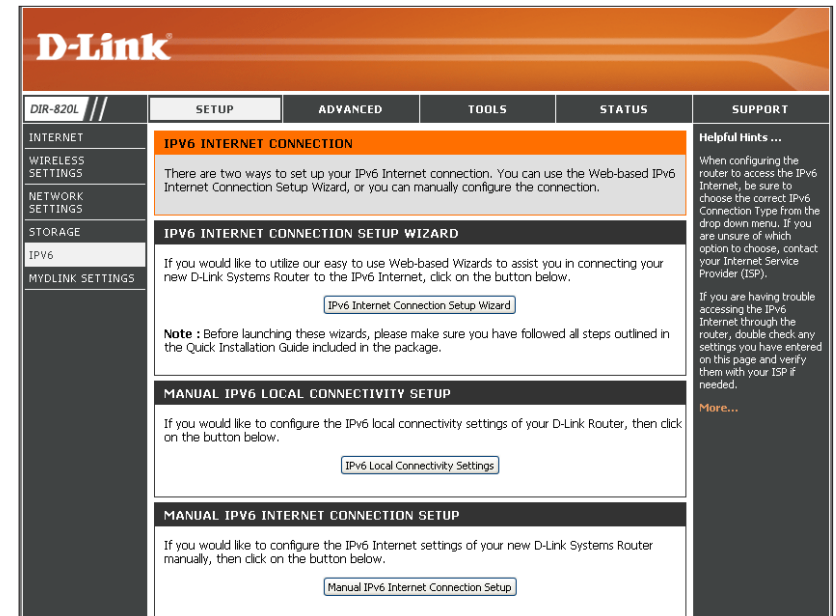
# IPv6

On this page, the user can configure the IPv6 Connection type. There are three ways to set up the IPv6 Internet connection.

For the beginner user that has not configured a router before, click on the **IPv6 Internet Connection Setup Wizard** button and the router will guide you through a few simple steps to get your network up and running. (Refer to page 54.)

For the advanced user that has configured a router before, click on the **Manual IPv6 Internet Connection Setup** button to input all the settings manually. (Refer to page 59.)

If you would like to manually configure the IPv6 local connectivity settings of your router, click on **IPv6 Local Connectivity Settings**.



Click on **Enable ULA**. You can check **Use default ULA prefix**, or you can leave the box unchecked and enter the prefix manually in the **ULA Prefix** text box.

IPv6 LOCAL CONNECTIVITY SETTINGS

Use this section to configure Unique Local IPv6 Unicast Addresses(ULA) settings for your router. ULA is intended for local communications and not expected to be routable on the global Internet.

Save Settings

Don't Save Settings

IPv6 ULA Settings

Enable ULA :

☐

Use default ULA prefix :

☒

ULA Prefix :

fdb8:f5c4:f27b::

/64

Current IPv6 ULA Settings

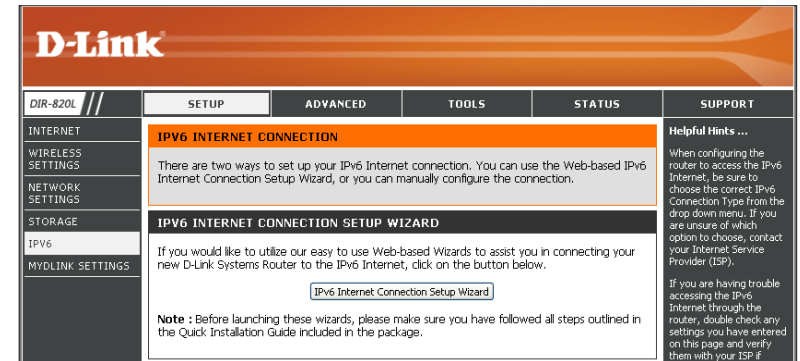
Current ULA Prefix :

LAN IPv6 ULA :

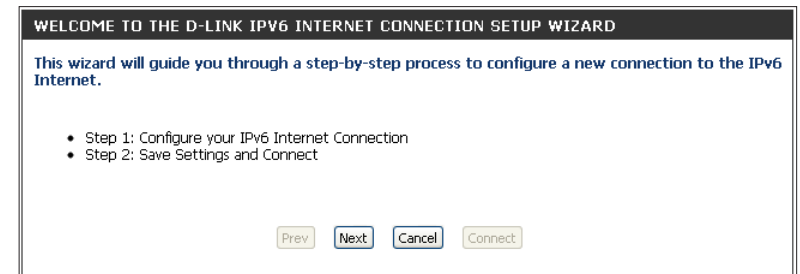
# IPv6 Internet Connection Setup Wizard

On this page, the user can configure the IPv6 Connection type using the *IPv6 Internet Connection Setup Wizard*.

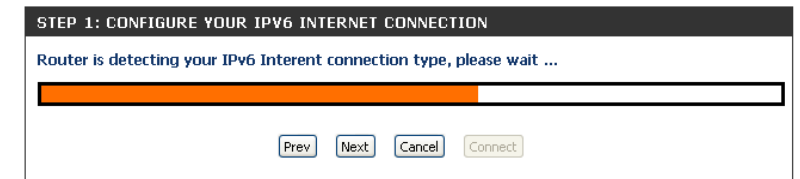
Click the **IPv6 Internet Connection Setup Wizard** button and the router will guide you through a few simple steps to get your network up and running.



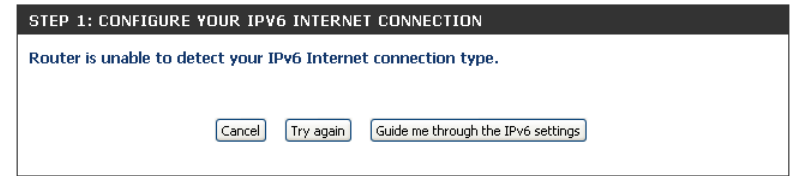
Click **Next** to continue. Click **Cancel** to return to the main page.



The router will try to detect the IPv6 Internet connection type automatically. If it succeeds, then the user will be guided through the input of the appropriate parameters for the connection type found.



However, if the automatic detection fails, the user will be prompt to either **Try again** or to click on the **Guide me through the IPv6 settings** button to initiate the manual continuation of the wizard.



STEP 1: CONFIGURE YOUR IPV6 INTERNET CONNECTION

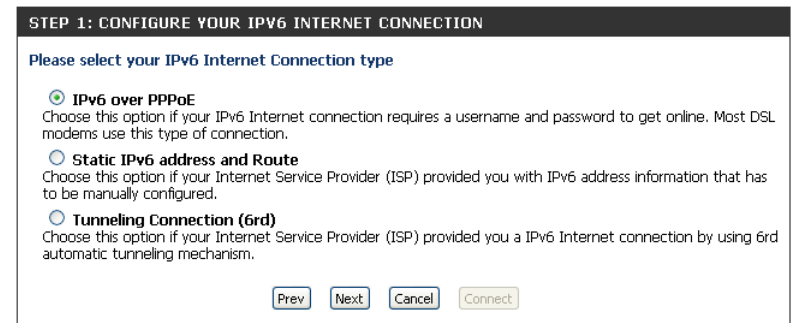
Router is unable to detect your IPv6 Internet connection type.

Cancel Try again Guide me through the IPv6 settings

If you click on **Guide me through the IPv6 settings** button, there are several connection types to choose from. If you are unsure of your connection method, please contact your IPv6 Internet Service Provider.

**Note:** *If using the PPPoE option, you will need to ensure that any PPPoE client software on your computers has been removed or disabled. The three options available on this page are **IPv6 over PPPoE**, **Static IPv6 address and Route**, and **Tunneling Connection (6rd)**.*

Choose the required IPv6 Internet Connection type and click on the **Next** button to continue. Click on the **Prev** button to return to the previous page. Click on the **Cancel** button to discard all the changes made and return to the main page.



STEP 1: CONFIGURE YOUR IPV6 INTERNET CONNECTION

Please select your IPv6 Internet Connection type

☒ **IPv6 over PPPoE**  
Choose this option if your IPv6 Internet connection requires a username and password to get online. Most DSL modems use this type of connection.

☐ **Static IPv6 address and Route**  
Choose this option if your Internet Service Provider (ISP) provided you with IPv6 address information that has to be manually configured.

☐ **Tunneling Connection (6rd)**  
Choose this option if your Internet Service Provider (ISP) provided you a IPv6 Internet connection by using 6rd automatic tunneling mechanism.

Prev Next Cancel Connect

## IPv6 over PPPoE

After selecting the IPv6 over PPPoE option, the user will be able to configure the IPv6 Internet connection that requires a username and password to get online. Most DSL modems use this type of connection.

The following parameters will be available for configuration:

**PPPoE Session:** Select the PPPoE Session value here. You can select **Share with IPv4**, meaning this connection shares it's information with the already configured IPv4 PPPoE connection. Or you can choose to **Create a new session**.

**Username:** Enter the PPPoE **Username** here. If you do not know your user name, please contact your ISP.

**Password:** Enter the PPPoE **Password** here. If you do not know your password, please contact your ISP.

**Verify Password:** Re-enter the PPPoE **Password** used here.

**Service Name:** Enter the **Service Name** for this connection here. This option is optional.

SET USERNAME AND PASSWORD CONNECTION (PPPOE)

To set up this connection you will need to have a Username and Password from your IPv6 Internet Service Provider. If you do not have this information, please contact your ISP.

PPPoE Session : ☒ Share with IPv4 ☐ Create a new session

Username :

Password :

Verify Password :

Service Name :  (optional)

Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.

Prev Next Cancel Connect

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## Static IPv6 Address Connection

This mode is used when your ISP provides you with a set IPv6 addresses that does not change. The IPv6 information is manually entered in your IPv6 configuration settings. You must enter the IPv6 address, Subnet Prefix Length, Default Gateway, Primary DNS Server, and Secondary DNS Server. Your ISP provides you with all this information.

**Use Link-Local Address:** The *Link-Local Address* is used by nodes and routers when communicating with neighboring nodes on the same link. When this box is checked, it enables IPv6-capable devices to communicate with each other on the LAN side.

**IPv6 Address:** Enter the WAN **IPv6 Address** for the router here.

**Subnet Prefix Length:** Enter the WAN **Subnet Prefix Length** value used here.

**Default Gateway:** Enter the WAN **Default Gateway** IPv6 address used here.

**Primary IPv6 DNS Address:** Enter the WAN primary **DNS Server** address used here.

**Secondary IPv6 DNS Address:** Enter the WAN secondary **DNS Server** address used here.

**LAN IPv6 Address:** These are the settings of the LAN (Local Area Network) IPv6 interface for the router. The router's **LAN IPv6 Address** configuration is based on the IPv6 Address and Subnet assigned by your ISP. (A subnet with prefix /64 is supported in LAN.)

The screenshot shows a configuration window titled "SET STATIC IPV6 ADDRESS CONNECTION". It contains a warning message at the top: "To set up this connection you will need to have a complete list of IPv6 information provided by your IPv6 Internet Service Provider. If you have a Static IPv6 connection and do not have this information, please contact your ISP." Below the warning, there are several fields: "Use Link-Local Address" with a checked checkbox, "IPv6 Address" with the value "FE80:0:0:0:CAD3:A3FF:FE60:4EC", "Subnet Prefix Length" with the value "64", "Default Gateway", "Primary IPv6 DNS Server", "Secondary IPv6 DNS Server", and "LAN IPv6 Address" with a trailing "/64". At the bottom, there are four buttons: "Prev", "Next", "Cancel", and "Connect".

## Tunneling Connection (6rd)

After selecting the Tunneling Connection (6rd) option, the user can configure the IPv6 6rd connection settings.

**6rd IPv6 Prefix:** Enter the **6rd IPv6** address and prefix value used here.

**IPv4 Address:** You will see the **IPv4 Address** used here.

**Mask Length:** Enter the IPv4 **Mask Length** used here.

**Assigned IPv6 Prefix:** Displays the **IPv6 Assigned Prefix** value here.

**6rd Border Relay IPv4 Address:** Enter the **6rd Border Relay IPv4 Address** here.

**IPv6 DNS Server:** Enter the primary **IPv6 DNS Server** address here.

The screenshot shows a dialog box titled "SET UP 6RD TUNNELING CONNECTION". It contains the following text: "To set up this 6rd tunneling connection you will need to have the following information from your IPv6 Internet Service Provider. If you do not have this information, please contact your ISP." Below this text are several input fields: "6rd IPv6 Prefix" with a text box and a dropdown set to "32"; "IPv4 Address" with the value "10.10.10.101" and a "Mask Length" dropdown set to "0"; "Assigned IPv6 Prefix" with the value "None"; "6rd Border Relay IPv4 Address" with the value "0.0.0.0"; and "IPv6 DNS Server" with an empty text box. At the bottom are four buttons: "Prev", "Next", "Cancel", and "Connect".

The IPv6 Internet Connection Setup Wizard is complete.

Click on the **Connect** button to continue. Click on the **Prev** button to return to the previous page. Click on the **Cancel** button to discard all the changes made and return to the main page.

The screenshot shows a dialog box titled "SETUP COMPLETE!". It contains the text: "The IPv6 Internet Connection Setup Wizard has completed. Click the Connect button to save your settings and reboot the router." Below this text are four buttons: "Prev", "Next", "Cancel", and "Connect".

## IPv6 Manual Setup

There are several connection types to choose from: **Auto Detection**, **Static IPv6**, **Autoconfiguration (SLAAC/DHCPv6)**, **PPPoE**, **IPv6 in IPv4 Tunnel**, **6to4**, **6rd**, and **Local Connectivity Only**. If you are unsure of your connection method, please contact your IPv6 Internet Service Provider.

**Note:** If using the PPPoE option, you will need to ensure that any PPPoE client software on your computers has been removed or disabled.

### Auto Detection

Select **Auto Detection** to have the router detect and automatically configure your IPv6 setting from your ISP.

Click **Save Settings**.

**IPv6**  
Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.  
[Save Settings](#) [Don't Save Settings](#)

**IPv6 CONNECTION TYPE**  
Choose the mode to be used by the router to the IPv6 Internet.  
My IPv6 Connection is : Auto Detection

**IPv6 DNS SETTINGS :**  
Obtain a DNS server address automatically or enter a specific DNS server address.  
☒ Obtain a DNS server address automatically  
☐ Use the following IPv6 DNS servers  
Primary IPv6 DNS Server :   
Secondary IPv6 DNS Server :

**LAN IPv6 ADDRESS SETTINGS :**  
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.  
Enable DHCP-PD : ☒  
LAN IPv6 Address :  /64  
LAN IPv6 Link-Local Address : FE80::CAD3:A3FF:FE60:4ECC/64

**ADDRESS AUTOCONFIGURATION SETTINGS**  
Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network. You can also enable DHCP-PD to delegate prefixes for router in your LAN.  
Enable automatic IPv6 address assignment : ☒  
Enable Automatic DHCP-PD in LAN : ☒  
Autoconfiguration Type : SLAAC + Stateless DHCPv6  
Router Advertisement Lifetime :  (minutes)



## Static IPv6

**My IPv6 Connection is:** Select **Static IPv6** from the drop-down menu.

**WAN IPv6 Address Settings:** Enter the address settings supplied by your Internet provider (ISP).

**LAN IPv6 Address:** Enter the LAN (local) IPv6 address for the router.

**LAN IPv6 Link-Local Address:** Displays the Router's LAN Link-Local Address.

**Enable Automatic IPv6 address assignment:** Check to enable the Autoconfiguration feature.

**Autoconfiguration Type:** Select **Stateful (DHCPv6)**, **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

**IPv6 Address Range Start:** Enter the start IPv6 Address for the DHCPv6 range for your local computers.

**IPv6 Address Range End:** Enter the end IPv6 Address for the DHCPv6 range for your local computers.

**Router Advertisement Lifetime:** Enter the Router Advertisement Lifetime (in minutes).

Click **Save Settings**.

**IPv6**  
Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

**IPv6 CONNECTION TYPE**  
Choose the mode to be used by the router to the IPv6 Internet.  
My IPv6 Connection is :

**WAN IPv6 ADDRESS SETTINGS :**  
Enter the IPv6 address information provided by your Internet Service Provider (ISP).  
Use Link-Local Address : ☒  
IPv6 Address :   
Subnet Prefix Length :   
IPv6 Default Gateway :   
Primary IPv6 DNS Server :   
Secondary IPv6 DNS Server :

**LAN IPv6 ADDRESS SETTINGS :**  
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.  
LAN IPv6 Address :  /64  
LAN IPv6 Link-Local Address : FE80::CAD3:A3FF:FE60:4ECC/64

**ADDRESS AUTOCONFIGURATION SETTINGS**  
Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network.  
Enable automatic IPv6 address assignment : ☒  
Autoconfiguration Type :   
Router Advertisement Lifetime :  (minutes)

## Autoconfiguration

**My IPv6 Connection is:** Select **Autoconfiguration (SLAAC/DHCPv6)** from the drop-down menu.

**IPv6 DNS Settings:** Select either **Obtain DNS server address automatically** or **Use the following DNS Servers**.

**Primary/Secondary IPv6 DNS Server:** Enter the primary and secondary DNS server addresses.

**LAN IPv6 Address:** Enter the LAN (local) IPv6 address for the router.

**LAN IPv6 Link-Local Address:** Displays the Router's LAN Link-Local Address.

**Enable Automatic IPv6 address assignment:** Check to enable the Autoconfiguration feature.

**Enable Automatic DHCP-PD in LAN:** Check to enable DHCP-PD to delegate prefixes for routers in your LAN.

**Autoconfiguration Type:** Select **Stateful (DHCPv6)**, **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

**IPv6 Address Range Start:** Enter the start IPv6 Address for the DHCPv6 range for your local computers.

**IPv6 Address Range End:** Enter the end IPv6 Address for the DHCPv6 range for your local computers.

**Router Advertisement Lifetime:** Enter the Router Advertisement Lifetime (in minutes).

Click **Save Settings**.

The screenshot shows the IPv6 configuration page with the following sections:

- IPv6** (orange header):
  - Text: "Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider."
  - Buttons: "Save Settings" and "Don't Save Settings".
- IPv6 CONNECTION TYPE** (dark grey header):
  - Text: "Choose the mode to be used by the router to the IPv6 Internet."
  - Form: "My IPv6 Connection is : Autoconfiguration (SLAAC/DHCPv6)" with a dropdown arrow.
- IPv6 DNS SETTINGS :** (dark grey header):
  - Text: "Obtain a DNS server address automatically or enter a specific DNS server address."
  - Radio buttons: "Obtain a DNS server address automatically" (selected) and "Use the following IPv6 DNS servers".
  - Form: "Primary IPv6 DNS Server : [text box]"
  - Form: "Secondary IPv6 DNS Server : [text box]"
- LAN IPv6 ADDRESS SETTINGS :** (dark grey header):
  - Text: "Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again."
  - Form: "Enable DHCP-PD : [checked checkbox]"
  - Form: "LAN IPv6 Address : [text box] /64"
  - Form: "LAN IPv6 Link-Local Address : FE80::CAD3:A3FF:FE60:4ECC/64"
- ADDRESS AUTOCONFIGURATION SETTINGS** (dark grey header):
  - Text: "Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network. You can also enable DHCP-PD to delegate prefixes for router in your LAN."
  - Form: "Enable automatic IPv6 address assignment : [checked checkbox]"
  - Form: "Enable Automatic DHCP-PD in LAN : [checked checkbox]"
  - Form: "Autoconfiguration Type : SLAAC + Stateless DHCPv6" with a dropdown arrow.
  - Form: "Router Advertisement Lifetime : 0 (minutes)" with a text box.

## PPPoE

**My IPv6 Connection is:** Select **PPPoE** from the drop-down menu.

**PPPoE Internet Connection Type:** Enter the PPPoE account settings supplied by your Internet provider (ISP).

**PPPoE Session:** Select **Create a new session** if you have IPv6.

**Address Mode:** Select **Static IP** if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. In most cases, select **Dynamic IP**.

**IP Address:** Enter the IP address (Static PPPoE only).

**User Name:** Enter your PPPoE user name.

**Password:** Enter your PPPoE password and then retype the password in the next box.

**Service Name:** Enter the ISP Service Name (optional).

**Reconnect Mode:** Select either **Always-on**, **On-Demand**, or **Manual**.

**Maximum Idle Time:** Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

**MTU:** Maximum Transmission Unit - you may need to change the MTU for optimal performance with your specific ISP. 1492 is the default MTU.

**IPv6 DNS Settings:** Select either **Obtain IPv6 DNS servers automatically** or **Use the following IPv6 DNS Servers**

**Primary/Secondary IPv6 DNS Servers:** Enter the primary and secondary DNS server addresses.

**IPv6**

Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

Save Settings Don't Save Settings

**IPv6 CONNECTION TYPE**

Choose the mode to be used by the router to the IPv6 Internet.

My IPv6 Connection is : PPPoE

**PPPoe :**

Enter the information provided by your Internet Service Provider (ISP).

PPPoE Session : ☒ Share with IPv4 ☐ Create a new session

Address Mode : ☒ Dynamic IP ☐ Static IP

IP Address :

User Name :

Password :

Verify Password :

Service Name :  (optional)

Reconnect Mode : ☐ Always on ☒ On demand ☐ Manual

Maximum Idle Time :  5 (minutes, 0=infinite)

MTU :  1492 (bytes) MTU default = 1492

**IPv6 DNS SETTINGS :**

Enter a specific DNS server address

☒ Obtain IPv6 DNS server address automatically

☐ Use the following IPv6 DNS servers

Primary IPv6 DNS Server :

Secondary IPv6 DNS Server :

**LAN IPv6 ADDRESS SETTINGS :**

Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.

Enable DHCP-PD : ☒

LAN IPv6 Address :  /64

LAN IPv6 Link-Local Address : FE80::CAD3:A3FF:FE60:4ECC/64

**ADDRESS AUTOCONFIGURATION SETTINGS**

Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network. You can also enable DHCP-PD to delegate prefixes for router in your LAN.

Enable automatic IPv6 address assignment : ☒

Enable Automatic DHCP-PD in LAN : ☒

Autoconfiguration Type : SLAAC + Stateless DHCPv6

Router Advertisement Lifetime :  0 (minutes)

**Enable DHCP-PD:** Check to enable DHCP-PD.

**LAN IPv6 Address:** Enter the LAN (local) IPv6 address for the router.

**LAN IPv6 Link-Local Address:** Displays the Router's LAN Link-Local Address.

**Enable Automatic IPv6 address assignment:** Check to enable the IPv6 Autoconfiguration.

**Enable Automatic DHCP-PD in LAN:** Check to enable delegation of previxes for router addresses.

**Autoconfiguration Type:** Select **Stateful (DHCPv6)**, **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

**IPv6 Address Range Start:** Enter the start IPv6 Address for the DHCPv6 range for your local computers.

**IPv6 Address Range End:** Enter the end IPv6 Address for the DHCPv6 range for your local computers.

**Router Advertisement Lifetime:** Enter the Router Advertisement Lifetime (in minutes).

Click **Save Settings**.

The screenshot shows two sections of a router's configuration page. The top section is titled "LAN IPv6 ADDRESS SETTINGS :" and contains a descriptive paragraph, a checked checkbox for "Enable DHCP-PD", a text input for "LAN IPv6 Address" followed by "/64", and a display of the "LAN IPv6 Link-Local Address" as "FE80::CAD3:A3FF:FE60:4ECC/64". The bottom section is titled "ADDRESS AUTOCONFIGURATION SETTINGS" and contains another descriptive paragraph, checked checkboxes for "Enable automatic IPv6 address assignment" and "Enable Automatic DHCP-PD in LAN", a dropdown menu for "Autoconfiguration Type" set to "SLAAC + Stateless DHCPv6", and a text input for "Router Advertisement Lifetime" set to "0" minutes.

## IPv6 in IPv4 Tunnel

**My IPv6 Connection is:** Select **IPv6 in IPv4 Tunnel** from the drop-down menu.

### IPv6 in IPv4 Tunnel

**Settings:** Enter the settings supplied by your Internet provider (ISP).

**IPv6 DNS Settings:** Select either **Obtain IPv6 DNS server address automatically** or **Use the following IPv6 DNS Servers**

**Primary/Secondary IPv6 DNS Servers:** Enter the primary and secondary DNS server addresses.

**Enable DHCP-PD:** Check to enable DHCP-PD.

**LAN IPv6 Address:** Enter the LAN (local) IPv6 address for the router.

**LAN IPv6 Link-Local Address:** Displays the Router's LAN Link-Local Address.

**Enable Automatic IPv6 Address Assignment:** Check to enable the Autoconfiguration feature.

**Enable Automatic DHCP-PD in LAN:** Check to enable delegation of prefixes for router addresses.

**Autoconfiguration Type:** Select **Stateful (DHCPv6)**, **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

**IPv6 Address Range Start:** Enter the start IPv6 Address for the DHCPv6 range for your local computers.

**IPv6 Address Range End:** Enter the end IPv6 Address for the DHCPv6 range for your local computers.

**Router Advertisement Lifetime:** Enter the Router Advertisement Lifetime (in minutes).

Click **Save Settings**.

The screenshot shows the IPv6 configuration page with the following sections and settings:

- IPv6** (Header): Includes a note about contacting the ISP and buttons for "Save Settings" and "Don't Save Settings".
- IPv6 CONNECTION TYPE**: "Choose the mode to be used by the router to the IPv6 Internet." The "My IPv6 Connection is" dropdown is set to "IPv6 in IPv4 Tunnel".
- IPv6 in IPv4 TUNNEL SETTINGS :**: "Enter the IPv6 in IPv4 Tunnel information provided by your Tunnel Broker." Fields include: Remote IPv4 Address (0.0.0.0), Remote IPv6 Address, Local IPv4 Address (10.10.10.101), and Local IPv6 Address.
- IPv6 DNS SETTINGS :**: "Obtain a DNS server address automatically or enter a specific DNS server address." Radio buttons show "Obtain a DNS server address automatically" is selected. Fields for Primary and Secondary IPv6 DNS Servers are present.
- LAN IPv6 ADDRESS SETTINGS :**: "Use this section to configure the internal network settings of your router." Includes: "Enable DHCP-PD" (checked), "LAN IPv6 Address" field followed by "/64", and "LAN IPv6 Link-Local Address" (FE80::CAD3:A3FF:FE60:4ECC/64).
- ADDRESS AUTOCONFIGURATION SETTINGS**: "Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network." Includes: "Enable automatic IPv6 address assignment" (checked), "Enable Automatic DHCP-PD in LAN" (checked), "Autoconfiguration Type" dropdown set to "SLAAC + Stateless DHCPv6", and "Router Advertisement Lifetime" set to 0 minutes.

## 6 to 4 Tunneling

**My IPv6 Connection is:** Select **6 to 4** from the drop-down menu.

**6 to 4 Address Settings:** Enter the IPv6 settings supplied by your Internet provider (ISP).

**Primary/Secondary IPv6 DNS Servers:** Enter the primary and secondary DNS server addresses.

**LAN IPv6 Address:** Enter the LAN (local) IPv6 address for the router.

**LAN IPv6 Link-Local Address:** Displays the Router's LAN Link-Local Address.

**Enable Automatic IPv6 Address Assignment:** Check to enable the Autoconfiguration feature.

**Autoconfiguration Type:** Select **Stateful (DHCPv6)**, **SLAAC + RDNSS** or **SLAAC + Stateless DHCPv6**.

**IPv6 Address Range Start:** Enter the start IPv6 Address for the DHCPv6 range for your local computers.

**IPv6 Address Range End:** Enter the end IPv6 Address for the DHCPv6 range for your local computers.

**Router Advertisement Lifetime:** Enter the Router Advertisement Lifetime (in minutes).

Click **Save Settings**.

**IPv6**  
Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

**IPv6 CONNECTION TYPE**  
Choose the mode to be used by the router to the IPv6 Internet.  
My IPv6 Connection is :

**6to4 SETTINGS :**  
Enter the IPv6 address information provided by your Internet Service Provider (ISP).  
6to4 Address : 2002:0A0A:0A65::0A0A:0A65  
6to4 Relay :   
Primary IPv6 DNS Server :   
Secondary IPv6 DNS Server :

**LAN IPv6 ADDRESS SETTINGS :**  
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.  
LAN IPv6 Address : 2002:0A0A:0A65:1::1/64  
LAN IPv6 Link-Local Address : FE80::CAD3:A3FF:FE60:4ECC/64

**ADDRESS AUTOCONFIGURATION SETTINGS**  
Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network.  
Enable automatic IPv6 address assignment : ☒  
Autoconfiguration Type :   
Router Advertisement Lifetime :  (minutes)

## 6rd

**My IPv6 Connection is:** Select **6rd** from the drop-down menu.

**6rd Address Settings:** Enter the IPv6 address settings supplied by your Internet provider (ISP).

**LAN IPv6 Address:** Enter the LAN (local) IPv6 address for the router.

**LAN IPv6 Link-Local Address:** Displays the Router's LAN Link-Local Address.

**Enable Automatic IPv6 address assignment:** Check to enable the Autoconfiguration feature.

**Autoconfiguration Type:** Select **Stateful (DHCPv6)**, **SLAAC+RDNSS** or **SLAAC + Stateless DHCPv6**.

**Router Advertisement Lifetime:** Enter the Router Advertisement Lifetime (in minutes).

Click **Save Settings**.

**IPv6**  
Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.  
[Save Settings](#) [Don't Save Settings](#)

**IPv6 CONNECTION TYPE**  
Choose the mode to be used by the router to the IPv6 Internet.  
My IPv6 Connection is : 6rd

**6RD SETTINGS**  
Enter the IPv6 address information provided by your Internet Service Provider (ISP).  
Enable Hub and Spoke Mode : ☒  
6rd Configuration : ☒ 6rd DHCPv4 Option ☐ Manual Configuration  
6rd IPv6 Prefix :  /   
IPv4 Address: 10.10.10.101 Mask Length:   
Assigned IPv6 Prefix : None  
6rd Border Relay IPv4 Address :   
Primary IPv6 DNS Server :   
Secondary IPv6 DNS Server :

**LAN IPv6 ADDRESS SETTINGS**  
Use this section to configure the internal network settings of your router. If you change the LAN IPv6 Address here, you may need to adjust your PC network settings to access the network again.  
LAN IPv6 Address : None  
LAN IPv6 Link-Local Address : FE80::CAD3:A3FF:FE60:4ECC/64

**ADDRESS AUTOCONFIGURATION SETTINGS**  
Use this section to setup IPv6 Autoconfiguration to assign IPv6 addresses to the computers in your network. You can also enable DHCP-PD to delegate prefixes for router in your LAN.  
Enable automatic IPv6 address assignment : ☒  
Autoconfiguration Type : SLAAC + Stateless DHCPv6  
Router Advertisement Lifetime :  (minutes)

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## Local Connectivity

**My IPv6 Connection is:** Select **Local Connectivity Only** from the drop-down menu.

**LAN IPv6 Link-Local Address:** Displays the IPv6 address of the router.

Click **Save Settings**.

**IPv6**

Use this section to configure your IPv6 Connection type. If you are unsure of your connection method, please contact your Internet Service Provider.

[Save Settings](#) [Don't Save Settings](#)

**IPv6 CONNECTION TYPE**

Choose the mode to be used by the router to the IPv6 Internet.

**My IPv6 Connection is :** Local Connectivity Only

**LAN IPv6 ADDRESS SETTINGS**

LAN IPv6 address for local IPv6 communications.

**LAN IPv6 Link-Local Address :** **FE80::CAD3:A3FF:FE60:4ECC/64**



# mydlink Settings

The DIR-820L features a cloud service that pushes information such as firmware upgrade notifications, user activity, and intrusion alerts to the mydlink™ app on Android and Apple mobile devices. To insure that your router is up-to-date with the latest features, mydlink™ will notify you when an update is available for your router. You can also monitor a user's online activity with real-time website browsing history, maintaining a safe and secure environment, especially for children at home.

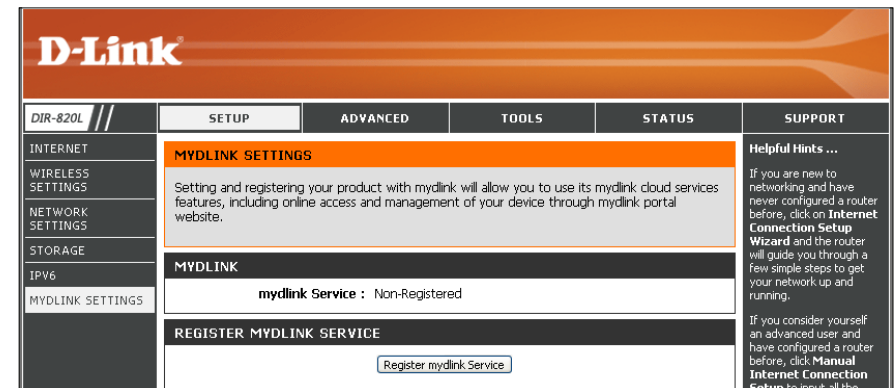
On this page the user can configure the mydlink™ settings for this router. This feature will allow us to use the mydlink cloud services that includes online access and management of this router through the mydlink portal website or portable device applications like iOS apps and Android applications.

In the mydlink section, we can view the registration status of the mydlink account service. The *mydlink Service* field will either display Registered or Non-Registered. In the *Register mydlink Service* section, we can register or modify a mydlink account. Click on the **Register mydlink Service** button to initiate this procedure.

**mydlink Service:** Displays whether your device is registered with a mydlink account or not. If you are registered, your mydlink e-mail address will be displayed.

**mydlink E-mail:** If you are registered, your mydlink E-mail address will be displayed.

**Register mydlink Service:** Click to go to the mydlink website to register or edit your settings.



D-Link					
DIR-820L	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
INTERNET	<b>MYDLINK SETTINGS</b>				<b>Helpful Hints ...</b> If you are new to networking and have never configured a router before, click on <b>Internet Connection Setup Wizard</b> and the router will guide you through a few simple steps to get your network up and running.  If you consider yourself an advanced user and have configured a router before, click <b>Manual Internet Connection Setup</b> to input all the
WIRELESS SETTINGS	Setting and registering your product with mydlink will allow you to use its mydlink cloud services features, including online access and management of your device through mydlink portal website.				
NETWORK SETTINGS	<b>MYDLINK</b>				
STORAGE	mydlink Service : Non-Registered				
IPV6	<b>REGISTER MYDLINK SERVICE</b>				
MYDLINK SETTINGS	<a href="#">Register mydlink Service</a>				

# Advanced Virtual Server

This will allow you to open a single port. If you would like to open a range of ports, refer to the next page.

**Name:** Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

**IP Address:** Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), your computer will be listed in the “Computer Name” drop-down menu. Select your computer and click <<.

**Private Port/ Public Port:** Enter the port that you want to open next to Private Port and Public Port. The private and public ports are usually the same. The public port is the port seen from the Internet side, and the private port is the port being used by the application on the computer within your local network.

**Protocol Type:** Select **TCP**, **UDP**, or **Both** from the drop-down menu.

**Schedule:** The schedule of time when the Virtual Server Rule will be enabled. The schedule may be set to **Always**, which will allow the particular service to always be enabled. You can create your own times in the **Tools** > **Schedules** section.

**Inbound Filter:** Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced** > **Inbound Filter** page.

**D-Link**

DIR-820L

SETUP ADVANCED TOOLS STATUS SUPPORT

**VIRTUAL SERVER**

The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Save Settings Don't Save Settings

**24-- VIRTUAL SERVERS LIST**

	Name	IP Address	Application Name	Computer Name	Port	Traffic Type	Schedule	Inbound Filter
<input type="checkbox"/>		0.0.0.0	<<	<<	Public Port 0	Protocol TCP	Schedule Always	Allow All
<input type="checkbox"/>		0.0.0.0	<<	<<	Private Port 0	6		Allow All
<input type="checkbox"/>		0.0.0.0	<<	<<	Public Port 0	Protocol TCP	Schedule Always	Allow All
<input type="checkbox"/>		0.0.0.0	<<	<<	Private Port 0	6		Allow All
<input type="checkbox"/>		0.0.0.0	<<	<<	Public Port 0	Protocol TCP	Schedule Always	Allow All
<input type="checkbox"/>		0.0.0.0	<<	<<	Private Port 0	6		Allow All

**Helpful Hints ...**

Check the **Application Name** drop down menu for a list of predefined server types. If you select one of the predefined server types, click the arrow button next to the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the computer at which you would like to open the specified port.

Select a schedule for when the virtual server will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools** > **Schedules** screen and create a new schedule.

Select a filter that restricts the Internet hosts that can access this virtual server to hosts that you trust. If you do

# Port Forwarding

This will allow you to open a single port or a range of ports.

**Name:** Enter a name for the rule or select an application from the drop-down menu. Select an application and click << to populate the fields.

**IP Address:** Enter the IP address of the computer on your local network that you want to allow the incoming service to. If your computer is receiving an IP address automatically from the router (DHCP), your computer will be listed in the "Computer Name" drop-down menu. Select your computer and click <<.

**TCP/UDP:** Enter the TCP and/or UDP port or ports that you want to open. You can enter a single port or a range of ports. Separate ports with a comma.

Example: 24,1009,3000-4000

**Schedule:** The schedule of time when the Virtual Server Rule will be enabled. The schedule may be set to **Always**, which will allow the particular service to always be enabled. You can create your own times in the **Tools > Schedules** section.

**Inbound Filter:** Select **Allow All** (most common) or a created Inbound filter. You may create your own inbound filters in the **Advanced > Inbound Filter** page.

**D-Link**

DIR-820L //

SETUP ADVANCED TOOLS STATUS SUPPORT

**PORT FORWARDING**

This option is used to open multiple ports or a range of ports in your router and redirect data through those ports to a single PC on your network. This feature allows you to enter ports in various formats including, Port Ranges (100-150), Individual Ports (80, 68, 888), or Mixed (1020-5000, 689).

Save Settings Don't Save Settings

**24--PORT FORWARDING RULES**

	Name	IP Address	Application Name	Computer Name	Ports to Open	Schedule
<input type="checkbox"/>		0.0.0.0			TCP 0	Always
<input type="checkbox"/>		0.0.0.0			UDP 0	Allow All
<input type="checkbox"/>		0.0.0.0			TCP 0	Always
<input type="checkbox"/>		0.0.0.0			UDP 0	Allow All
<input type="checkbox"/>		0.0.0.0			TCP 0	Always
<input type="checkbox"/>		0.0.0.0			UDP 0	Allow All

**Helpful Hints ...**

Check the **Application Name** drop down menu for a list of predefined applications. If you select one of the predefined applications, click the arrow button next to the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the LAN computer to which you would like to open the specified port.

Select a schedule for when the rule will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools > Schedules** screen and create a new schedule.

You can enter ports in various formats:  
Range (50-100) Individual (80, 68, 888) Mixed (1020-5000, 689)

## Application Rules

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the DIR-820L. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the firewall (public) ports associated with the trigger port to open them for inbound traffic.

The DIR-820L provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

**Name:** Enter a name for the rule. You may select a pre-defined application from the drop-down menu and click <<.

**Trigger:** This is the port used to trigger the application. It can be either a single port or a range of ports.

**Traffic Type:** Select the protocol of the trigger port (**TCP**, **UDP**, or **Both**).

**Firewall:** This is the port number on the Internet side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.

**Traffic Type:** Select the protocol of the firewall port (**TCP**, **UDP**, or **Both**).

**Schedule:** The schedule of time when the Application Rule will be enabled. The schedule may be set to **Always**, which will allow the particular service to always be enabled. You can create your own times in the **Tools > Schedules** section.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES (selected), QOS ENGINE, NETWORK FILTER, ACCESS CONTROL, WEBSITE FILTER, INBOUND FILTER, FIREWALL SETTINGS, ROUTING, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, ADVANCED NETWORK, GUEST ZONE, IPV6 FIREWALL, and IPV6 ROUTING. The main content area is titled "APPLICATION RULES" and contains a description: "This option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a 'trigger' port or port range. Special Applications rules apply to all computers on your internal network." Below this are "Save Settings" and "Don't Save Settings" buttons. A table titled "24-- APPLICATION RULES" displays three rows of configuration options. Each row includes a checkbox, a "Name" field, an "Application" dropdown menu (with a "<<" button), "Trigger" and "Firewall" port fields, "Traffic Type" dropdown menus (TCP, UDP, Both), and a "Schedule" dropdown menu (Always, etc.). The right sidebar contains "Helpful Hints..." and instructions on how to use the Application Name dropdown menu.

	Name	Application	Trigger	Firewall	Traffic Type	Schedule
<input type="checkbox"/>		<< Application Name	0	0	TCP	Always
<input type="checkbox"/>		<< Application Name	0	0	TCP	Always
<input type="checkbox"/>		<< Application Name	0	0	TCP	Always

# QoS Engine

The QoS Engine option helps improve your network gaming experience by ensuring that your game traffic is prioritized over other network traffic, such as FTP or Web. For best performance, use the Automatic classification option to automatically set the priority.

**Enable QoS Engine:** This option is disabled by default. Enable this option for a better experience with online games and other interactive applications, such as VoIP.

**Automatic Uplink Speed:** Automatic Uplink speed, which is determined by your ISP, is the data transfer rate from the router to your ISP. This option is enabled by default when the *Enable QoS Engine* option is checked. If you wish to limit your uplink speed, uncheck the *Automatic Uplink Speed* checkbox. This will allow you to enter the uplink speed manually where it says *Manual Uplink Speed*, or select a rate from the drop-down menu that says *Select Transmission Rate*.

**Measured Uplink Speed:** Displays the uplink speed measured when the WAN interface was last re-established.

**Manual Uplink Speed:** If the Measured Uplink Speed produces suboptimal performance, disable Automatic Uplink Speed and enter the Manual Uplink Speed. Experimentation and performance testing will result in discovery of the optimal value.

**QoS Engine Rules:** A QoS Engine Rule identifies a specific message flow and assigns a priority to that flow. For most applications, automatic classification will be adequate, and specific QoS Engine Rules will not be required.

**Name:** Enter a name for the rule that is meaningful to you.

**Priority:** Enter a number between one and 255 to set a priority of the message flow. (One is the highest priority and 255 is the lowest priority.)

**Protocol:** This is the protocol used by the messages. Select **Any**, **TCP**, **UDP**, **Both**, **ICMP** or **Other**.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes links for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, QoS ENGINE (selected), NETWORK FILTER, ACCESS CONTROL, WEBSITE FILTER, INBOUND FILTER, FIREWALL SETTINGS, ROUTING, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, ADVANCED NETWORK, GUEST ZONE, IPV6 FIREWALL, and IPV6 ROUTING.

The main content area is titled "QoS ENGINE". It contains a section for "QoS ENGINE SETUP" with the following options:

- Enable QoS Engine: ☐
- Automatic Uplink Speed: ☒
- Measured Uplink Speed: Not Estimated
- Manual Uplink Speed: 128 kbps << Select Transmission Rate

Below the setup section is a table for "10 -- QoS ENGINE RULES". The table has three columns: Name, Priority, and Protocol. The first rule is named "1", has a priority of 1, and a protocol of TCP. The second rule is named "2", has a priority of 1, and a protocol of TCP. Both rules have a local IP range of 0.0.0.0 to 255.255.255.255 and a remote IP range of 0.0.0.0 to 255.255.255.255. The local and remote port ranges are both 0 to 65535.

On the right side of the page, there is a "Helpful Hints ..." section. It contains text about the Measured Uplink Speed and a link to "More...".

---

**Local IP Range:** The rule applies to a flow of messages whose LAN-side IP address is within the range set here.

**Local Port Range:** The rule applies to a flow of messages whose LAN-side port number falls within the range set here.

**Remote IP Range:** The rule applies to a flow of messages whose WAN-side IP address falls within the range set here.

**Remote Port Range:** The rule applies to a flow of messages whose WAN-side port number is within the range set here.

Click on the **Save Settings** button to accept the changes made, or click on **Don't Save Settings** to discard the changes.

## Network Filters

Use MAC (Media Access Controller) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the network. You can either manually add a MAC address or select the MAC address from the list of clients that are currently connected to the Broadband Router.

**Configure MAC Filtering:** Select **Turn MAC Filtering Off**, **Allow MAC addresses listed below**, or **Deny MAC addresses listed below** from the drop-down menu.

**MAC Address:** Enter the MAC address you would like to filter.

To find the MAC address on a computer, please refer to the *Networking Basics* section in this manual.

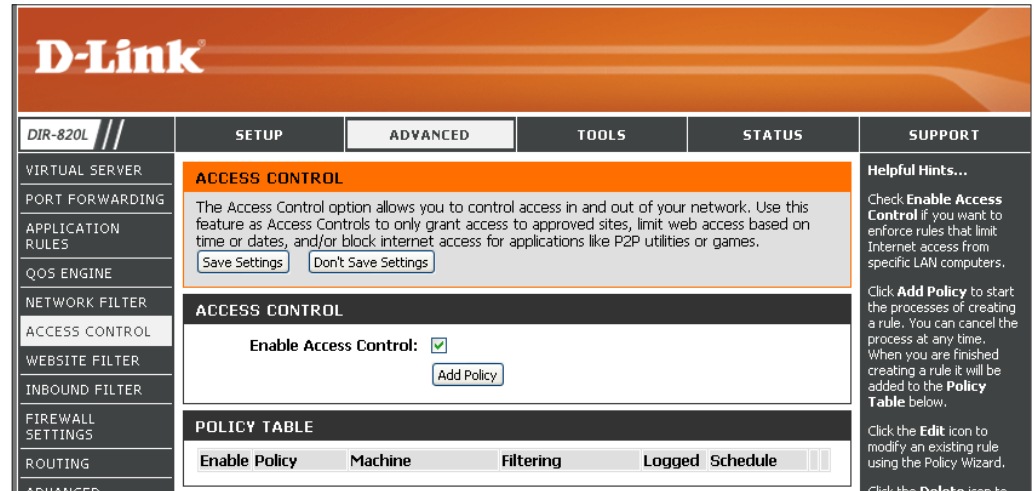
**DHCP Client List:** Select a DHCP client from the drop-down menu and click << to copy that MAC Address.

The screenshot shows the D-Link DIR-820L Advanced Setup page. The left sidebar contains a menu with options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, QOS ENGINE, NETWORK FILTER (selected), ACCESS CONTROL, WEBSITE FILTER, INBOUND FILTER, FIREWALL SETTINGS, ROUTING, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, ADVANCED NETWORK, and GUEST ZONE. The main content area is titled 'MAC ADDRESS FILTER' and includes a description: 'The MAC (Media Access Controller) Address filter option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.' Below this is a 'Save Settings' button and a 'Don't Save Settings' button. The '24 -- MAC FILTERING RULES' section shows a configuration for 'Turn MAC Filtering OFF'. It features a table with columns for 'MAC Address' and 'DHCP Client List'. The table has five rows, each with a MAC address input field, a '<<' button, a 'Computer Name' dropdown menu, and a 'Clear' button. A 'Helpful Hints...' sidebar on the right provides additional information: 'Create a list of MAC addresses that you would either like to allow or deny access to your network. Computers that have obtained an IP address from the router's DHCP server will be in the DHCP Client List. Select a device from the drop down menu, then click the arrow to add that device's MAC address to the list. Click the Clear button to remove the MAC address from the MAC Filtering list. More...'

## Access Control

The Access Control section allows you to control access in and out of your network. Use this feature as Parental Controls to only grant children access to approved sites, limit web access based on time or dates, and/or block access from certain applications like P2P utilities or games.

**Enable Access Control:** Check the **Enable Access Control** box, and then click on **Add Policy** to start the *Access Control Wizard*.



## Access Control Wizard

Click **Next** to continue with the wizard and create a rule.

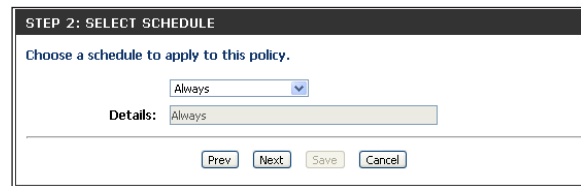




Enter a name for the policy and then click **Next** to continue.

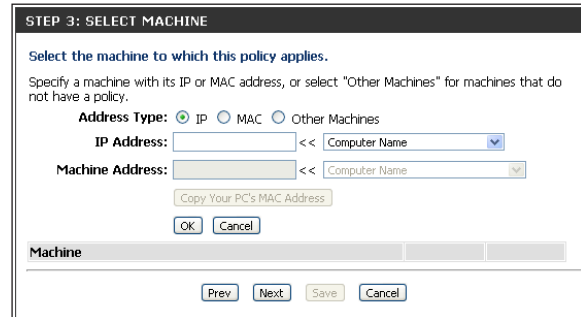


Select a schedule (i.e., **Always**) from the drop-down menu and then click **Next** to continue.



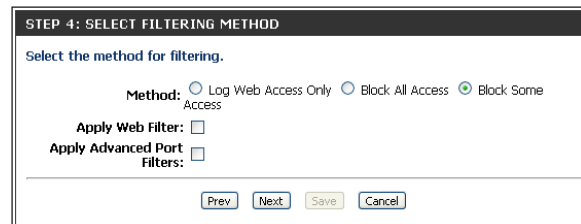
Enter the following information and then click **Next** to continue:

- **Address Type** - Select **IP** address, **MAC** address, or **Other Machines**.
- **IP Address** - Enter the IP address of the computer you want to apply the rule to.
- **Machine Address** - Enter the PC's MAC address or click on **Copy Your PC's MAC Address**.



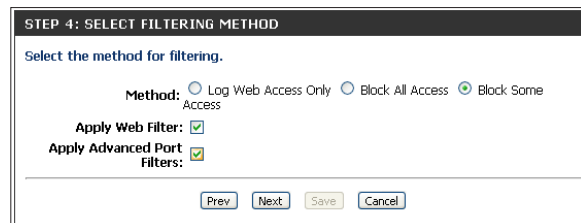
Click **OK** and then click **Next** to continue.

Select a filtering method, either **Log Web Access Only**, **Block All Access**, or **Block Some Access**.



If you selected **Block Some Access**, check **Apply Web Filter** and/or **Apply Advanced Port Filters**.

Click **Next** to continue.



Add Port Filter Rules:

- Enable** - Check to enable the rule.
- Name** - Enter a name for your rule.
- Dest IP Start** - Enter the starting IP address.
- Dest IP End** - Enter the ending IP address.
- Protocol** - Select the protocol.
- Dest Port Start** - Enter the starting port number.
- Dest Port End** - Enter the ending port number.

Click **Next** to continue.

STEP 5: PORT FILTER

Add Port Filters Rules.

Specify rules to prohibit access to specific IP addresses and ports.

Enable	Name	Dest IP Start	Dest IP End	Protocol	Dest Port Start	Dest Port End
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535
<input type="checkbox"/>		0.0.0.0	255.255.255.255	ANY	0	65535

Prev

Next

Save

Cancel

To enable web logging, click **Enabled**.

Click **Save** to save the access control rule.

STEP 6: CONFIGURE WEB ACCESS LOGGING

Web Access Logging:

Disabled

Enabled

Prev

Next

Save

Cancel

Your newly created policy will now show up under *Policy Table*.

ACCESS CONTROL

The Access Control option allows you to control access in and out of your network. Use this feature as Access Controls to only grant access to approved sites, limit web access based on time or dates, and/or block internet access for applications like P2P utilities or games.

Save Settings

Don't Save Settings

ACCESS CONTROL

Enable Access Control:

Add Policy

POLICY TABLE

Enable Policy	Machine	Filtering	Logged	Schedule		
<input checked="" type="checkbox"/>	test	192.168.0.100	Block Some Access	Yes	Always	<div><div></div><div></div></div>

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## Website Filters

*Website Filters* allow you to set up a list of Web sites that can be viewed by users through your network. To use this feature select to **Allow** or **Deny**, enter the domain or website and click **Save Settings**. Make sure you selected **Apply Web Filter** under the *Access Control* section (page 75).

**Configure** Select either **DENY** computers access to **Website Filter: ONLY these sites** or **ALLOW** computers access to **ONLY these sites**.

**Website URL/** Enter the keywords or URLs that you want **Domain:** to allow or block. Click **Save Settings**.

The screenshot shows the D-Link DIR-820L Advanced Setup interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options, with 'WEBSITE FILTER' selected. The main content area is titled 'WEBSITE FILTER' and contains the following elements:

- WEBSITE FILTER** section: A text box explaining the feature and two buttons: 'Save Settings' and 'Don't Save Settings'.
- 40 WEBSITE FILTERING RULES** section: A heading for the rule configuration area.
- Configure Website Filter below**: A dropdown menu set to 'DENY computers access to ONLY these sites' and a 'Clear the list below...' button.
- Website URL/Domain** section: A table with two columns for entering website URLs or domains.

Website URL/Domain	
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

On the right side of the interface, there is a 'Helpful Hints...' section with instructions on how to use the website filter feature.

## Inbound Filters

The Inbound Filter option is an advanced method of controlling data received from the Internet. With this feature you can configure inbound data filtering rules that control data based on an IP address range. Inbound Filters can be used with Virtual Server, Port Forwarding, or Remote Administration features.

**Name:** Enter a name for the inbound filter rule.

**Action:** Select **Allow** or **Deny**.

**Remote IP** Check to enable rule.

**Range: Enable:**

**Remote IP Start:** Enter the starting IP address. Enter **0.0.0.0** if you do not want to specify an IP range.

**Remote IP End:** Enter the ending IP address. Enter **255.255.255.255** if you do not want to specify an IP range.

**Add:** Click the **Add** button to apply your settings.

**Inbound Filter Rules List:** This section will list any rules that you create. You can click the **Edit** icon to change the settings or enable/disable the rule, or click the **Trash** icon to remove the rule.

**D-Link**

DIR-820L //

SETUP ADVANCED TOOLS STATUS SUPPORT

### INBOUND FILTER

The Inbound Filter option is an advanced method of controlling data received from the Internet. With this feature you can configure inbound data filtering rules that control data based on an IP address range.

Inbound Filters can be used for limiting access to a server on your network to a system or group of systems. Filter rules can be used with Virtual Server, Port Forwarding, or Remote Administration features.

#### ADD INBOUND FILTER RULE

Name:

Action:

Remote IP Range:	Enable	Remote IP Start	Remote IP End
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0.0.0.0"/>	<input type="text" value="255.255.255.255"/>

#### INBOUND FILTER RULES LIST

Name	Action	Remote IP Range
------	--------	-----------------

**Helpful Hints ...**

Give each rule a **Name** that is meaningful to you.

Each rule can either **Allow** or **Deny** access from the WAN.

Up to eight ranges of WAN IP addresses can be controlled by each rule. The checkbox by each IP range can be used to disable ranges already defined.

The starting and ending IP addresses are WAN-side address.

Click the **Add** or **Update** button to store a finished rule in the Rules List below.

Click the **Edit** icon in the Rules List to change a rule.

Click the **Delete** icon in the Rules List to permanently remove a rule.

[More...](#)

# Firewall Settings

A firewall protects your network from the outside world. The DIR-820L offers a firewall type functionality. The SPI feature helps prevent cyber attacks. Sometimes you may want a computer exposed to the outside world for certain types of applications. If you choose to expose a computer, you can enable DMZ. DMZ is short for Demilitarized Zone. This option will expose the chosen computer completely to the outside world.

**Enable SPI:** SPI (Stateful Packet Inspection, also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

**Anti-Spoof Checking:** Enable this feature to protect your network from certain kinds of “spoofing” attacks.

**Enable DMZ:** If an application has trouble working from behind the router, you can expose one computer to the Internet and run the application on that computer.

**Note:** Placing a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.

**DMZ IP Address:** Specify the IP address of the computer on the LAN that you want to have unrestricted Internet communication. If this computer obtains its IP address automatically using DHCP, be sure to make a static reservation on the **Setup > Network Settings** page so that the IP address of the DMZ machine does not change.

**PPTP:** Allows multiple machines on the LAN to connect to their corporate network using PPTP protocol.

**IPSEC (VPN):** Allows multiple VPN clients to connect to their corporate network using IPsec. Some VPN clients support traversal of IPsec through NAT. This ALG may interfere with the operation of such VPN clients. If you are having trouble connecting with your corporate network, try turning this ALG off. Please check with the system administrator of your corporate network whether your VPN client supports NAT traversal.

**D-Link**

DIR-820L

SETUP ADVANCED TOOLS STATUS SUPPORT

**FIREWALL SETTINGS**

The Firewall Settings allows you to set a single computer on your network outside of the router.

Save Settings Don't Save Settings

**ENABLE SPI**

Enable SPI: ☐

**ANTI-SPOOF CHECKING**

Enable anti-spoof checking: ☐

**DMZ HOST**

DMZ means "Demilitarized Zone." If an application has trouble working from behind the router, you can expose one computer to the Internet and run the application on that computer.

**Note:** Putting a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.

Enable DMZ: ☐

DMZ IP Address: 0.0.0.0 << Computer Name

**APPLICATION LEVEL GATEWAY (ALG) CONFIGURATION**

PPTP: ☒

IPSec (VPN): ☒

RTSP: ☒

SIP: ☒

**Helpful Hints...**

Enable the DMZ option only as a last resort. If you are having trouble using an application from a computer behind the router, first try opening ports associated with the application in the Virtual Server or Port Forwarding sections.

More...

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**RTSP:** Allows application that uses Real Time Streaming Protocol to receive streaming media from the Internet. QuickTime and Real Player are some of the common applications using this protocol.

**SIP:** Allows devices and applications using VoIP (Voice over IP) to communicate across NAT. Some VoIP applications and devices have the ability to discover NAT devices and work around them. This ALG may interfere with the operation of such devices. If you are having trouble making VoIP calls, try turning this ALG off.

# Routing

The Routing option is an advanced method of customizing specific routes of data through your network.

**Name:** Enter a name for your route.

**Destination IP:** Enter the IP address of packets that will take this route.

**Netmask:** Enter the netmask of the route, please note that the octets must match your destination IP address.

**Gateway:** Enter your next hop gateway to be taken if this route is used.

**Metric:** The route metric is a value from 1 to 16 that indicates the cost of using this route. A value 1 is the lowest cost and 15 is the highest cost.

**Interface:** Select the interface that the IP packet must use to transit out of the router when this route is used.

## Advanced Wireless

For best performance of your wireless network, it is recommended that you leave the *Advance Wireless* settings at their default values.

**Transmit Power:** For both the 2.4GHz and 5GHz band, set the transmit power of the antennas.

**WLAN Partition:** This option should only be enabled if you are in a country that requires it. WLAN Partition enables 802.11d operation, which is a wireless specification developed to allow implementation of wireless networks in countries that cannot use the 802.11 standard.

**WMM Enable:** WMM is enabled by default. It is QoS (Quality of Service) for your wireless network. WMM will improve the quality of video and voice applications for your wireless clients.

**HT 20/40 Coexistence:** Enable this option to reduce interference from other wireless networks in your area. If the channel width is operating at 40MHz and there is another wireless network's channel over-lapping and causing interference, the router will automatically change to 20MHz.

**D-Link**

DIR-820L

SETUP ADVANCED TOOLS STATUS SUPPORT

**ADVANCED WIRELESS**

If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings.

Save Settings Don't Save Settings

**ADVANCED WIRELESS SETTINGS**

Wireless Band : 2.4GHz  
Transmit Power : High  
WLAN Partition : ☐  
WMM Enable : ☒  
HT 20/40 MHz Coexistence : ☒ Enable ☐ Disable

**ADVANCED WIRELESS SETTINGS**

Wireless Band : 5GHz  
Transmit Power : High  
WLAN Partition : ☐  
WMM Enable : ☒

**Helpful Hints ...**

It is recommended that you leave these parameters at their default values. Adjusting them could limit the performance of your wireless network.

Enabling WMM can help control latency and jitter when transmitting multimedia content over a wireless connection.

[More...](#)



## Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup (WPS) System is a simplified method for securing your wireless network during the “Initial setup” as well as the “Add New Device” processes. The Wi-Fi Alliance (WFA) has certified it across different products as well as manufactures. The process is just as easy as pressing a button for the Push-Button Method or correctly entering the 8-digit code for the PIN Code Method. The time reduction in setup and ease of use are quite beneficial, while the highest wireless Security setting of WPA2 is automatically used.

**Enable:** Enable the Wi-Fi Protected Setup feature.

**Note:** if this option is unchecked, the WPS button on the side of the router will be disabled.

**Lock WPS-PIN Setup:** Locking the WPS-PIN Method prevents the settings from being changed by any external registrar using its PIN. Devices can still be added to the wireless network using the Wi-Fi Protected Setup Push Button Configuration (WPS-PBC). It is still possible to change wireless networks settings with Manual Wireless Network Setup or Wireless Network Setup Wizard.

**PIN Settings:** A PIN is a unique number that can be used to add the router to an existing network or to create a new network. Only the Administrator (“admin” account) can change or reset the PIN.

**Current PIN:** Shows the current PIN.

**Generate New PIN:** Create a random number that is a valid PIN. This becomes the router’s PIN. You can then copy this PIN to the user interface of the wireless client.

**Reset PIN to Default:** Click to restore the default PIN of the router.

The screenshot shows the D-Link DIR-820L Web UI. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, QOS ENGINE, NETWORK FILTER, ACCESS CONTROL, WEBSITE FILTER, INBOUND FILTER, FIREWALL SETTINGS, ROUTING, ADVANCED WIRELESS, WI-FI PROTECTED SETUP (highlighted), and ADVANCED NETWORK. The main content area is titled "WI-FI PROTECTED SETUP" and contains the following sections:

- WI-FI PROTECTED SETUP**: A description of the feature and two buttons: "Save Settings" and "Don't Save Settings".
- WI-FI PROTECTED SETUP**: A section with two checkboxes: "Enable" (checked) and "Lock WPS-PIN Setup" (unchecked).
- PIN SETTINGS**: A section showing the "Current PIN" as 24139762, with buttons for "Generate New PIN" and "Reset PIN to Default".
- ADD WIRELESS STATION**: A section with a button labeled "Add Wireless Device With WPS".

On the right side of the page, there is a "Helpful Hints..." section with additional information about WPS and a "More..." link.

---

**Add Wireless Station:** This Wizard helps you add wireless devices to the wireless network.

The wizard will either display the wireless network settings to guide you through manual configuration, prompt you to enter the PIN for the device, or ask you to press the configuration button on the device. If the device supports Wi-Fi Protected Setup and has a configuration button, you can add it to the network by pressing the configuration button on the device and then the on the router within 60 seconds. The status LED on the router will flash three times if the device has been successfully added to the network.

There are several ways to add a wireless device to your network. A “registrar” controls access to the wireless network. A registrar only allows devices onto the wireless network if you have entered the PIN, or pressed a special Wi-Fi Protected Setup button on the device. The router acts as a registrar for the network, although other devices may act as a registrar as well.

**Add Wireless Device with WPS:** Click to start the *Wireless Network Setup Wizard* and skip to page 35.

## WPS Button

You can also simply press the WPS button on the back of the router, and then press the WPS button on your wireless client to automatically connect without logging into the router.

Refer to page 109 for more information.



## Advanced Network Settings

**Enable UPnP:** To use the Universal Plug and Play (UPnP™) feature check the box. UPnP provides compatibility with networking equipment, software and peripherals.

**Enable WAN Ping Respond:** Checking the box will allow the DIR-820L to respond to pings. Unchecking the box may provide extra security from hackers.

**WAN Ping Inbound filter:** Select **Allow All** or **Deny All**.

**WAN Port Speed:** You may set the WAN Port Speed of the Internet port to **10Mbps**, **100Mbps**, or leave it at the default setting of **Auto 10/100Mbps** (recommended).

**Enable Multicast Streams:** If you are having difficulty receiving multicast streams from the Internet, make sure this box is checked. It allows multicast traffic to pass through the router from the Internet (IPv4).

**Enable IPV6 Multicast Streams:** Check the box to allow multicast traffic to pass through the router from the Internet (IPv6).

**D-Link**

DIR-820L

SETUP ADVANCED TOOLS STATUS SUPPORT

**ADVANCED NETWORK**

If you are not familiar with these Advanced Network settings, please read the help section before attempting to modify these settings.

Save Settings Don't Save Settings

**UPNP**

Universal Plug and Play (UPnP) supports peer-to-peer Plug and Play functionality for network devices.

Enable UPnP : ☒

**WAN PING**

If you enable this feature, the WAN port of your router will respond to ping requests from the Internet that are sent to the WAN IP Address.

Enable WAN Ping Respond : ☐

WAN Ping Inbound Filter :

Details :

**WAN PORT SPEED**

WAN Port Speed :

**MULTICAST STREAMS**

Enable Multicast Streams : ☐

**IPV6 MULTICAST STREAMS**

Enable IPv6 Multicast Streams : ☒

**Helpful Hints ...**

UPnP helps other UPnP LAN hosts interoperate with the router. Leave the UPnP option enabled as long as the LAN has other UPnP applications.

For added security, it is recommended that you disable the WAN Ping Respond option. Ping is often used by malicious Internet users to locate active networks or PCs.

The WAN speed is usually detected automatically. If you are having problems connecting to the WAN, try selecting the speed manually.

If you are having trouble receiving multicast streams from the Internet, make sure the Multicast Streams option is enabled.

[More...](#)

## Guest Zone

The *Guest Zone* feature will allow you to create temporary zones that can be used by guests to access the Internet. These zones will be separate from your main wireless network. You may configure different zones for the 2.4GHz and 5GHz wireless bands.

**Enable Guest Zone:** For 2.4GHz and/or 5GHz, check the box to enable the *Guest Zone* feature.

**Schedule:** The schedule for when the *Guest Zone* will be enabled may be set to **Always** or **Never**. Or you can click **Add New** to create your own schedule. (This option is also available in the **Tools > Schedules** section.)

**Wireless Network Name:** Enter a wireless network name (SSID) that is different from your main wireless network.

**Security Mode:** Select the type of security or encryption you would like to enable for the guest zone. Choose **None**, **WEP**, **WPA-Personal**, or **WPA-Enterprise**.

**Enable Routing Between Zones:** Check to allow network connectivity between the different zones created.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: VIRTUAL SERVER, PORT FORWARDING, APPLICATION RULES, QOS ENGINE, NETWORK FILTER, ACCESS CONTROL, WEBSITE FILTER, INBOUND FILTER, FIREWALL SETTINGS, ROUTING, ADVANCED WIRELESS, WI-FI PROTECTED SETUP, ADVANCED NETWORK, GUEST ZONE (highlighted), and IPV6 FIREWALL. The main content area is titled 'GUEST ZONE' and contains instructions: 'Use this section to configure the guest zone settings of your router. The guest zone provide a separate network zone for guest to access Internet.' Below this are 'Save Settings' and 'Don't Save Settings' buttons. The 'GUEST ZONE SELECTION' section is divided into two parts. The first part is for the 2.4GHz Band, showing 'Enable Guest Zone' as an unchecked checkbox, 'Wireless Band' as '2.4GHz Band', 'Wireless Network Name' as 'dlink\_guest' (with a note '(Also called the SSID)'), and 'Enable Routing Between Zones' as an unchecked checkbox. The second part is for the 5GHz Band, showing 'Enable Guest Zone' as an unchecked checkbox, 'Wireless Band' as '5GHz Band', 'Wireless Network Name' as 'dlink\_media\_guest' (with a note '(Also called the SSID)'), and 'Enable Routing Between Zones' as an unchecked checkbox. A 'Helpful Hints...' section on the right provides additional information and a 'More...' link.

# IPv6 Firewall

The DIR-820L's IPv6 Firewall feature allows you to configure which kind of IPv6 traffic is allowed to pass through the device. This feature functions in a similar way to the IP Filters feature.

**Enable IPv6 Ingress Filtering:** TBD

**Enable IPv6 Simple Security:** Check the box to enable the IPv6 firewall simple security.

**Configure IPv6 firewall below:** Select one of the following options:  
**Turn IPv6 firewall off**  
**Turn IPv6 Firewall ON and ALLOW Rules listed**  
**Turn IPv6 Firewall ON and DENY Rules listed**

**Name:** Enter a name to identify the IPv6 firewall rule.

**Schedule:** The schedule for when the *IPv6 Firewall* Rules will be enabled may be set to **Always** or **Never**. Or you can create your own schedule in the **Tools > Schedules** section.

**Source:** Use the **Interface** drop-down menu to specify the interface that connects to the source IPv6 addresses of the firewall rule.

**Dest:** Use the **Interface** drop-down menu to specify the interface that connects to the destination IP address of the firewall rule.

**IP Address Range:** Enter the **Source** IPv6 address range in the adjacent **IP Address Range** field, and enter the **Dest** IPv6 address range in the other **IP Address Range** field below.

**Protocol:** Select the protocol of the firewall port (**Any**, **TCP**, **UDP**, or **ICMP**).

**Port Range:** Enter the first port of the range that will be used for the firewall rule in the first box and enter the last port in the range in the second box.

**D-Link**

DIR-820L // SETUP ADVANCED TOOLS STATUS SUPPORT

**IPV6 FIREWALL**

The Firewall Settings section is an advance feature used to allow or deny traffic from passing through the device. It works in the same way as IP Filters with additional settings. You can create more detailed rules for the device.

Save Settings Don't Save Settings

**IPV6 SIMPLE SECURITY**

Enable IPv6 Ingress Filtering: ☐

Enable IPv6 Simple Security: ☐

**IPV6 FIREWALL**

Configure IPv6 Firewall below:  
Turn IPv6 Firewall OFF

Remaining number of firewall rules that can be configured:

Name	Schedule	Source	Interface	IP Address Range	Protocol	Port Range
	Always	Any	Any	Any	TCP	1 ~ 65535
	Always	Any	Any	Any	TCP	1 ~ 65535

**Helpful Hints ...**

Check the **Application Name** drop down menu for a list of predefined server types. If you select one of the predefined server types, click the arrow button next to the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the computer at which you would like to open the specified port.

Select a schedule for when the virtual server will be enabled. If you do not see the schedule you need in the list of schedules, go to the **Tools > Schedules** screen and create a new schedule.

Select a filter that restricts the Internet hosts that can access this virtual server to hosts that you trust. If you do not see the filter you need in the list of filters, go to the **Advanced > Inbound Filter** screen and create a new filter.

# IPv6 Routing

This page allows you to specify custom routes that determine how data is moved around your network.

**Route List:** Check the box next to the route you wish to enable.

**Name:** Enter a specific name to identify this route.

**Destination IPv6/ Prefix Length:** This is the IP address of the router used to reach the specified destination or enter the IPv6 address prefix length of the packets that will take this route.

**Metric:** Enter the metric value for this route here.

**Interface:** You can use the default selection of **NULL**, or use the drop-down menu to specify if the IP packet must use the **WAN** or **LAN** interface to transit out of the Router.

**Gateway:** Enter the next hop that will be taken if this route is used.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'ADVANCED' tab is selected, and the 'ROUTING' section is active. Below the 'ROUTING' header, there is a description: 'This Routing page allows you to specify custom routes that determine how data is moved around your network.' and two buttons: 'Save Settings' and 'Don't Save Settings'.

The '10 - ROUTE LIST' section contains a table with the following columns: 'Name', 'Destination IPv6/Prefix Length', 'Metric', 'Interface', and 'Gateway'. There are four rows, each with a checkbox in the first column. The first row is selected. The 'Destination IPv6/Prefix Length' column shows '/64' for all rows. The 'Interface' column has a dropdown menu with 'NULL' selected.

The 'Helpful Hints' sidebar on the right provides additional information: 'Check the Application Name drop down menu for a list of predefined server types. If you select one of the predefined server types, click the arrow button next to the drop down menu to fill out the corresponding field.' It also mentions that users can select a computer from the list of DHCP clients in the 'Computer Name' drop down menu, or manually enter the IP address of the computer. Finally, it advises selecting a schedule for when the virtual server will be enabled, and if not seen in the list of schedules, to go to the 'Tools -> Schedules' screen and create a new schedule. It also mentions selecting a filter that restricts the Internet hosts that can access this virtual server to hosts that you trust.

# Tools Admin

The *Admin* page allows you to change the Administrator *Password* and also to enable the *Remote Management* feature. With *Remote Management* enabled, you can change the router configuration from a computer on the Internet.

**Admin Password:** Enter a new password for the Admin login name. Enter again to verify password.

**Gateway Name:** Enter a name for your router.

**Enable Graphical Authentication:** Enables a challenge-response test to require users to type letters or numbers from a distorted image displayed on the screen to prevent online hackers and unauthorized users from gaining access to your router's network settings.

**Enable HTTPS Server:** Check to enable HTTPS to connect to the router securely. This means to connect to the router, you must enter **https://192.168.0.1** (for example) instead of **http://192.168.0.1**.

**Enable Remote Management:** Remote management allows the DIR-820L to be configured from the Internet with a web browser. A username/password is still required to access the Web Management interface.

**Remote Admin Port:** The port number used to access the DIR-820L is used in the URL. Example: **http://x.x.x.x:8080** whereas x.x.x.x is the Internet IP address of the DIR-820L and 8080 is the port used for the Web Management interface.

**Use HTTPS:** If you have enabled **HTTPS Server**, you must enter **https://** as part of the URL to access the router remotely.

**Remote Admin Inbound Filter:** This section will list any rules that are created. You may click the **Edit** icon to change the settings or enable/disable the rule, or click the **Trash** icon to delete the rule. **Details** will display the current status.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'ADMINISTRATOR SETTINGS' and contains the following sections:

- ADMINISTRATOR SETTINGS:** A text box explaining that the 'admin' account has read/write access and can change passwords. It includes a note that by default there is no password configured and a recommendation to create a password for security. There are 'Save Settings' and 'Don't Save Settings' buttons.
- ADMIN PASSWORD:** A section with the instruction 'Please enter the same password into both boxes, for confirmation.' It contains two password input fields labeled 'Password' and 'Verify Password'.
- SYSTEM NAME:** A section with a 'Gateway Name' input field, which currently contains 'DIR-820L'.
- ADMINISTRATION:** A section with several checkboxes and input fields:
  - Enable Graphical Authentication:** ☐
  - Enable HTTPS Server:** ☒
  - Enable Remote Management:** ☐
  - Remote Admin Port:** An input field with '8080' and a 'Use HTTPS' checkbox.
  - Remote Admin Inbound Filter:** A dropdown menu with 'Allow All' selected.
  - Details:** An input field with 'Allow All'.

On the right side of the interface, there is a 'Helpful Hints ...' section with text about security recommendations and a 'More...' link.



## Time

The *Time* page allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the *Time Zone* that you are in and set the NTP (Network Time Protocol) Server. Daylight Saving Time can also be set to automatically adjust the time when needed.

**Current Router Time:** Displays the current date and time of the router.

**Time Zone:** Select your **Time Zone** from the drop-down menu.

**Enable Daylight Saving:** Check the box to **Enable Daylight Saving**. To set the start and end of Daylight Saving Time manually, enter a **DST Start** date and a **DST End** date. (**Month, Week, Day of Week, and Time.**)

**Enable NTP Server:** An NTP server (for Network Time Protocol) will sync the time and date with your router. This will only connect to a server on the Internet, not a local server. Check the box to enable this feature.

**NTP Server Used:** Enter the IP address of a NTP server or select one from the drop-down menu.

**Set Date and Time Manually:** To manually input the date and time, enter the values for the **Year, Month, Day, Hour, Minute, and Second**. Click **Set Time**.

You can also click **Copy Your Computer's Time Settings** to synch the date and time with the computer you are currently on.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes 'D-Link', 'DIR-820L', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists menu items: 'ADMIN', 'TIME', 'SYSLOG', 'EMAIL SETTINGS', 'SYSTEM', 'FIRMWARE', 'DYNAMIC DNS', 'SYSTEM CHECK', and 'SCHEDULES'. The main content area is titled 'TIME' and contains the following sections:

- TIME**: A descriptive paragraph about the Time Configuration option, followed by 'Save Settings' and 'Don't Save Settings' buttons.
- TIME CONFIGURATION**:
  - Current Router Time**: Sat Jan, 1, 2011 01:52:19
  - Time Zone**: A dropdown menu showing '(GMT-08:00) Pacific Time (US/Canada), Tijuana'.
  - Enable Daylight Saving**: An unchecked checkbox.
  - Daylight Saving Dates**: Fields for DST Start and DST End, each with dropdowns for Month, Week, Day of Week, and Time.
- AUTOMATIC TIME CONFIGURATION**:
  - Enable NTP Server**: An unchecked checkbox.
  - NTP Server Used**: A text input field followed by a '<<' button and a 'Select NTP Server' dropdown.
- SET THE DATE AND TIME MANUALLY**:
  - Date And Time**: Fields for Year (2007), Month (Nov), Day (22), Hour (08), Minute (01), Second (28), and PM/AM.
  - A 'Copy Your Computer's Time Settings' button.

On the right side of the interface, there is a 'Helpful Hints...' section with the text: 'Good timekeeping is important for accurate logs and scheduled firewall rules.' and a 'More...' link.



# SysLog

The DIR-820L keeps a running log of events and activities occurring on the router. You may send these logs to a SysLog server on your network.

**Enable Logging to SysLog Server:** Check this box to enable the ability to send the router logs to a SysLog Server.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes 'DIR-820L', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists 'ADMIN', 'TIME', 'SYSLOG', 'EMAIL SETTINGS', 'SYSTEM', 'FIRMWARE', and 'DYNAMIC DNS'. The main content area is titled 'SYSLOG' and contains the text: 'The SysLog options allow you to send log information to a SysLog Server.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. Under the 'SYSLOG SETTINGS' section, the 'Enable Logging To Syslog Server' checkbox is unchecked. A 'Helpful Hints ...' section on the right explains that a System Logger (syslog) is a server that collects logs from different sources and provides a 'More...' link.

**SysLog Server IP Address:** Enter the address of the SysLog server that will be used to send the logs, or select your computer from the drop-down menu (only if receiving an IP address from the router via DHCP).

The screenshot shows the D-Link DIR-820L web interface with the 'Enable Logging To Syslog Server' checkbox checked. The 'Syslog Server IP Address' is set to '0.0.0.0', and there is a dropdown menu for 'Computer Name'. The 'Save Settings' and 'Don't Save Settings' buttons are still present. The 'Helpful Hints ...' section on the right remains the same.

# Email Settings

The *Email Settings* feature can be used to send the system log files, router alert messages, and firmware update notifications to your e-mail address.

**Enable Email Notification:** When this option is enabled, router activity logs and firmware update notifications are automatically sent to a designated e-mail address.

**From Email Address:** This e-mail address will appear as the sender when you receive a log file or firmware upgrade notification via e-mail.

**To Email Address:** Enter the e-mail address where you want the e-mail sent.

**SMTP Server Address:** Enter the SMTP server address for sending e-mail.

**SMTP Server Port:** Enter the SMTP port used on the server.

**Enable Authentication:** Check this box if your SMTP server requires authentication.

**Account Name:** Enter your account for sending e-mail.

**Password:** Enter the password associated with the account. Re-type the password associated with the account.

**On Log Full:** When this option is selected, logs will be sent via e-mail to your account when the log is full.

**On Schedule:** Selecting this option will send the logs via e-mail according to a set schedule.

**Schedule:** This option is enabled when **On Schedule** is selected. You can select a schedule from the list of defined schedules. To create a schedule, go to **Tools > Schedules**.

**D-Link**

DIR-820L //

SETUP ADVANCED **TOOLS** STATUS SUPPORT

**EMAIL SETTINGS**

The Email feature can be used to send the system log files, router alert messages, and firmware update notification to your email address.

Save Settings Don't Save Settings

**ENABLE**

Enable Email Notification: ☐

**EMAIL SETTINGS**

From Email Address:

To Email Address:

SMTP Server Address:

SMTP server port:

Enable Authentication: ☐

Account Name:

Password:

Verify Password:

**EMAIL LOG WHEN FULL OR ON SCHEDULE**

On Log Full : ☐

On Schedule: ☐

Schedule :

Details:

**Helpful Hints ...**

You may want to make the email settings similar to those of your email client program.

[More...](#)

## System

The *System Settings* section allows you to manage the router's configuration settings. You can reboot the router, and restore the router to the factory default settings. Restoring the unit to the factory default settings will erase all settings, including any rules that you've created. This is why you should save your settings to a configuration file when your router is configured the way you want it. Then you can reload your configuration in the event you have to reboot the router and your settings are erased.

**Save Settings to Local Hard Drive:** Use this option to save the current router configuration settings to a file on the hard disk of the computer you are using. First, click the **Save Configuration** button. A file dialog will appear, allowing you to select a location and file name for your configuration settings.

**Load Settings from Local Hard Drive:** Use this option to load your previously saved router configuration settings. Use the **Choose File** option to find a previously saved file of your configuration settings. Then, click the **Restore Configuration from file** button to transfer your settings to the router.

**Restore to Factory Default Settings:** Click **Restore Factory Defaults** to restore all configuration settings back to the settings that were in effect at the time the router was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save your current router configuration settings, use the **Save Configuration** button above.

**Reboot the Device:** Click to reboot the router.

The screenshot displays the D-Link DIR-820L web interface. The top navigation bar includes links for ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'SYSTEM SETTINGS' and contains the following options:

- Save Settings To Local Hard Drive:** A button labeled 'Save Configuration'.
- Load Settings From Local Hard Drive:** A 'Choose File' button (showing 'No file chosen') and a 'Restore Configuration from File' button.
- Restore To Factory Default Settings:** A 'Restore Factory Defaults' button with the text 'Restore all Settings to the Factory Defaults' below it.
- Reboot The Device:** A 'Reboot The Device' button.

On the right side, there is a 'Helpful Hints ...' section with text explaining the importance of saving configuration files and a 'More...' link.

# Firmware

You can upgrade the firmware of your router here. Make sure the firmware you want to use is on the local hard drive of the computer. It is recommended that you upgrade your current Language Pack when you upgrade the firmware. This ensures changes in the firmware are displayed correctly.

**Check Online Now** Click to find the most current available  
**for Latest Firmware:** Firmware version and Language Pack version.

## Firmware Upgrade

**Upload: Choose File:** After you have downloaded the new firmware, click **Choose File** to locate the firmware update on your hard drive.

**Upload:** Click to **Upload** the firmware upgrade into the access point.

## Language Pack Upgrade

You can change the language of the web UI by uploading available language packs.

**Upload: Choose File:** After you have downloaded the new language pack, click **Choose File** to locate the language pack file on your hard drive. Click **Upload** to complete the language pack upgrade.

**Upload:** Click to **Upload** the language pack upgrade into the access point.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes links for ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'FIRMWARE UPDATE' and contains instructions on how to upgrade the firmware and language pack. It also includes a section for 'FIRMWARE AND LANGUAGE PACK INFORMATION' showing the current version (1.00) and date (2013/04/23). Below this, there are sections for 'FIRMWARE UPGRADE' and 'LANGUAGE PACK UPGRADE', each with a 'Choose File' button and an 'Upload' button. A 'Check Online Now' button is also present in the information section. On the right side, there is a 'Helpful Hints' section with additional information about firmware updates.

DIR-820L	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
ADMIN	<b>FIRMWARE UPDATE</b>				<b>Helpful Hints</b> Firmware updates are released periodically to improve the functionality of your router and to add features. If you run into a problem with a specific feature of the router, check if updated firmware is available for your router. <a href="#">More...</a>
TIME	<p>There may be new firmware for your DIR-820L to improve functionality and performance. <a href="#">Click here to check for an upgrade on our support site.</a></p> <p>To upgrade the firmware, locate the upgrade file on the local hard drive with the Browse button. Once you have found the file to be used, click the Upload button below to start the firmware upgrade.</p> <p>The language pack allows you to change the language of the user interface on the DIR-820L. We suggest that you upgrade your current language pack if you upgrade the firmware. This ensures that any changes in the firmware are displayed correctly.</p> <p>To upgrade the language pack, locate the upgrade file on the local hard drive with Browse button. Once you have found the file to be used, click the Upload button to start the language pack upgrade.</p>				
SYSLOG	<b>FIRMWARE AND LANGUAGE PACK INFORMATION</b>				
EMAIL SETTINGS	<p>Current Firmware Version: 1.00      Date: 2013/04/23</p> <p>Current Language Pack Version : There is no language pack.</p> <p>Check Online Now for Latest Firmware and Language pack Version: <a href="#">Check Now</a></p>				
SYSTEM	<b>FIRMWARE UPGRADE</b>				
FIRMWARE	<p><b>Note:</b> Some firmware upgrades reset the configuration options to the factory defaults. Before performing an upgrade, be sure to save the current configuration.</p> <p>To upgrade the firmware, your PC must have a wired connection to the router. Enter the name of the firmware upgrade file, and click on the Upload button.</p> <p>Upload: <a href="#">Choose File</a> No file chosen <a href="#">Upload</a></p>				
DYNAMIC DNS	<b>LANGUAGE PACK UPGRADE</b>				
SYSTEM CHECK	<p>Upload: <a href="#">Choose File</a> No file chosen <a href="#">Upload</a></p>				
SCHEDULES					

# Dynamic DNS

The Dynamic DNS (DDNS) feature allows you to host a server (Web, FTP, Game Server, etc.) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter in your domain name to connect to your server regardless of your IP address.

**Enable Dynamic DNS:** Dynamic Domain Name System (DDNS) provides you with a way to keep your domain name linked to a changing IP Address. Check the box to **Enable DDNS**.

**Server Address:** Select your DDNS provider from the drop-down menu or enter the DDNS server address.

**Host Name:** Enter the **Host Name** that you registered with your DDNS service provider.

**Username or Key:** Enter the **Username** or key for your DDNS account.

**Password or Key:** Enter the **Password** or key for your DDNS account.

**Timeout:** Enter a **Timeout** value (in hours).

**Status:** Displays the current connection status.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists various settings: ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS (selected), SYSTEM CHECK, and SCHEDULES. The main content area is titled 'DYNAMIC DNS' and contains the following sections:

- Dynamic DNS Overview:** A text box explaining the feature and a link to 'Sign up for D-Link's Free DDNS service at [www.DLinkDDNS.com](http://www.DLinkDDNS.com)'. Below this are 'Save Settings' and 'Don't Save Settings' buttons.
- Dynamic DNS Configuration:** A form with the following fields:
  - Enable Dynamic DNS:** A checkbox.
  - Server Address:** A dropdown menu showing 'dlinkdns.com(Free)' and a '<<' button.
  - Host Name:** A text input field with a placeholder '(e.g. myhost.mydomain.net)'.
  - Username or Key:** A text input field.
  - Password or Key:** A text input field with masked characters.
  - Verify Password or Key:** A text input field with masked characters.
  - Timeout:** A text input field showing '576' with a unit '(hours)'.
  - Status:** A label showing 'Disconnect'.
- Dynamic DNS for IPv6 Hosts:** A section with the following fields:
  - Enable:** A checkbox.
  - IPv6 Address:** A text input field with a '<<' button and a 'Computer Name' dropdown.
  - Host Name:** A text input field with a placeholder '(e.g. myhost.mydomain.net)'.
  - Buttons:** 'Save' and 'Clear' buttons.
- IPv6 Dynamic DNS List:** A table with columns 'Enable', 'Host Name', and 'IPv6 Address'.

## Dynamic DNS for IPv6 Hosts

**Enable:** Check the box to **Enable** DDNS for IPv6 Hosts.

**IPv6 Address:** Enter the **IPv6 Address** of your computer/server in your local network. You can click the << button and select a computer/server from the drop-down list.

**Host Name:** Enter the IPv6 **Host Name** that you registered with your DDNS service provider.

**IPv6 DDNS List:** Once you save your entry, the IPv6 DDNS host information will be displayed below.

**Enable:** Check the box to **Enable** the entry.

**Host Name:** Displays the name of your IPv6 DDNS host.

**IPv6 Address:** Displays the **IPv6 Address** of your computer/server associated with the IPv6 DDNS host.

**Edit/Delete:** Click the **Edit** icon to make changes to the entry or click the **Trash** icon to delete the entry.

DYNAMIC DNS FOR IPV6 HOSTS

Enable : ☒

IPv6 Address :  << Computer Name ▼

Host Name :  (e.g. myhost.mydomain.net)

Save Clear

IPV6 DYNAMIC DNS LIST

Enable	Host Name	IPv6 Address		
--------	-----------	--------------	--	--

## System Check

**Ping Test:** The *Ping Test* is used to send ping packets in order to find out if a computer is on the Internet.

**Host Name or IP Address:** Enter the **IP Address** that you wish to ping and click **Ping**.

**Host Name or IPv6 Address:** Enter the **IPv6 Address** that you wish to ping and click **Ping**.

**Ping Results:** The results of your ping attempts will be displayed here.

The screenshot displays the D-Link DIR-820L web management interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options: ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, and SCHEDULES. The main content area is titled 'PING TEST' and contains the following sections:

- PING TEST**: A section with a description: 'Ping Test sends "ping" packets to test a computer on the Internet.'
- PING TEST**: A form with the label 'Host Name or IP Address :', a text input field, and a 'Ping' button.
- IPv6 PING TEST**: A form with the label 'Host Name or IPv6 Address :', a text input field, and a 'Ping' button.
- PING RESULT**: A section with the instruction: 'Enter a host name or IP address above and click "Ping".'

On the right side of the interface, there is a 'Helpful Hints ...' section. It contains the text: 'Ping checks whether a computer on the Internet is running and responding. Enter either the IP address of the target computer or enter its fully qualified domain name.' followed by a 'More...' link.

# Schedules

Schedules can be created for use with enforcing rules. For example, if you want to restrict web access to Mon-Fri from 3pm to 8pm, you could create a schedule selecting Mon, Tue, Wed, Thu, and Fri and enter a Start Time of 3pm and End Time of 8pm.

**Name:** Enter a name for your new schedule.

**Day(s):** Select **All Week** to include every day of the week, or click on **Select Day(s)** to choose specific days by checking the box by the corresponding day(s).

**Time:** Check **All Day - 24hrs** or enter a **Start Time** and **End Time** for your schedule.

**Schedule Rules** The list of schedules will be listed here. Click the **List:** **Edit** icon to make changes or click the **Trash** icon to delete the schedule.

**D-Link**

DIR-820L

SETUP ADVANCED TOOLS STATUS SUPPORT

**SCHEDULES**

The Schedule configuration option is used to manage schedule rules for various firewall and parental control features.

Save Settings Don't Save Settings

**10 - ADD SCHEDULE RULE**

Name:

Day(s): ☒ All Week ☐ Select Day(s)

☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

All Day - 24 hrs: ☐

Time format: 12-hour

Start Time: 12 : 00 PM (hour:minute, 12 hour time)

End Time: 12 : 00 PM (hour:minute, 12 hour time)

**SCHEDULE RULES LIST**

Name :	Day(s) :	Time Frame :
--------	----------	--------------

**Helpful Hints...**

Schedules are used with a number of other features to define when those features are in effect.

Give each schedule a name that is meaningful to you. For example, a schedule for Monday through Friday from 3:00pm to 9:00pm, might be called "After School".

Click **Save** to add a completed schedule to the list below.

Click the **Edit** icon to change an existing schedule.

Click the **Delete** icon to permanently delete a schedule.

[More...](#)



# Status

## Device Info

The *Status* page displays the current Internet and connection details for the DIR-820L. It displays the *WAN*, *LAN*, and *Wireless* information. If your Internet connection is set up for a Dynamic IP address then a **Release** button and a **Renew** button will be displayed. Use **Release** to disconnect from your ISP and use **Renew** to connect to your ISP.

If your Internet connection is set up for PPPoE, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection.

**WAN:** Displays the *MAC Address* and the public IP settings.

**LAN:** Displays the *MAC Address* and the private (local) IP settings for the router.

**Wireless LAN:** Displays the 2.4GHz wireless *MAC Address* and your wireless settings such as *Network Name (SSID)* and *Channel*.

**Wireless LAN2:** Displays the 5GHz wireless *MAC Address* and your wireless settings such as *Network Name (SSID)* and *Channel*.

**LAN Computers:** Displays computers and devices that are connected to the router via Ethernet and that are receiving an *IP Address* assigned by the router (DHCP).

**IGMP Multicast Memberships:** Displays *Multicast Group Address*.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes links for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for DEVICE INFO, LOGS, STATISTICS, and INTERNET SESSIONS. The main content area is titled 'DEVICE INFORMATION' and displays the following sections:

- WAN:** Shows Connection Type (Dynamic IP (DHCP)), Cable Status (Connected), Network Status (Connected), Connection Up Time (0 Day, 2:06:12), MAC Address (C8:D3:A3:60:4E:CD), IP Address (10.10.10.101), Subnet Mask (255.255.255.0), Default Gateway (10.10.10.1), Primary DNS Server (10.10.10.1), and Secondary DNS Server (0.0.0.0). Buttons for 'Renew' and 'Release' are visible.
- LAN:** Shows MAC Address (C8:D3:A3:60:4E:CC), IP Address (192.168.0.1), Subnet Mask (255.255.255.0), and DHCP Server (Enabled).
- WIRELESS LAN:** Shows Wireless Band (2.4GHz Band), Wireless Radio (Enable), 802.11 Mode (Mixed 802.11n, 802.11g and 802.11b), Channel Width (20/40 MHz), Channel (10), and Wi-Fi Protected Setup (Enabled/Configured). A table lists the Network Name (SSID) as 'dlink-4ECC', Guest as 'No', MAC Address as 'C8:D3:A3:60:4E:CC', and Security Mode as 'Auto (WPA or WPA2) - PSK'.
- WIRELESS LAN2:** Shows Wireless Band (5GHz Band), Wireless Radio (Enable), 802.11 Mode (Mixed 802.11ac, 802.11n and 802.11a), Channel Width (20/40/80 MHz), Channel (161), and Wi-Fi Protected Setup (Enabled/Configured). A table lists the Network Name (SSID) as 'dlink-4ECC-5GHz', Guest as 'No', MAC Address as 'C8:D3:A3:60:4E:CE', and Security Mode as 'Auto (WPA or WPA2) - PSK'.
- LAN COMPUTERS:** A table showing connected devices with columns for IP Address, Name (if any), and MAC. One device is listed with IP 192.168.0.100, Name DLINKTESTPC, and MAC 00:0C:F1:87:74:28.
- IGMP MULTICAST MEMBERSHIPS:** A table with a single row for Multicast Group Address.

# Logs

The router automatically logs (records) events of possible interest in its internal memory. If there isn't enough internal memory for all events, logs of older events are deleted but logs of the latest events are retained. The *Log Options* allow you to define what types of events you want to view. This router also has external Syslog Server support so you can send the log files to a computer on your network that is running a Syslog utility.

**Log Options:** You can select the type of events that you would like to keep track of. Check the box by the corresponding activity or event that you would like to view.

**Apply Log Settings Now:** After selecting your **Log Options**, click on this button to activate your log settings.

**First Page:** Click to go to the first page.

**Last Page:** Click to go to the last page.

**Previous:** Click to go back one page.

**Next:** Click to go to the next page.

**Refresh:** Updates the *Log Details* on the screen so you can view any recent activity.

**Clear:** Clears all of the log contents.

**Email Now:** Clicking on this option will e-mail a copy of the router log to the address configured in the **Tools > Email Settings** page.

**Save Log:** Click to save the router log to a local hard drive.

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DIR-820L

SETUP ADVANCED TOOLS STATUS SUPPORT

**LOGS**

Use this option to view the router logs. You can define what types of events you want to view and the event levels to view. This router also has internal syslog server support so you can send the log files to a computer on your network that is running a Syslog utility.

**LOG OPTIONS**

Log Options : ☒ System Activity  
☐ Debug Information  
☒ Attacks  
☐ Dropped Packets  
☒ Notice  
[Apply Log Settings Now](#)

**LOG DETAILS**

[First Page](#) [Last Page](#) [Previous](#) [Next](#)  
[Refresh](#) [Clear](#) [Email Now](#) [Save Log](#)

1/10

TIME	Message
Jan 1 02:02:44	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 01:27:08	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 01:23:44	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 01:20:29	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 01:15:19	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 00:45:26	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 00:41:39	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 00:38:29	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 00:35:19	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin
Jan 1 00:30:50	user.info: ncc[670]: [ItSystemActivity]192.168.0.100 has login to GUI with Admin

**Helpful Hints...**  
Check the log frequently to detect unauthorized network usage.  
You can also have the log mailed to you periodically. Refer to [Tools -> EMail](#).  
[More...](#)

## Statistics

The screen below displays the *Traffic Statistics*. Here you can view the number of packets that pass through the DIR-820L on both the WAN, LAN ports and the wireless segments. The traffic counter will reset if the device is rebooted.

The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains a menu with options: DEVICE INFO, LOGS, STATISTICS (highlighted), INTERNET SESSIONS, ROUTING, WIRELESS, IPV6, and IPV6 ROUTING. The main content area is titled "TRAFFIC STATISTICS" and includes a description: "Traffic Statistics display Receive and Transmit packets passing through your router." Below this are two buttons: "Refresh Statistics" and "Clear Statistics". The statistics are organized into four sections: LAN STATISTICS, WAN STATISTICS, WI-FI STATISTICS 2.4GHZ, and WI-FI STATISTICS 5GHZ. Each section displays "Sent" and "Received" packet counts, along with "TX/RX Packets", "Dropped", and "Collisions/Errors".

Segment	Sent	Received	TX/RX Packets	Dropped	Collisions/Errors
LAN	72815	45418	TX Packets: 0	RX Packets: 0	Dropped: 0, Collisions: 0, Errors: 0
WAN	1913	15794	TX Packets: 0	RX Packets: 0	Dropped: 0, Collisions: 0, Errors: 0
Wi-Fi 2.4GHz	19982	605566	TX Packets: 0	RX Packets: 0	Dropped: 0, Collisions: 0, Errors: 0
Wi-Fi 5GHz	27380	804278	TX Packets: 0	RX Packets: 0	Dropped: 0, Collisions: 0, Errors: 0

Helpful Hints... This is a summary of the number of packets that have passed between the WAN and the LAN since the router was last initialized. [More...](#)

## Internet Sessions

The *Internet Sessions* page displays full details of active Internet sessions through your router. An Internet session is a conversation between a program or application on a LAN-side computer and a program or application on a WAN-side computer.

**D-Link**

DIR-820L //

SETUP ADVANCED TOOLS STATUS SUPPORT

DEVICE INFO  
LOGS  
STATISTICS  
INTERNET SESSIONS  
ROUTING  
WIRELESS

**INTERNET SESSIONS**

This page displays the full details of active sessions to your router.

**INTERNET SESSIONS**

Local	NAT	Internet	Protocol	State	Dir	Time Out
-------	-----	----------	----------	-------	-----	----------

**Helpful Hints...**  
This is a list of all active conversations between WAN computers and LAN computers.  
[More...](#)

## Wireless

The wireless client table displays a list of currently connected wireless clients. This table shows the *MAC Address*, *IP Address* and connection *Rate* of the connected wireless clients.

**D-Link**

DIR-820L

SETUP

ADVANCED

TOOLS

STATUS

SUPPORT

DEVICE INFO

LOGS

STATISTICS

INTERNET SESSIONS

ROUTING

WIRELESS

IPV6

IPV6 ROUTING

WIRELESS

Use this option to view the wireless clients that are connected to your wireless router.

NUMBER OF WIRELESS CLIENTS - 2.4GHZ BAND: 0

MAC Address

IP Address

Mode

Rate

Signal(%)

NUMBER OF WIRELESS CLIENTS - 5GHZ BAND: 0

MAC Address

IP Address

Mode

Rate

Signal(%)

Helpful Hints ...

This is a list of all wireless clients that are currently connected to your wireless router.

More...

# Routing

This page will display information about the routes that have been enabled on your router.

**D-Link**

DIR-820L

///

DEVICE INFO

LOGS

STATISTICS

INTERNET SESSIONS

**ROUTING**

WIRELESS

IPv6

IPv6 ROUTING

SETUP

ADVANCED

TOOLS

**STATUS**

SUPPORT

**ROUTING**

**Routing Table**

The Routing Status menu shows information about the routes that have been enabled on your router. The list will display the destination IP address, gateway IP address, subnet mask, metric and interface for each route.

**ROUTING TABLE**

Destination IP	Netmask	Gateway	Metric	Interface	Type	Creator
239.0.0.0	255.0.0.0	0.0.0.0	0	LAN	Dynamic	System
192.168.0.0	255.255.255.0	0.0.0.0	0	LAN	Dynamic	System
10.10.10.0	255.255.255.0	0.0.0.0	0	WAN	Dynamic	System
0.0.0.0	0.0.0.0	10.10.10.1	0	WAN	Dynamic	System

More...

## IPv6

The *IPv6* page displays a summary of the Router's IPv6 connection information, and lists the *IPv6 Address* and host *Name* of any IPv6 clients.

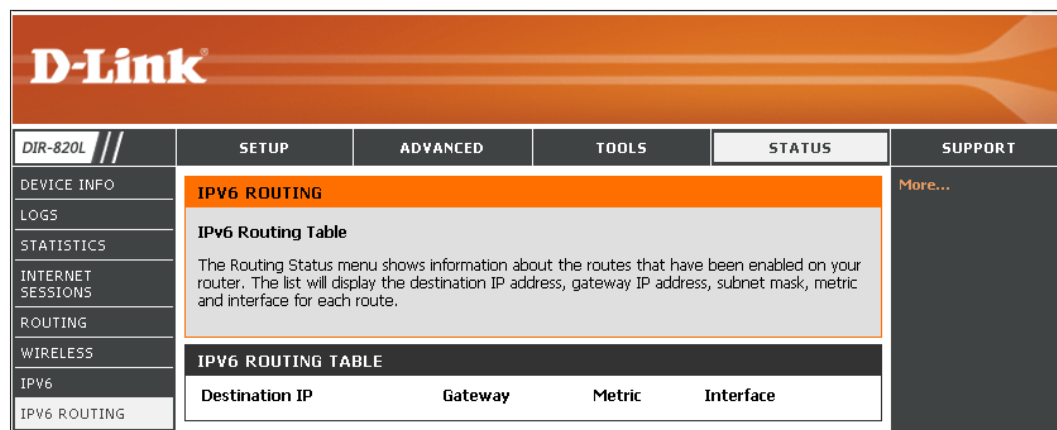
The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various menu items: DIR-820L, DEVICE INFO, LOGS, STATISTICS, INTERNET SESSIONS, ROUTING, WIRELESS, IPv6 (highlighted), and IPv6 ROUTING. The main content area is titled 'IPv6 Network Information' and contains a message: 'All of your IPv6 Internet and network connection details are displayed on this page.' Below this, a section titled 'IPv6 Connection Information' displays the following details:

- IPv6 Connection Type : Auto Detection
- Network Status : Disconnected
- WAN IPv6 Address :
- IPv6 Default Gateway :
- LAN IPv6 Address :
- LAN IPv6 Link-Local Address : fe80::cad3:a3ff:fe60:4ecc/64
- Primary DNS Address :
- Secondary DNS Address :

On the right side of the main content area, there is a 'Helpful Hints ...' section with the text: 'All of your IPv6 LAN connection details are displayed here.' and a link labeled 'More...'.

## IPv6 Routing

This page displays the *IPv6 Routing* details configured for your router.



The screenshot shows the D-Link DIR-820L web interface. The top navigation bar includes the D-Link logo and tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains a list of menu items: DEVICE INFO, LOGS, STATISTICS, INTERNET SESSIONS, ROUTING, WIRELESS, IPV6, and IPV6 ROUTING. The main content area is titled "IPv6 ROUTING" and contains a section for the "IPv6 Routing Table". Below this, there is a table with the following structure:

IPv6 ROUTING TABLE			
Destination IP	Gateway	Metric	Interface

The table is currently empty. To the right of the main content area, there is a "More..." link.



# Support

**D-Link**

DIR-820L //

MENU

SETUP

ADVANCED

TOOLS

STATUS

WIRELESS

SETUP

ADVANCED

TOOLS

STATUS

SUPPORT

SUPPORT MENU

- [Setup](#)
- [Advanced](#)
- [Tools](#)
- [Status](#)

SETUP HELP

- [Internet Connection](#)
- [WAN](#)
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- [Storage](#)
- [IPv6](#)
- [mydlink Settings](#)

ADVANCED HELP

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- [Application Rules](#)
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STATUS HELP

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- [Wireless](#)
- [IPv6](#)
- [IPv6 Routing](#)

---

# Connect a Wireless Client to your Router

## WPS Button

The easiest and most secure way to connect your wireless devices to the router is WPS (Wi-Fi Protected Setup). Most wireless devices such as wireless adapters, media players, Blu-ray DVD players, wireless printers and cameras will have a WPS button (or a software utility with WPS) that you can press to connect to the DIR-820L router. Please refer to your user manual for the wireless device you want to connect to make sure you understand how to enable WPS. Once you know, follow the steps below:

**Step 1** - Press the WPS button on the DIR-820L for about one second. The Internet LED on the front will start to blink.

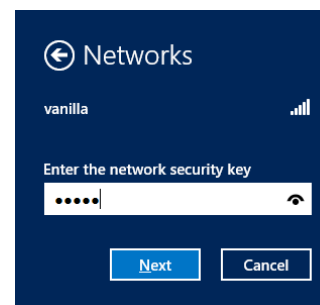
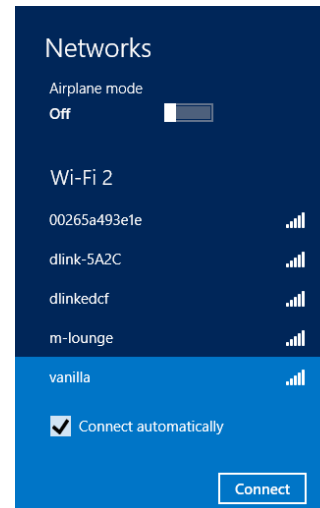
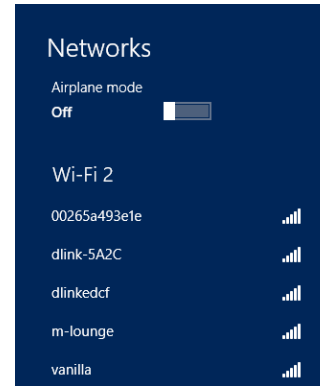


**Step 2** - Within two minutes, press the WPS button on your wireless client (or launch the software utility and start the WPS process).

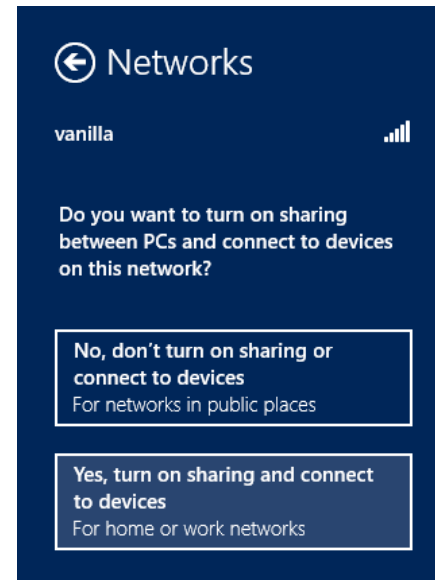
**Step 3** - Allow up to one minute to configure. Once the Internet light stops blinking, you will be connected and your wireless connection will be secure with WPA2.

# Windows® 8

1. Click on the wireless computer icon in your system tray (lower-right corner next to the time).
2. A list of available wireless networks will appear.
3. Click the wireless network (SSID) you want to connect to and then click **Connect**.
4. If the network is secure/encrypted, enter the Wi-Fi password (security key) and click **Next**.



- 
5. Click either to enable or disable file sharing.
  6. You will now be connected to your wireless network.



If you get a good signal but cannot access the Internet, confirm the encryption by reviewing the profile or check the TCP/IP settings for your wireless adapter. Refer to the *Networking Basics* section in this manual for more information.

---

# Windows® 7

## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.

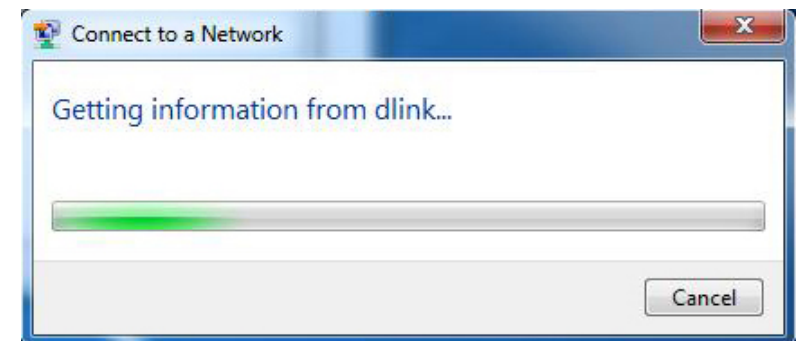


3. Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.

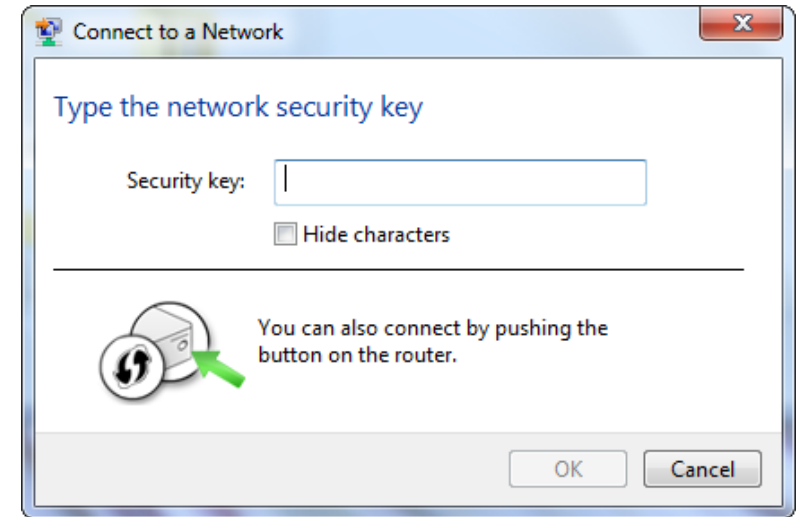


4. The following window appears while your computer tries to connect to the router.



5. Enter the same security key or passphrase that is on your router and click **Connect**. You can also connect by pushing the WPS button on the router.

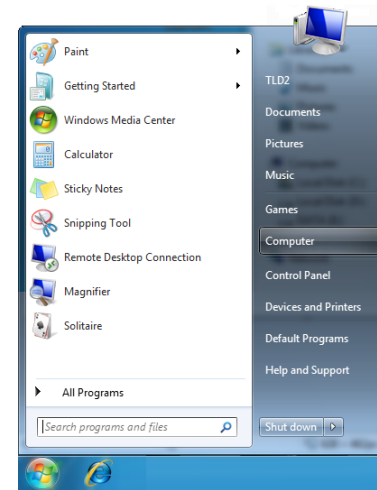
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



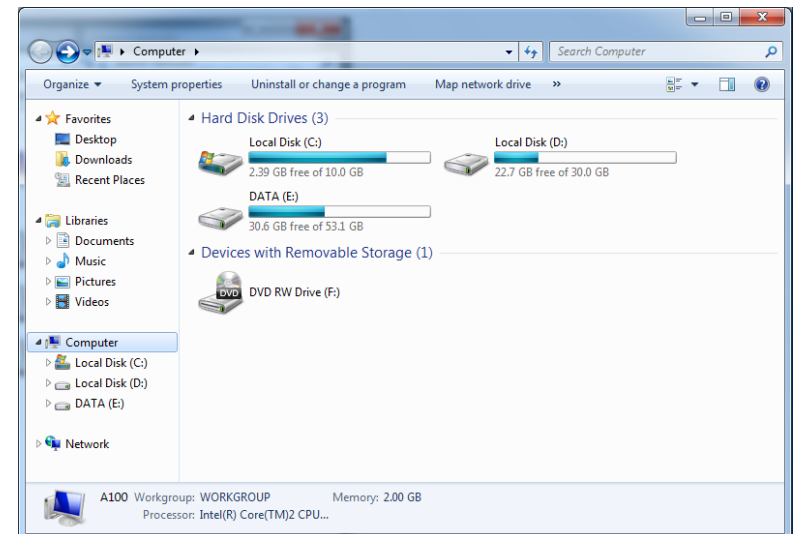
# WPS

The WPS feature of the DIR-820L can be configured using Windows® 7. Carry out the following steps to use Windows® 7 to configure the WPS feature:

1. Click the **Start** button and select **Computer** from the Start menu.

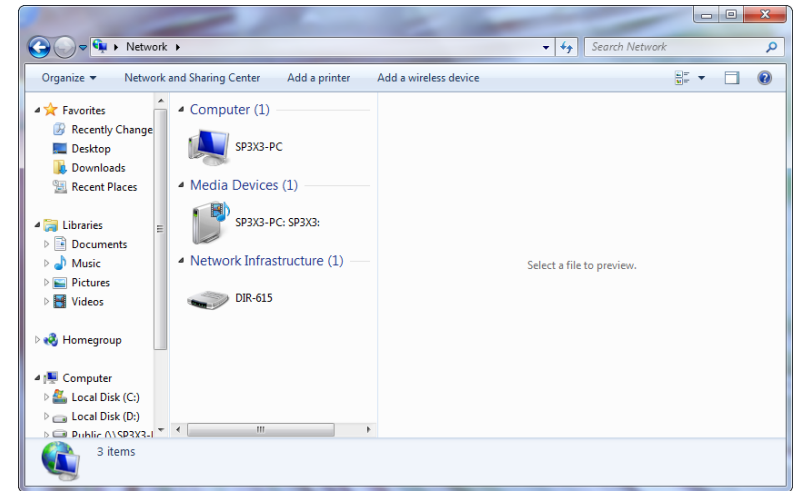


2. Click **Network** on the left side.

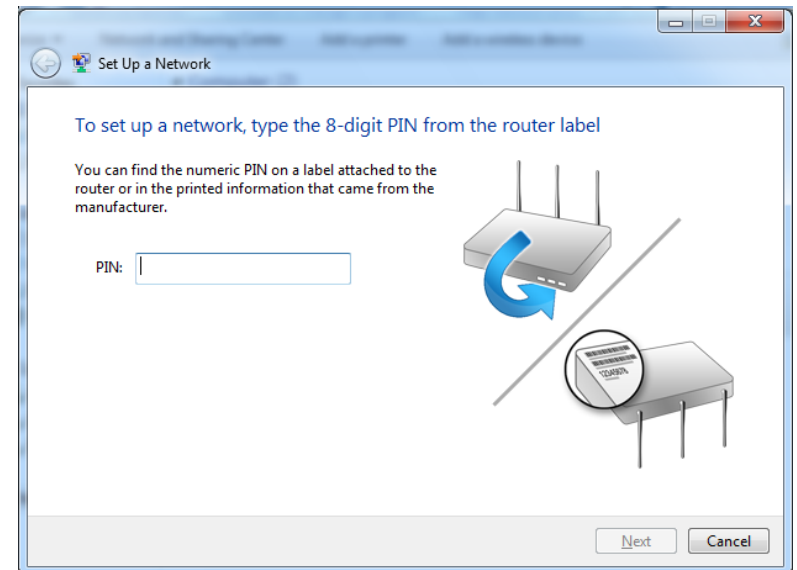




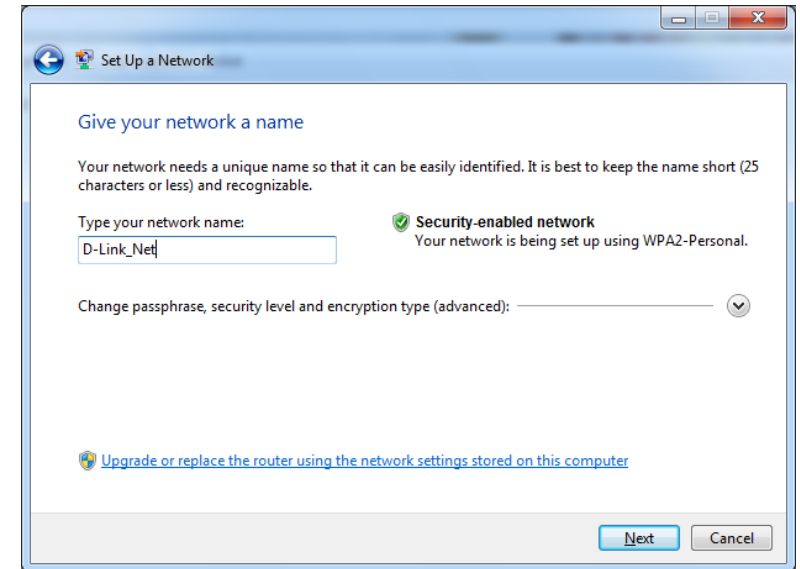
3. Double-click the DIR-820L.




4. Input the WPS PIN number (displayed in the WPS window on the Router's LCD screen or in the **Setup** > **Wireless Setup** menu in the Router's Web UI) and click **Next**.

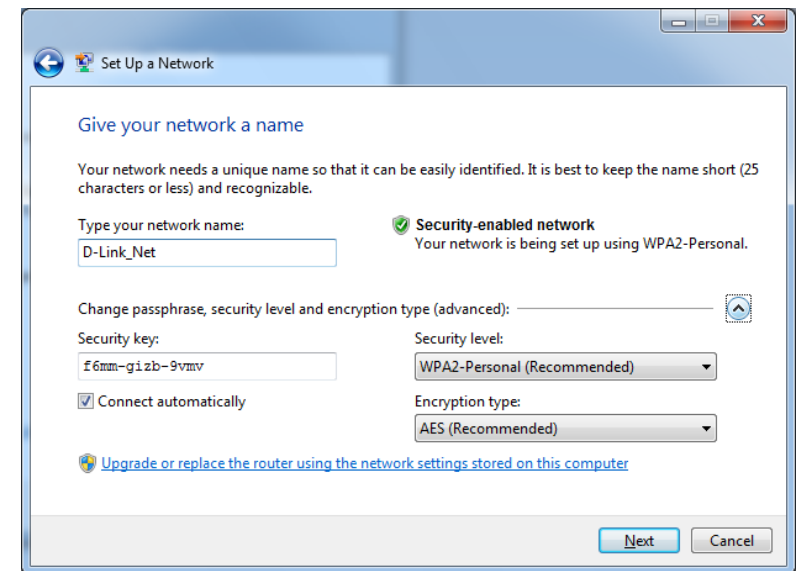


5. Type a name to identify the network.



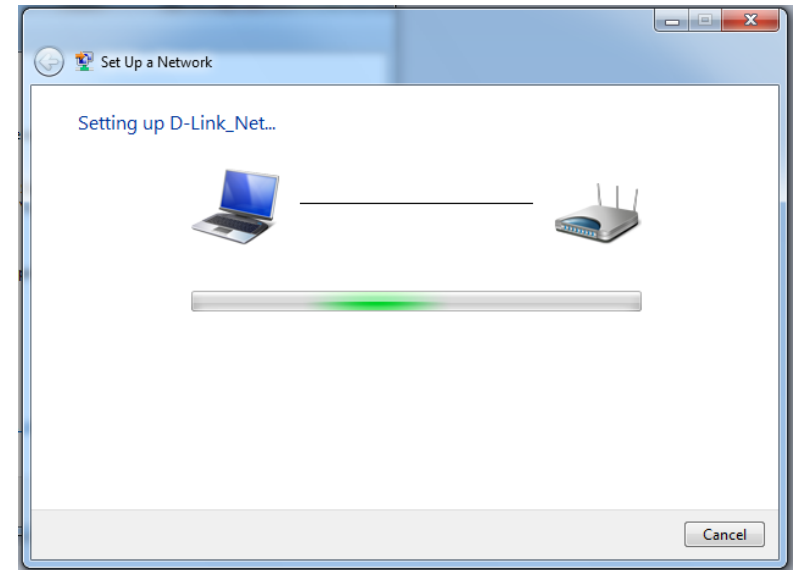
6. To configure advanced settings, click the  icon.

Click **Next** to continue.



7. The following window appears while the Router is being configured.

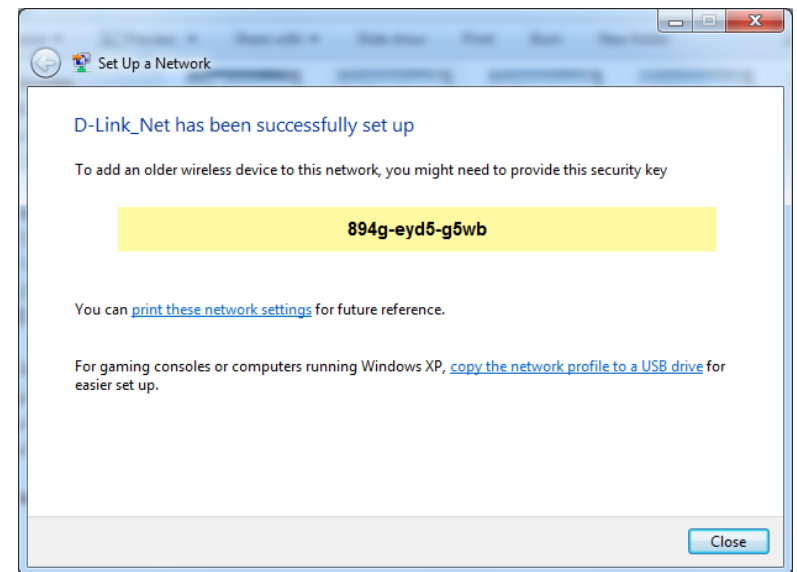
Wait for the configuration to complete.



8. The following window informs you that WPS on the router has been setup successfully.

Make a note of the security key as you may need to provide this security key if adding an older wireless device to the network in the future.

9. Click **Close** to complete WPS setup.



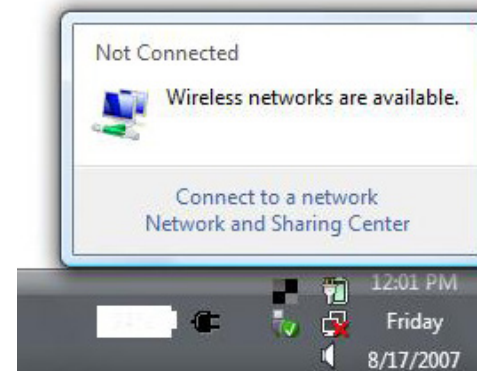
# Windows Vista®

Windows Vista® users may use the built-in wireless utility. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows Vista® utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

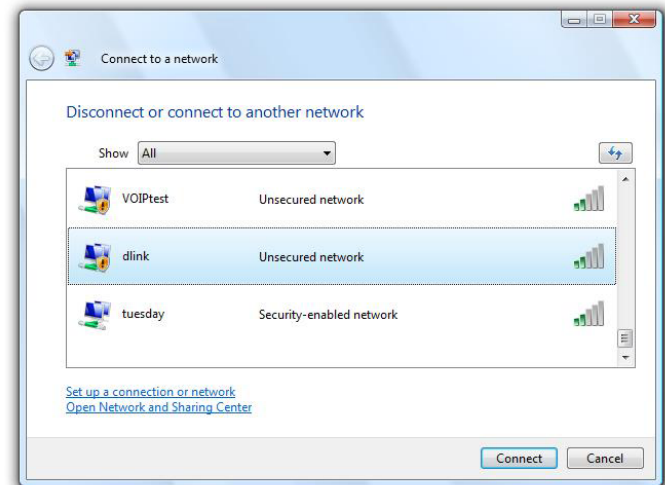
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

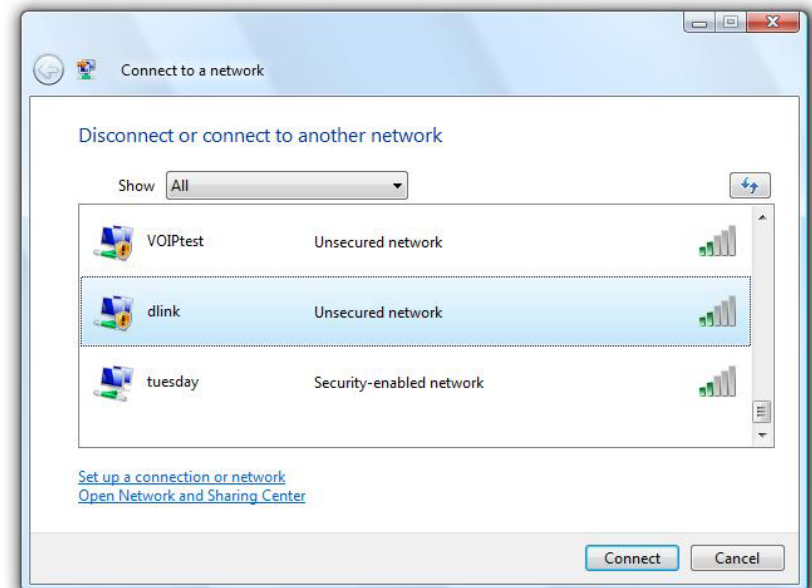
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



# WPA/WPA2

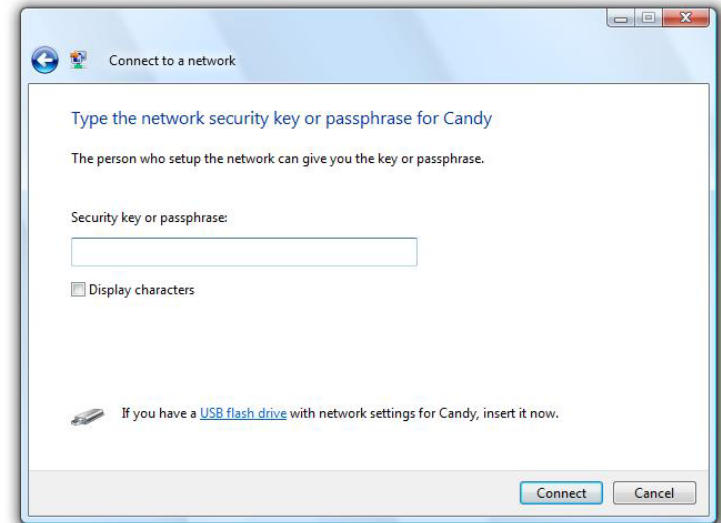
It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. Enter the same security key or passphrase that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



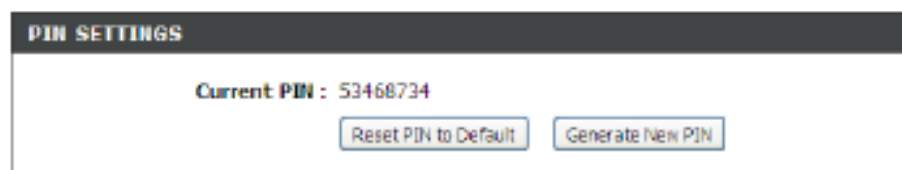
---

## WPS/WCN 2.0

The router supports Wi-Fi protection, referred to as WCN 2.0 in Windows Vista®. The following instructions for setting this up depends on whether you are using Windows Vista® to configure the router or third party software.

When you first set up the router, Wi-Fi protection is disabled and unconfigured. To enjoy the benefits of Wi-Fi protection, the router must be both enabled and configured. There are three basic methods to accomplish this: use Windows Vista's built-in support for WCN 2.0, use software provided by a third party, or manually configure.

If you are running Windows Vista®, log into the router and click the **Enable** checkbox in the **Basic > Wireless** section. Use the Current PIN that is displayed on the **Advanced > Wi-Fi Protected Setup** section or choose to click the **Generate New PIN** button or **Reset PIN to Default** button.



If you are using third party software to set up Wi-Fi Protection, carefully follow the directions. When you are finished, proceed to the next section to set up the newly-configured router.

# Windows® XP

Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows® XP utility as seen below.

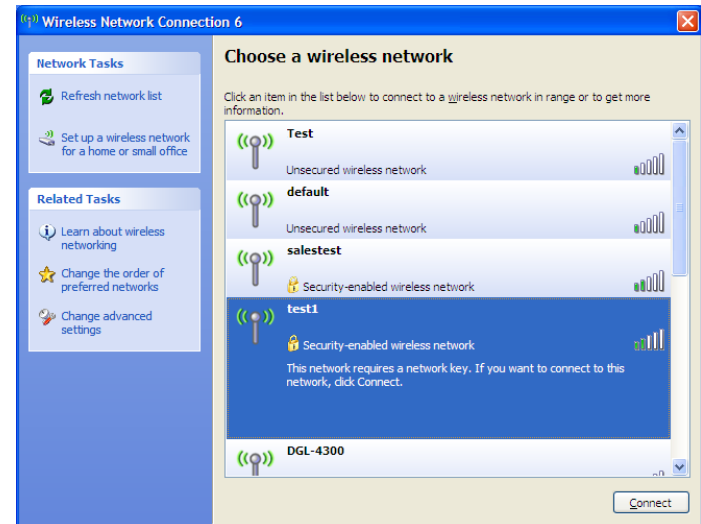
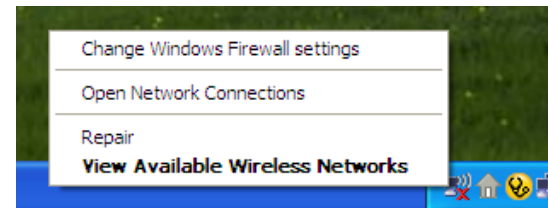
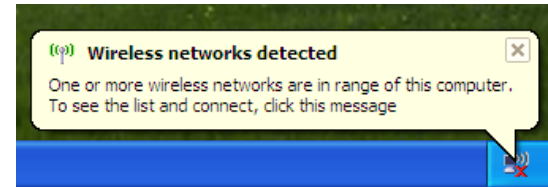
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.

The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.

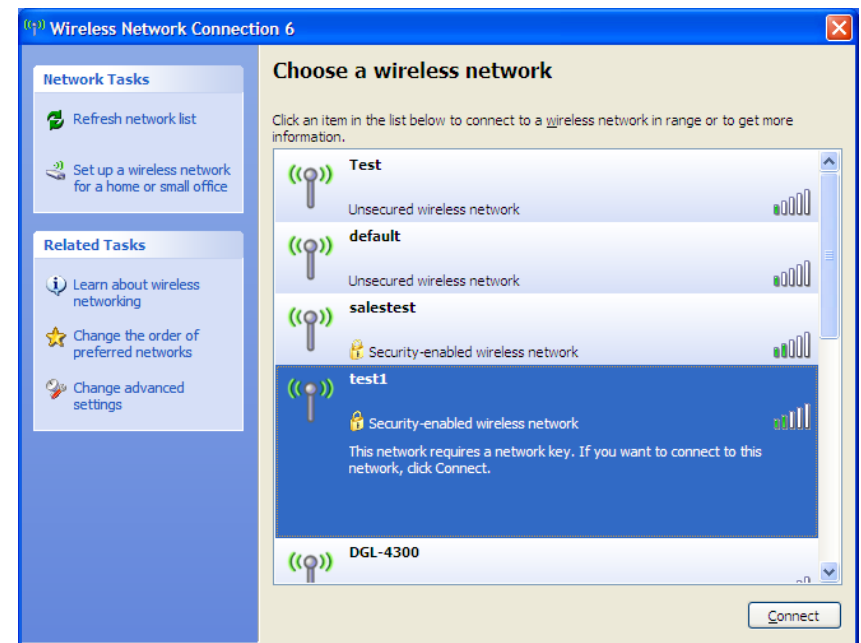
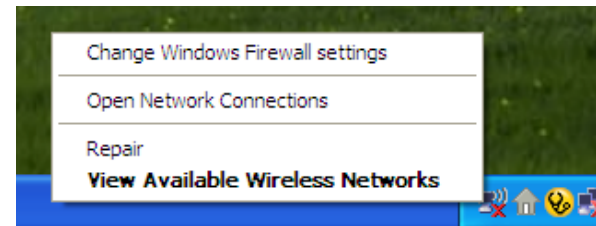




# WPA/WPA2

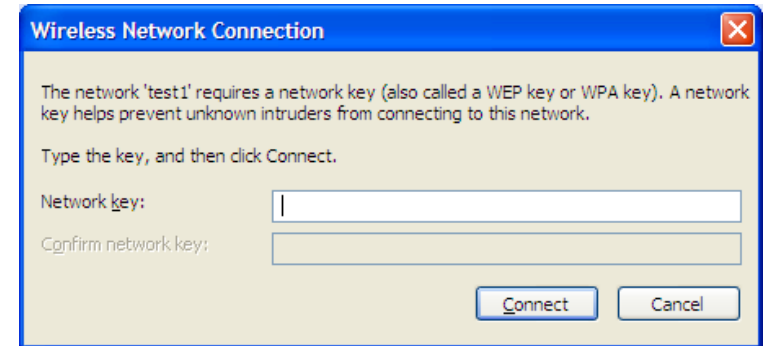
It is recommended to enable WPA on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA key being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



- 
3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless router.



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# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-820L. Read the following descriptions if you are having problems. The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.

## 1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (192.168.0.1 for example), you are not connecting to a website nor do you have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Microsoft Internet Explorer® 7 and higher
  - Mozilla Firefox 3.5 and higher
  - Google™ Chrome 8 and higher
  - Apple Safari 4 and higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any Internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- 
- Configure your Internet settings:
    - Go to **Start > Settings > Control Panel**. Double-click the **Internet Options** icon. From the **Security** tab, click the button to restore the settings to their defaults.
    - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
    - Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.
    - Close your web browser (if open) and open it.
  - Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your web management.
  - If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

## 2. What can I do if I forgot my password?

If you forgot your password, you must reset your router. Unfortunately this process will change all your settings back to the factory defaults.

To reset the router, locate the reset button (hole) on the bottom of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait about 30 seconds to access the router. To re-configure the router, refer to page 13.



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### 3. Why can't I connect to certain sites or send and receive e-mails when connecting through my router?

If you are having a problem sending or receiving e-mail, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

To find the proper MTU Size, you'll have to do a special ping of the destination you're trying to go to. A destination could be another computer, or a URL.

- Click on **Start** and then click **Run**.
- Windows® 95, 98, and Me users type in **command** (Windows® NT, 2000, XP, Vista®, and 7 users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

**ping [url] [-f] [-l] [MTU value]**

Example: **ping yahoo.com -f -l 1472**

```
C:\>ping yahoo.com -f -l 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping yahoo.com -f -l 1472
Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52
Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 93ms, Maximum = 203ms, Average = 132ms
C:\>
```

---

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, let's say that 1452 was the proper value, the actual MTU size would be 1480, which is the optimum for the network we're working with ( $1452+28=1480$ ).

Once you find your MTU, you can now configure your router with the proper MTU size.

To change the MTU rate on your router follow the steps below:

- Open your browser, enter the IP address of your router (192.168.0.1) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on **Setup** and then click **Manual Configure**.
- To change the MTU enter the number in the MTU field and click **Save Settings** to save your settings.
- Test your email. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

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# Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

---

## **What is Wireless?**

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

## **Why D-Link Wireless?**

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

## **How does wireless work?**

Wireless works similar to how cordless phones work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

### **Wireless Local Area Network (WLAN)**

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.



---

## **Wireless Personal Area Network (WPAN)**

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

## **Who uses wireless?**

Wireless technology has become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

### **Home**

- Gives everyone at home broadband access
- Surf the web, check email, instant message, etc.
- Gets rid of the cables around the house
- Simple and easy to use

### **Small Office and Home Office**

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

---

## **Where is wireless used?**

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

## **Tips**

Here are a few things to keep in mind, when you install a wireless network.

### **Centralize your router or Access Point**

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

### **Eliminate Interference**

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

---

## Security

Don't let your next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the router. Refer to product manual for detail information on how to set it up.

# Wireless Modes

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DIR-820L wireless network Cardbus adapters.

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

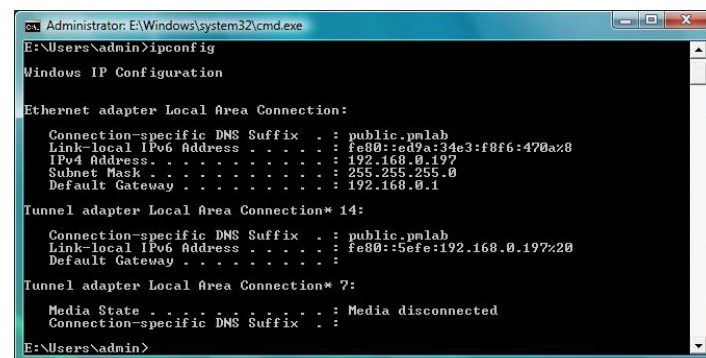
# Networking Basics

## Check your IP address

After you install your new D-Link wireless adapter and have established a wireless connection, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e., router) automatically. To verify your IP address, please follow the steps below.

### Windows® 8 Users

- Press the **Windows key** and **R** together. Type **cmd** in the box and click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and default gateway of your adapter.



```
Administrator: E:\Windows\system32\cmd.exe
E:\Users\Admin>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : public.milab
    Link-local IPv6 Address . . . . . : fe80::ed9a:34e3:f8f6:470a%8
    IPv4 Address. . . . . : 192.168.0.197
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.1

Tunnel adapter Local Area Connection* 14:

    Connection-specific DNS Suffix  . : public.milab
    Link-local IPv6 Address . . . . . : fe80::5efe:192.168.0.197%20
    Default Gateway . . . . . :

Tunnel adapter Local Area Connection* 7:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

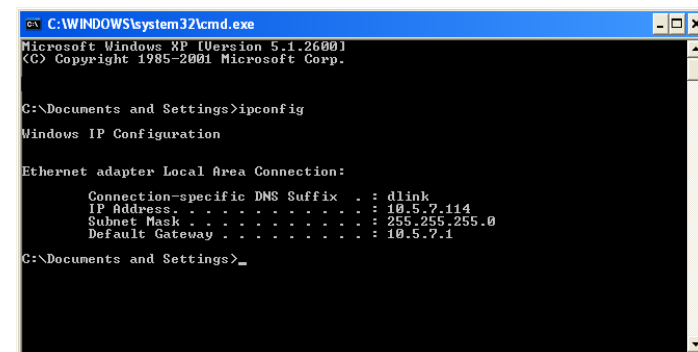
E:\Users\Admin>
```

### Windows® 7/Vista® Users

- Click **Start**, type **cmd** in the search box and then click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and default gateway of your adapter.

### Windows® XP Users

- Click on **Start > Run**. In the run box type **cmd** and click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and the default gateway of your adapter.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address. . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and Settings>
```

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

# Statically Assign an IP Address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

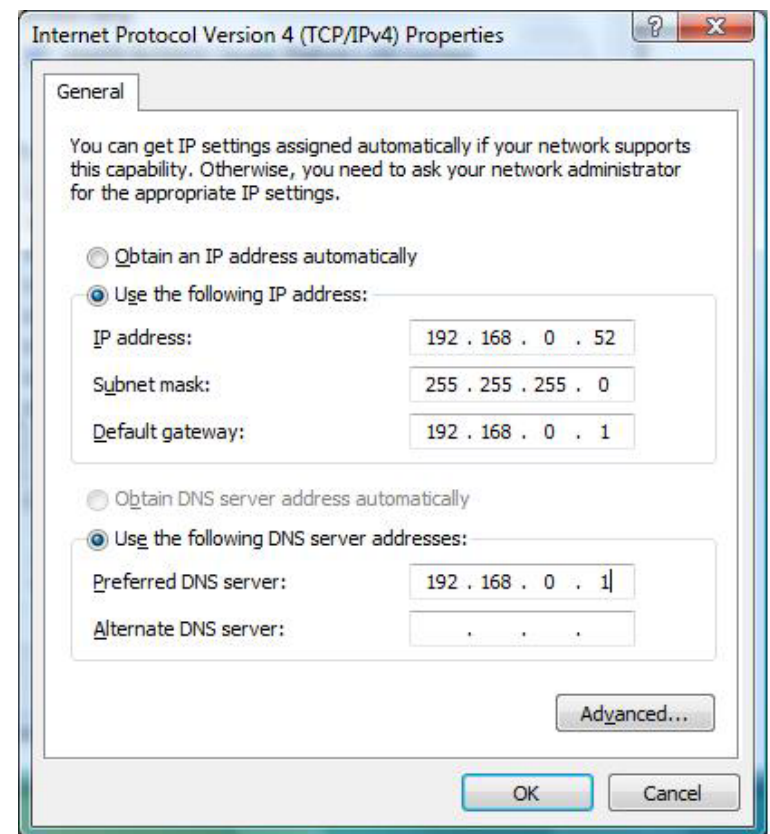
## Windows® 8 Users

- Press the **Windows** key and then type **IP**. Click **Settings** on the right side and then click **View Network Connections**.
- Right-click on the adapter which represents your D-Link wireless network adapter.
- Highlight **Internet Protocol Version 4 (TCP /IPv4)** and click **Properties**.

- Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or LAN IP address on your router or network.

**Example:** If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.

- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



## Windows® 7/ Vista® Users

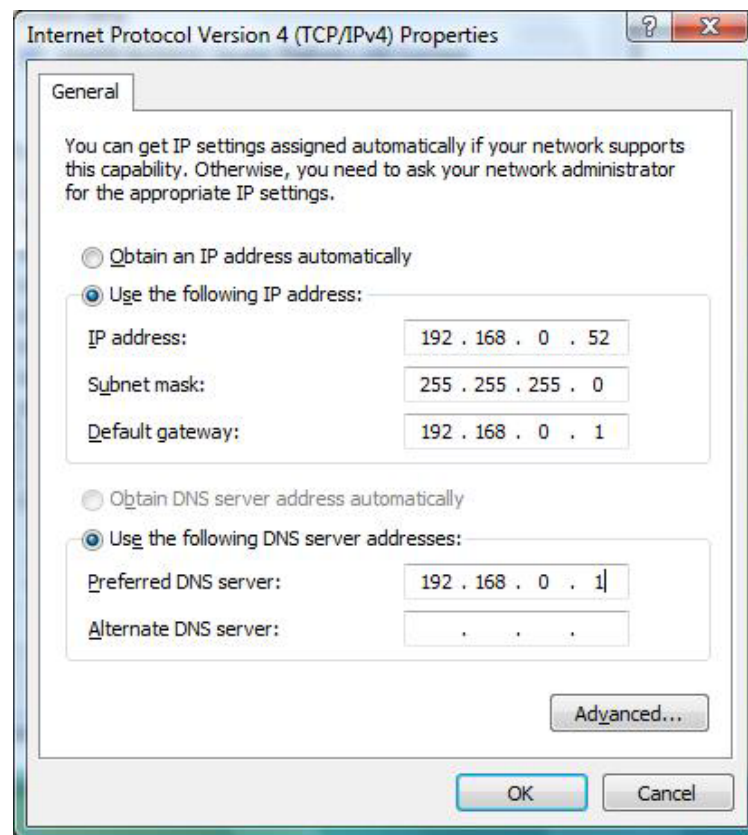
- Click on **Start > Control Panel** (make sure you are in Classic View). Double-click on the **Network and Sharing Center** icon. If you are using Windows Vista, click on **Manage network connections** along the left panel in the window. For Windows® 7, click on **Change adapter settings**.
- Right-click on the **Local Area Connection** which represents your D-Link wireless network adapter which will be connected to your network.

- Highlight **Internet Protocol Version 4 (TCP /IPv4)** and click **Properties**.

- Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or LAN IP address on your router or network.

**Example:** If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.

- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



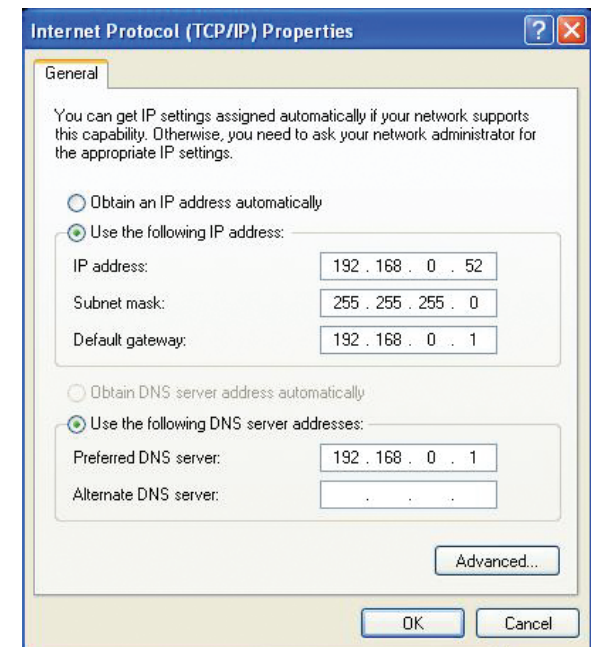
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## Windows® XP Users

- Click on **Start > Control Panel**. Make sure you are in Classic View. Double-click on the Network Connections icon.
- Right-click on the **Local Area Connection** which represents your D-Link wireless network adapter (or other adapter) which will be connected to your router.
- Highlight **Internet Protocol (TCP/IP)** and click **Properties**.
- Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or LAN IP address on your router.

**Example:** If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.

- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



---

# Technical Specifications

## Standards (5GHz)

- IEEE 802.11ac
- IEEE 802.11n
- IEEE 802.11a

## Standards (2.4GHz)

- IEEE 802.11n
- IEEE 802.11g

## Physical Interface

- Four 10/100 LAN Ports
- 10/100 WAN Port
- USB 2.0 Port
- 1 WPS Push Button
- Reset Button

## Security

- Wi-Fi Protected Access (WPA/WPA2)
- WPS™ (Wi-Fi Protected Setup)

## LEDs

- Power/WPS
- Internet

## Power

- DC 12V/1A

## Operating Temperature

- 30° to 104° F (0° to 40° C)

## Operating Humidity

- 10% to 90% non-condensing

## Certifications

- CE
- FCC
- IC
- C-Tick
- CSA International

## Dimensions

- 4.37" x 3.66" x 5.71"

## Weight

- 0.642 lb

## Warranty

- 1-Year Limited Warranty

1 Maximum wireless signal rate derived from IEEE Standard 802.11ac, 802.11a, 802.11g, and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.

2 Frequency Range varies depending on country's regulation

3 The DIR-820L does not include 5.25-5.35GHz & 5.47-5.725GHz in some regions.



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# Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g., DIR-820L)
- Hardware Revision (located on the label on the bottom of the router (e.g., rev B1))
- Serial Number (s/n number located on the label on the bottom of the router).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

## For customers within the United States:

### Phone Support:

(877) 453-5465

### Internet Support:

<http://support.dlink.com>

## For customers within Canada:

### Phone Support:

(800) 361-5265

### Internet Support:

<http://support.dlink.ca>

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# GPL Code Statement

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<http://tsd.dlink.com.tw/GPL.asp>

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- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.



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- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
  - The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

**Submitting A Claim (Canada):**

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- Customers need to provide their receipt (proof of purchase) even if the product is registered. Without a receipt, no warranty service will be done. The registration is not considered a proof of purchase.
- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-800-361-5265, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.ca/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.



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- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will be rejected by D-Link. Products shall be fully insured by the customer and shipped to D-Link Networks, Inc., 2525 Meadowvale Boulevard Mississauga, Ontario, L5N 5S2 Canada. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via Purolator Canada or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in Canada, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.
  - RMA phone number: 1-800-361-5265 Hours of Operation: Monday-Friday, 9:00AM – 9:00PM EST

### **What Is Not Covered:**

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

### **Disclaimer of Other Warranties:**

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

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**Limitation of Liability:**

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

**Governing Law:**

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

**Trademarks:**

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**CE Mark Warning:**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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**FCC Statement:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**FCC Caution:**

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Operations in the 5.15-5.25GHz / 5.470 ~ 5.725GHz band are restricted to indoor usage only.

**IMPORTANT NOTICE:****FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

If this device is going to be operated in 5.15 ~ 5.25GHz frequency range, then it is restricted in indoor environment only. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

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**ICC Notice:**

Operation is subject to the following two conditions:

- 1) This device may not cause interference and
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

**IMPORTANT NOTE:****IC Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

- (i) The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems;
- (ii) The maximum antenna gain (2dBi) permitted (for devices in the band 5725-5825 MHz) to comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate, as stated in section A9.2(3).

In addition, users should also be cautioned to take note that high-power radars are allocated as primary users (meaning they have priority) of the bands 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

**Règlement d'Industry Canada**

Les conditions de fonctionnement sont sujettes à deux conditions:

- (1) Ce périphérique ne doit pas causer d'interférence et.
- (2) Ce périphérique doit accepter toute interférence, y compris les interférences pouvant perturber le bon fonctionnement de ce périphérique.

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# Registration

Register your product online at [registration.dlink.com](http://registration.dlink.com)



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 2.0  
August 27, 2014