



**User Manual** 

## **AC1200 Wi-Fi Gigabit Router**

### **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	July 17, 2015	• Initial release

#### **Trademarks**

D-Link and the D-Link logo are trademarks or registered trademarks of D-Link Corporation or its subsidiaries in the United States or other countries. iPhone, iPad, and iPod touch are registered trademarks of Apple Inc. Android is a trademark of Google, Inc. All other company or product names mentioned herein are trademarks or registered trademarks of their respective companies.

Copyright © 2015 by D-Link Corporation.

All rights reserved. This publication may not be reproduced, in whole or in part, without prior expressed written permission from D-Link Corporation.

### **Power Usage**

This device is an Energy Related Product (ErP) with High Network Availability (HiNA), and automatically switches to a power-saving Network Standby mode within 1 minute of no packets being transmitted. It can also be turned off through a power switch to save energy when it is not needed.

Network Standby: 6.0643 watts Switched Off: 0.0578 watts

# **Table of Contents**

Pretace	İ
Manual Revisions	i
Trademarks	i
Package Contents	1
System Requirements	2
Introduction	3
Features	4
Hardware Overview	5
Connections	5
LEDs	6
Installation	7
Before you Begin	7
Wireless Installation Considerations	8
Manual Setup	9
Configuration	11
Setup Wizard	
QRS Mobile App	15
Configuration	19
Home	20
Internet	20
DIR-842	21
Connected Clients	22
Settings	23
Wizard	23

	Internet	23
	IPv6	32
	Wireless	47
	Guest Zone	49
	Network	50
Fea	atures	52
	QoS Engine	52
	Firewall Settings	53
	IPv4/IPv6 Rules	55
	Port Forwarding	56
	Virtual Server	57
	Website Filter	58
	Static Routes	59
	IPv6	60
	Dynamic DNS	61
	IPv6 Host	62
Ма	nagement	63
	Time & Schedule	63
	Time	63
	Schedule	64
	System Log	65
	Admin	
	System	67
	Upgrade	
	Statistics	

Connect a Wireless Client to your Router	70
WPS Button	70
Windows® 8	71
WPA/WPA2	71
Windows® 7	73
WPA/WPA2	73
WPS	76
Windows Vista®	80
WPA/WPA2	81
Windows® XP	83
WPA/WPA2	84
Troubleshooting	86
Wireless Basics	90
What is Wireless?	91
Tips	93
Wireless Modes	94
Networking Basics	95
Check your IP address	
Statically Assign an IP address	96
Technical Specifications	97
Regulatory Information	98

### **Package Contents**



DIR-842 AC1200 Wi-Fi Gigabit Router



**Ethernet Cable** 



**Power Adapter** 



WI-FI Configuration Note

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-842 will cause damage and void the warranty for this product.

# **System Requirements**

Network Requirements	<ul> <li>An Ethernet-based cable or DSL modem</li> <li>IEEE 802.11ac/n/g/b/a wireless clients</li> <li>10/100 Ethernet</li> </ul>
	Computer with the following:  • Windows®, Macintosh, or Linux-based operating system  • An installed Ethernet adapter
Web-based Configuration Utility Requirements	Browser Requirements: Internet Explorer 9 or higher Firefox 20 or higher Safari 5.1 or higher Chrome 25 or higher
	<b>Windows</b> * <b>Users:</b> Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.
QRS Mobile Requirements	• iPhone®/iPad®/iPod Touch® (iOS 6.0 or higher) • Android™ device (2.33 or higher)

### Introduction

The D-Link DIR-842 is an IEEE 802.11ac compliant device that delivers up to 3x faster speeds than 802.11n while staying backward compatible with 802.11n/g/b/a devices. Connect the DIR-842 to a cable or DSL modem and provide high-speed Internet access to multiple computers, game consoles, and media players. Create a secure wireless network to share photos, files, music, videos, printers, and network storage. Powered by the 802.11ac technology and equipped with four external antennas, this router provides superior wireless coverage for larger homes and offices, or for users running bandwidth-intensive applications. The DIR-842 also includes a 4-port 10/100/1000 Gigabit Ethernet switch that connects to wired devices for uninterrupted video calling and faster file transfers.

D-Link Intelligent QoS Technology helps to increase network efficiency by analyzing wired and wireless network traffic and prioritizing it in order of importance. This way, important network traffic such as VoIP and video streaming, take priority over background network traffic such as a file downloads and print tasks, ensuring you have optimal network performance.

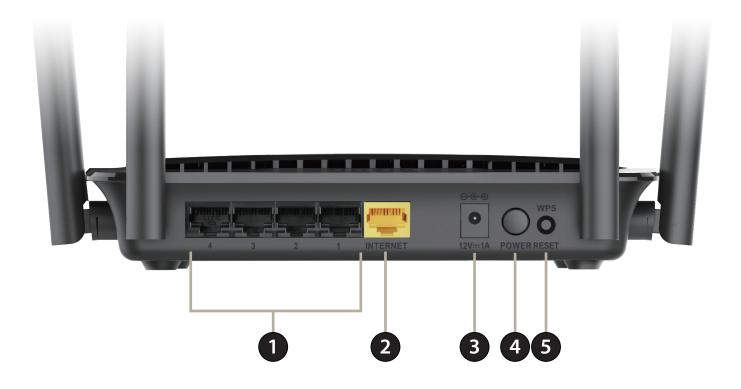
The DIR-842 supports the latest wireless security features to help prevent unauthorized access, be it from over a wireless network or the Internet. Support for WPA $^{\text{TM}}$  and WPA $^{\text{TM}}$  standards ensure that you will be able to use the best possible encryption regardless of your client devices. In addition, this router is equipped with a dual-active firewall (SPI and NAT) to prevent potential attacks over the Internet.

### **Features**

- **Ultimate Gigabit Wireless Networking** The DIR-842 provides up to 300 Mbps wireless connection in the 2.4 GHz band, and up to 867 Mbps wireless connection in the 5 GHz band with other 802.11ac and 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11ac wireless router gives you the freedom of wireless networking at speeds 3x faster than 802.11n.
- Compatible with 802.11n/g/b/a Devices The DIR-842 is still fully compatible with the IEEE 802.11a, IEEE 802.11b, 802.11g and 802.11n, so it can connect with existing networking devices as well as PCI, USB, and CardBus network adapters.
- **Advanced Firewall Features** The web-based user interface displays a number of advanced network management features including:
  - **Content Filtering** Easily applied content filtering based on MAC address, URL, and/or domain name.
  - **Filter Scheduling** These filters can be scheduled to be active on certain days or for a duration of hours or minutes.
  - **Secure Multiple/Concurrent Sessions** The DIR-842 can pass through VPN sessions. It supports multiple and concurrent IPSec and PPTP sessions, so users behind the DIR-842 can securely access corporate networks.
- **User-friendly Setup Wizard** Through its easy-to-use web-based user interface, the DIR-842 lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

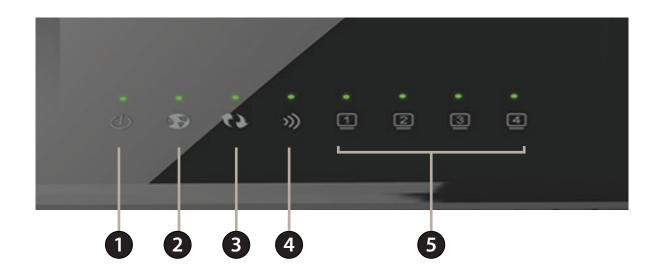
<sup>\*</sup> Maximum wireless signal rate derived from IEEE Standard 802.11a, 802.11g, 802.11n and 802.11ac specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead,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

# Hardware Overview Connections



1	LAN Ports (1-4)	Connect 10/100/1000 Ethernet devices such as computers, switches, storage (NAS) devices, and game consoles.
2	Internet Port	Using an Ethernet cable, connect your broadband modem to this port.
3	Power Receptor	Receptor for the supplied power adapter.
4	Power Button	Press the power button to power the DIR-842 on and off.
5	WPS / Reset Button	Short press to start the WPS process. Long press for 8 seconds to reset the router to default settings.

# Hardware Overview LEDs



1	Power LED	A solid light indicates that the device is powered on. The light will blink while the device is in recovery mode.
_		
2	Internet LED	A solid light indicates that an Internet link is established.
3	WPS LED	A solid light indicates that the WPS handshake has been completed. The light will blink while the WPS
	VVF 3 LLD	handshake is processing.
4	WLAN LED	A solid light indicates that the wireless is operating.
5	LAN LEDs 1-4	A solid light indicates a connection to an Ethernet-enabled computer on ports 1-4 respectively.

### 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 an attic or garage.

### Before you Begin

- Please configure the router with the computer that was last connected directly to your modem.
- You can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet port on the router, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet).
- If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoET, BroadJump, or EnterNet 300 from your computer or you will not be able to connect to the Internet.

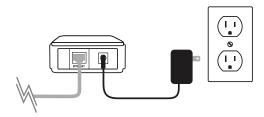
### **Wireless Installation Considerations**

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:

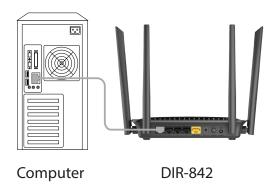
- 1. Keep the number of walls and ceilings between the D-Link router and other network devices to a minimum each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
- 2. Be aware of the direct line between 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 2.4 GHz 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 2.4 GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

### **Manual Setup**

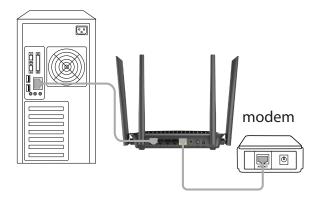
1. Turn off and unplug your cable or DSL broadband modem. This is required.



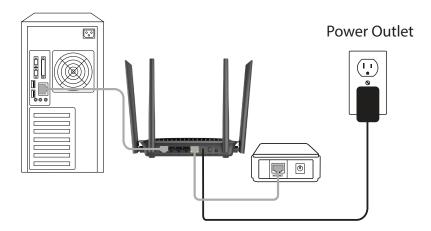
- 2. Position your router close to your modem and a computer. Place the router in an open area of your intended work area for better wireless coverage.
- 3. Unplug the Ethernet cable from your modem (or existing router if upgrading) that is connected to your computer. Plug it into the LAN port labeled 1 on the back of your router. The router is now connected to your computer.



4. Plug one end of the included blue Ethernet cable that came with your router into the yellow port labeled INTERNET on the back of the router. Plug the other end of this cable into the Ethernet port on your modem.



- 5. Reconnect the power adapter to your cable or DSL broadband modem and wait for two minutes.
- 6. Connect the supplied power adapter into the power port on the back of the router and then plug it into a power outlet or surge protector. Press the power button and verify that the power LED is lit. Allow 1 minute for the router to boot up.



7. If you are connecting to a broadband service, you may be online already and further configuration will be optional.

# Configuration

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

- D-Link Setup Wizard This wizard will launch when you log into the router for the first time. Refer to page 12.
- QRS Mobile App Use your smart device to configure your router. Refer to QRS Mobile App on page 15.
- Manual Setup Log into the router and manually configure your router (advanced users only). Refer to page 19.

### **Setup Wizard**

If this is your first time installing the router, open your web browser and enter **http://dlinkrouter.local./** in the address bar. Alternatively, enter the IP address of the router (default: **http://192.168.0.1**). Please refer to **Configuration on page 19**.

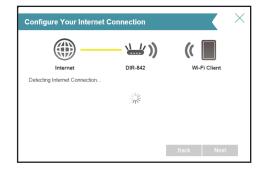


The wizard is designed to guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

Click **Next** to continue.

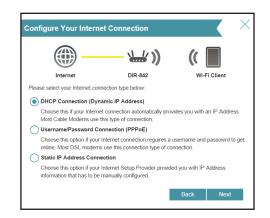


Please wait while your router detects your Internet connection type. After the router detects your Internet connection, you may need to enter your ISP information such as your username and password.



If the router does not detect a valid Internet connection, a list of connection types to choose from will be displayed.

Select your Internet connection type (this information can be obtained from your Internet service provider) and click **Next** to continue.

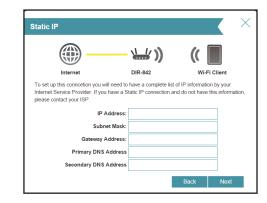


If the router detected or you selected **PPPoE**, enter your PPPoE username and password and click **Next** to continue.

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



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



For both the 2.4 GHz and 5 GHz segments, create a Wi-Fi network name (SSID) using up to 32 characters.

Create a Wi-Fi password (between 8-63 characters). Your wireless clients will need to have this passphrase or key entered to be able to connect to your wireless network.

Click **Next** to continue.

In order to secure the router, please enter a new password. You will be prompted for this password every time you want to use the router's web configuration utility. Click **Next** to continue.

Wi-Fi Settings

DIR-842 Wi-Fi Client

To setup a Wi-Fi network you will need to give your Wi-Fi network a name(SSID) and password.

2.4GHz Wi-Fi Network Name: dlink-E7DB

6GHz Wi-Fi Network Name: dlink-E7DB-5GHz

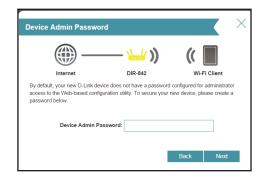
The Wi-Fi Network Name is up to 32 characters. You will need to join your Wi-Fi network using this Network Name (SSID).

2.4GHz Wi-Fi Password: E7DB1234

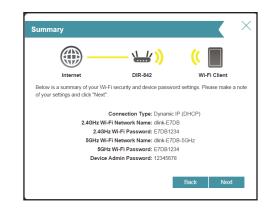
5GHz Wi-Fi Password: E7DB1234

The password must contain at least 8 characters. You will need to join your Wi-Fi network using this password.

Back Noxt



The Summary window will display your settings. Click **Next** if you are satisfied, or click **Back** to make changes to them.



### **QRS Mobile App**

QRS Mobile app allows you to install and configure your router from your mobile device.

**Note:** The screenshots may be different depending on your mobile device's OS version.

#### Step 1

Search for the free **QRS Mobile** App on the iTunes Store or Google Play.









#### 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 Wi-Fi name (SSID) as listed on the supplied info card. Select and then enter your Wi-Fi password.



#### Step 3

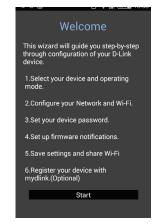
Once you connect to the router, launch the QRS Mobile app from the Home screen of your device.

**Note:** The following steps show the Android interface of the QRS Mobile app. If you are using an iPhone, iPad, or iPod touch, the appearance may be different to that of the screenshots, but the process is the same.



#### Step 4

You will see the welcome screen. Tap **Start** to proceed, then enter your device password and tap **Log In**. Tap **Next** once the Operation Mode screen appears.





#### Step 5

At this point, please ensure that your the router is connected to a modem. Plug one end of the provided Ethernet cable into your DSL or cable modem, and plug the other end into the port marked INTERNET on the DIR-842. Tap **Next** to automatically detect your Internet connection and proceed to the next step.



#### Step 6

Firstly, enter a network name (SSID) of your choice, or leave it unchanged to accept the default SSID.

Secondly, choose a Wi-Fi password of at least 8 characters. Any device trying to connect to the router wirelessly will need to enter this password the first time it connects.

Finally, tap **Next** to proceed.

You will be asked to enter a SSID and password for your 5 GHz network. Repeat step 6 and tap **Next** to proceed.



#### Step 7

Enter the administrator password of your choice. Unlike the Wi-Fi password, this password is only required when you need to configure the router. See **Configuration on page 19** for details of when this password is used. Tap **Next** to proceed.



#### Step 8

You will be presented with a summary of your chosen settings. Tap **Save** to complete the setup and wait for your device to reboot.



Congratulations, your device has been successfully configured! You can share this information by tapping **Share By E-mail**, or tap **Finish** to exit the app.



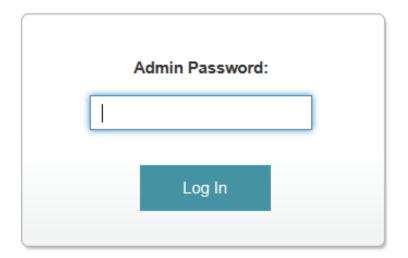
# Configuration

To access the configuration utility, open a web-browser such as Internet Explorer and enter http://dlinkrouter.local./

Windows and Mac users may also connect by typing the IP address of the router (by default this is **http://192.168.0.1**) in the address bar.

Enter your password. If you previously followed the setup wizard (see **Setup Wizard** on page 12, please use the admin password you entered during the wizard. Otherwise, leave the password blank. Click **Log In** to proceed.

**Note:** If you cannot remember your password and cannot log in, press and hold the reset button for 10 seconds (see **Connections** on page 5) to restore the router to its default settings.



The router's home page will open displaying its current connection status.

The bar at the top of the page has quick access to Settings and Management functions. You may quickly jump back Home at any time.

**Note:** The system will automatically log out after a period of inactivity.



### Home

The Home page displays the current status of the router in the form of an interactive diagram. You can click each icon to display information about each part of the network at the bottom of the screen. The menu bar at the top of the page will allow you to quickly navigate to other pages.

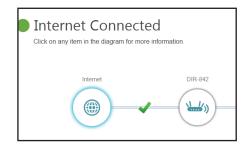
#### Internet

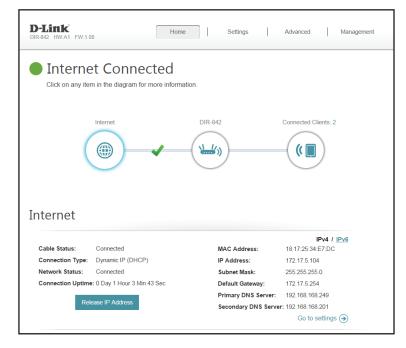
The Home page displays whether or not the router is currently connected to the Internet. If it is disconnected, click Click to repair to bring up the setup wizard (see **Setup Wizard** on page 12).

To bring up more details about your Internet connection, click on the **Internet** icon. Click **IPv4** or **IPv6** to see details of the IPv4 connection and IPv6 connection respectively.

Click **Release** to disconnect from the Internet. If you do this and wish to reconnect, click **Renew**.

To reconfigure the Internet settings, refer to **Internet** on page 23.





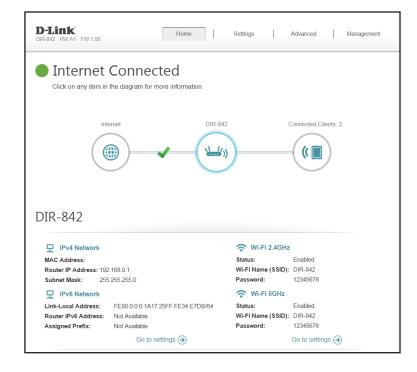
#### **DIR-842**

Click on the **DIR-842** icon to view details about the router and its wireless settings.

Here you can see the router's current wireless settings, as well as its MAC address and IPv4/IPv6 addresses.

To reconfigure the network settings, either click **Go to settings** on the lower left, or click **Settings** (at the top of the page) and then **Network** on the menu that appears. Refer to **Network** on page 50.

To reconfigure the wireless settings, either click **Go to settings**, on the lower right, or click **Settings** (at the top of the page) and then **Wireless** on the menu that appears. Refer to **Wireless** on page 47.



#### **Connected Clients**

Click on the **Connected Clients** icon to view details about the router and its wireless settings.

On this page you can see all the clients currently connected to the router, and their IP addresses.

To edit each client's settings, click the pencil icon on the client you want to edit.

Name: Enter a custom name for this client.

**Vendor:** Displays the vendor of the device.

**IP Address:** Enter a specific IP address for this client.

**Reserve IP:** Enable to reserve this IP address for this client.

Parental If enabled, parental control will completely disable all network **Control:** activity on the client according to a custom schedule. A drop-down menu will appear; select the time schedule during which parental control will take effect. The schedule may be set to Always OFF to indefinitely deny network access to the client, or you can create your own schedules in the **Schedules** section (refer to **Time & Schedule** on page 63)

Click Save when you are done.





### Settings Wizard

In the Settings menu on the bar on the top of the page, click **Wizard** to open the setup wizard. This is the same wizard that appears when you start the router for the first time. Refer to **Setup Wizard** on page 12 for details.

#### Internet

In the Settings menu on the bar on the top of the page, click Internet to see the Internet configuration options.

**My Internet** Choose your Internet connection type from the drop-down menu. **Connection Is:** You will be presented with the appropriate options for your connection type. Click **Advanced Settings...** to expand the list and see all of the options.

DLink
DIR-842 HW. FW1.00

Internet

Use this section to configure your Internet Connection type. There are several connection types to choose from Static IP, DHCP, PPDE, PPTP, L2TP and DS-Life. If you are unsure of your connection method, please contact your internet service provider. Note: If using the PPDE option, you will need to remove or disable any PPPDE client software on your computers. Click here for help.

Settings >> Internet

My Internet Connection is:

Dynamic IP (DHCP)

For Dynamic IP (DHCP) refer to **Dynamic IP (DCHP)** on page 24

For Static IP refer to **Static IP** on page 25

For PPPoE refer to **PPPoE** on page 26

For PPTP refer to **PPTP** on page 27

For L2TP refer to **L2TP** on page 29

For DS-Lite refer to **DS-Lite** on page 31

To configure an IPv6 connection, click the IPv6 link. Refer to **IPv6** on page 60.

#### **Dynamic IP (DCHP)**

Select **Dynamic IP (DHCP)** to obtain IP address information automatically from your Internet Service Provider (ISP). Select this option if your ISP does not give you an IP address to use.

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

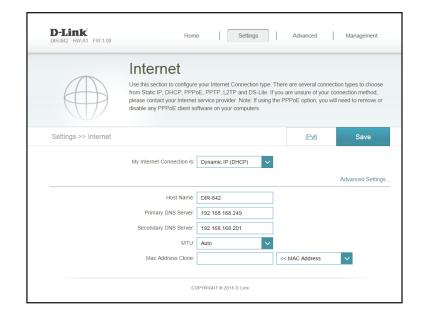
**Primary DNS** Enter the primary DNS server IP address assigned by your ISP. This **Server:** address is usually obtained automatically from your ISP.

**Secondary DNS** Enter the secondary DNS server IP address assigned by your ISP. This **Server:** address is usually obtained automatically from your ISP.

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

MAC Address The default MAC address is set to the physical MAC address of the Clone: router. You can use the drop-down menu to replace the Internet port's MAC address with the MAC address of a connected client.

Click Save when you are done.



#### **Static IP**

Select Static IP if your IP information is provided by your Internet service provider (ISP).

IP Address: Enter the IP address provided by your ISP.

**Subnet Mask:** Enter the subnet mask provided by your ISP.

**Default** Enter the default gateway address provided by your ISP.

**Gateway:** 

**Primary DNS** Enter the primary DNS server IP address assigned by your ISP.

**Server:** 

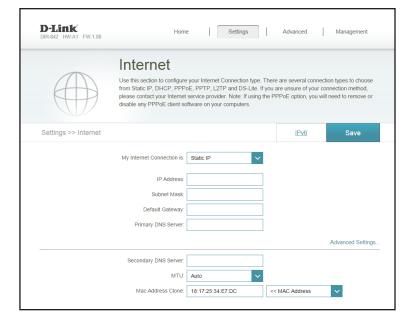
**Secondary DNS** Enter the secondary DNS server IP address assigned by your ISP.

Server:

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

The default MAC address is set to the physical MAC address of the router. You can use drop-down menu to replace the Internet port's MAC address with the MAC address of a connected client.

Click **Save** when you are done.



#### **PPPoE**

Select **PPPoE** if your Internet connection requires you to enter a username and password. This information is provided by your Internet Service Provider (ISP).

**Username:** Enter the username provided by your ISP.

**Password:** Enter the password provided by your ISP.

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

**Mode:** 

Maximum Idle Enter a maximum idle time during which the Internet connection is

Time: maintained during inactivity. To disable this feature, enable Auto-

reconnect.

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 provided by your ISP (Static IP only).

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

**Primary DNS** Enter the primary DNS server IP address assigned by your ISP.

Server:

**Secondary DNS** Enter the secondary DNS server IP address assigned by your ISP.

**Server:** 

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

Click **Save** when you are done.



#### **PPTP**

Choose **PPTP** (Point-to-Point-Tunneling Protocol ) if your Internet Service Provider (ISP) uses a PPTP connection. Your ISP will provide you with a username and password.

**PPTP Server IP** Enter the PPTP server IP address provided by your ISP. Address:

**Username:** Enter the username provided by your ISP.

Password: Enter the password provided by your ISP.

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

Mode:

Maximum Idle Enter a maximum idle time during which the Internet connection

Time: is maintained during inactivity. To disable this feature, enable Auto-

reconnect.

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**.

**PPTP IP** Enter the IP address provided by your ISP (Static IP only).

**Address:** 

**PPTP Subnet** Enter the subnet mask provided by your ISP (Static IP only).

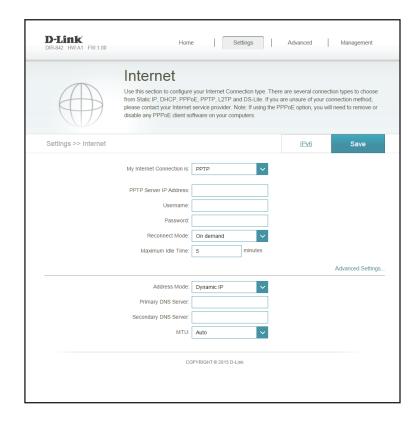
Mask:

**PPTP Gateway** Enter the gateway IP address provided by your ISP (Static IP only).

**IP Address:** 

**Primary DNS** Enter the primary DNS server IP address assigned by your ISP.

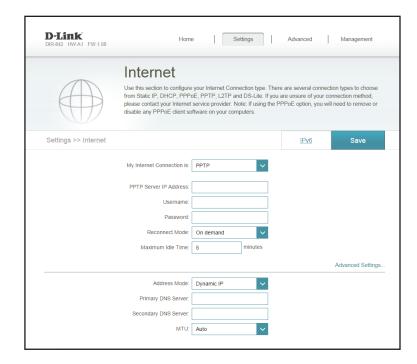
Server:



**Secondary DNS** Enter the secondary DNS server IP address assigned by your ISP. **Server:** 

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

Click **Save** when you are done.



#### L2TP

Choose **L2TP** (Layer 2 Tunneling Protocol) if your Internet Service Provider (ISP) uses a L2TP connection. Your ISP will provide you with a username and password.

**L2TP Server IP** Enter the L2TP server IP address provided by your ISP. **Address:** 

**Username:** Enter the username provided by your ISP.

**Password:** Enter the password provided by your ISP.

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

**Mode:** 

Maximum Idle Enter a maximum idle time during which the Internet connection

Time: is maintained during inactivity. To disable this feature, enable Auto-

reconnect.

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**.

**L2TP IP** Enter the IP address provided by your ISP (Static IP only).

**Address:** 

**L2TP Subnet** Enter the subnet mask provided by your ISP (Static IP only).

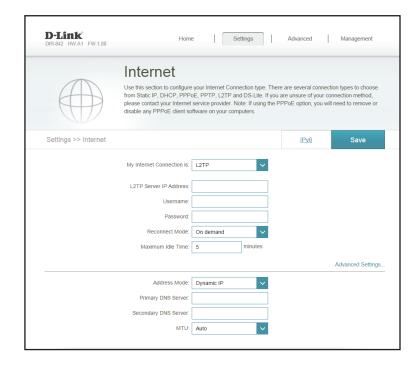
Mask:

**L2TP Gateway** Enter the gateway IP address provided by your ISP (Static IP only).

**IP Address:** 

**Primary DNS** Enter the primary DNS server IP address assigned by your ISP.

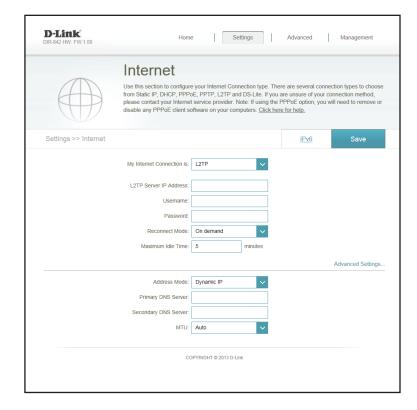
Server:



**Secondary DNS** Enter the secondary DNS server IP address assigned by your ISP. **Server:** 

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

Click **Save** when you are done.



#### **DS-Lite**

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

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

**AFTR IPv6** If you selected Manual Configuration above, enter the AFTR IPv6 **Address:** address here.

**B4 IPv6** Enter the B4 IPv4 address value here.

**Address:** 

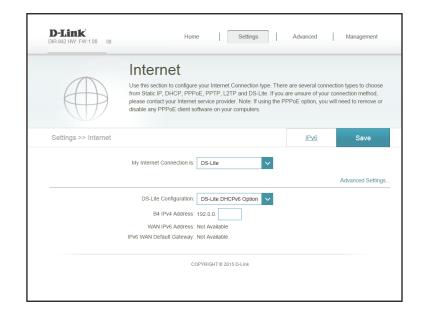
WAN IPv6 Once connected, the WAN IPv6 address will be displayed here.

**Address:** 

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

**Gateway:** 

Click **Save** when you are done.



#### IPv<sub>6</sub>

To configure an IPv6 connection, click the IPv6 link. To return to the IPv4 settings, click IPv4.

My Internet Choose your IPv6 connection type from the drop-down menu. You Connection Is: will be presented with the appropriate options for your connection type. Click Advanced Settings... to expand the list and see all of the options.

For **Auto Detection** refer to **Auto Detection** on page 33.

For **Static IPv6** refer to **Static IPv6** on page 35.

For **Auto Configuration (SLAAC/DHCPv6)** refer to **Auto Configuration (SLAAC/DHCPv6)** on page 37.

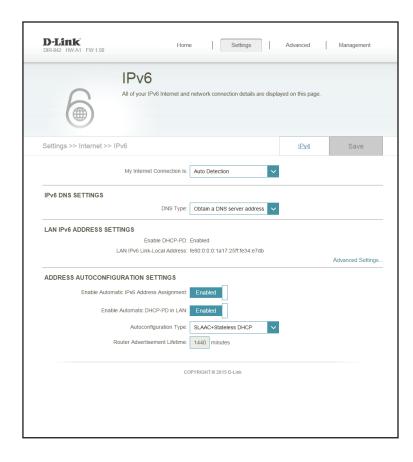
For **PPPoE** refer to **PPPoE** on page 39.

For **IPv6** in **IPv4** Tunnel refer to **IPv6** in **IPv4** Tunnel on page 41.

For **6 to 4** refer to **6 to 4** on page 43.

For **6rd** refer to **6rd** on page 44

For **Local Connectivity Only** refer to **Local Connectivity Only** on page 46.



#### **Auto Detection**

**Auto Detection** mode (not Auto-Configuration mode) automatically detects IPv6 the connection method used by your Internet Service Provider (ISP). If your ISP provides an IPv6 service and Auto Detection failed to detect it, the user must manually select another IPv6 connection type (such as PPPoE, Auto Configuration, 6rd, DS-Lite etc.)

**DNS Type:** Select either Obtain DNS server address automatically or Use the following DNS address.

**Primary DNS** If you selected Use the following DNS address above, enter the **Server:** primary DNS server address.

**Secondary DNS** If you selected Use the following DNS address above, enter the **Server**: secondary DNS server address.

**Enable DHCP**- Enable or disable prefix delegation services. **PD**:

LAN IPv6 If you disabled DHCP-PD, enter the LAN (local) IPv6 address for the Address: router.

LAN IPv6 Link- Displays the router's LAN link-local address.

**Local Address:** 

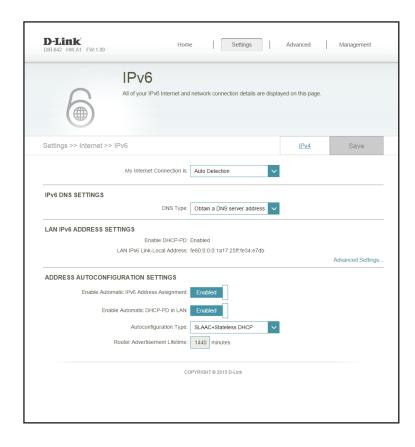
**Enable** Enable or disable the Automatic IPv6 Address Assignment feature.

Automatic IPv6 Address Assignment:

**Enable** Enable or disable DHCP-PD for other IPv6 routers connected to the **Automatic** LAN interface.

DHCP-PD in LAN:

Note: This feature requires a smaller subnet prefix than /64 (i.e. allowing for a larger address allocation), such as /63. Contact your ISP for more information.



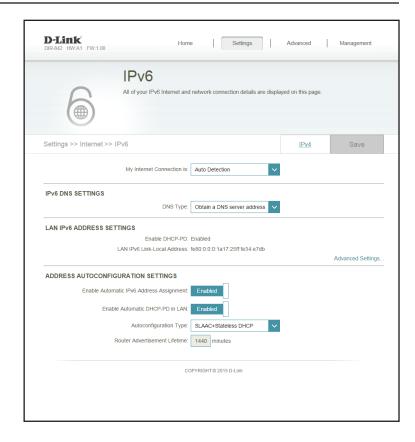
**Autoconfiguration** Select Stateful (DHCPv6), SLAAC + RDNSS or SLAAC + Stateless **Type:** DHCPv6.

Router Enter the IPv6 address lifetime (in minutes).

Advertisement

Lifetime:

Click **Save** when you are done.



### Static IPv6

Select Static IP if your IPv6 information is provided by your Internet service provider (ISP) and they request that you use a static IP.

Use Link-Local Enable or disable a link-local address.
Address:

IPv6 Address: If you disabled Use Link-Local Address, enter the address supplied by your ISP.

Subnet Prefix If you disabled Use Link-Local Address, enter the subnet prefix length Length: supplied by your ISP.

Default Enter the default gateway for your IPv6 connection.
Gateway:

**Primary DNS** Enter the primary DNS server address.

Server:

**Secondary DNS** Enter the secondary DNS server address.

Server:

LAN IPv6 Enter the LAN (local) IPv6 address for the router.

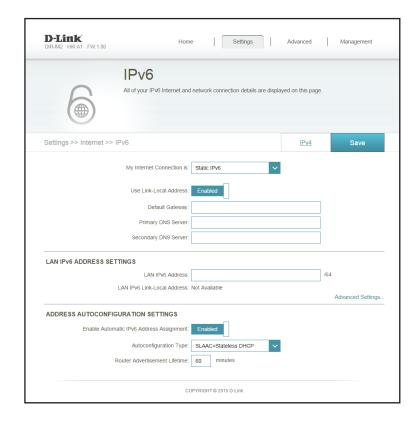
**Address:** 

LAN IPv6 Link- Displays the router's LAN link-local address.

**Local Address:** 

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

Automatic IPv6 Address Assignment:



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

Router Enter the IPv6 address lifetime (in minutes).

Advertisement

Lifetime:

Click **Save** when you are done.



## **Auto Configuration (SLAAC/DHCPv6)**

This is a connection method where the ISP assigns your IPv6 address when your router requests one from the ISP's server. Some ISPs require you to make some settings on your side before your router can connect to the IPv6 Internet.

**DNS Type:** Select either Obtain DNS server address automatically or Use the following DNS address.

**Primary DNS** If you selected Use the following DNS address above, enter the **Server:** primary DNS server address.

**Secondary DNS** If you selected Use the following DNS address above, enter the **Server**: secondary DNS server address.

**Enable DHCP-** Enable or disable prefix delegation services. **PD:** 

LAN IPv6 If you disabled DHCP-PD, enter the LAN (local) IPv6 address for the Address: router.

LAN IPv6 Link- Displays the router's LAN link-local address. Local Address:

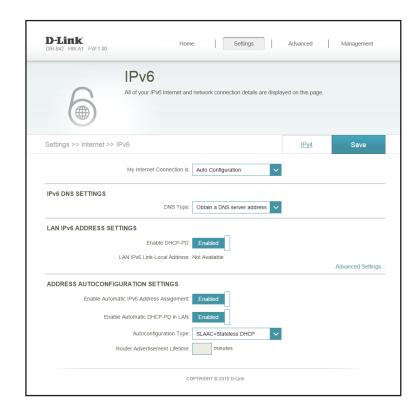
**Enable** Enable or disable the Automatic IPv6 Address Assignment feature.

Automatic IPv6 Address Assignment:

**Enable** Enable or disable DHCP-PD for other IPv6 routers connected to the **Automatic** LAN interface.

DHCP-PD in LAN:

Note: This feature requires a smaller subnet prefix than /64 (i.e. allowing for a larger address allocation), such as /63. Contact your ISP for more information.



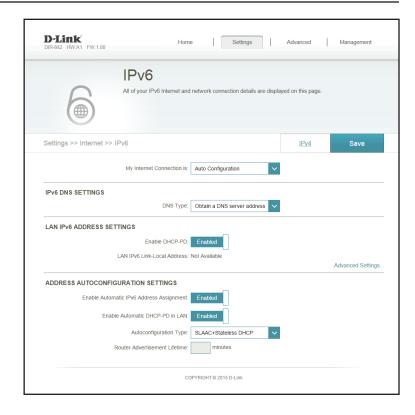
**Autoconfiguration** Select Stateful (DHCPv6), SLAAC + RDNSS or SLAAC + Stateless **Type:** DHCPv6.

Router Enter the IPv6 address lifetime (in minutes).

Advertisement

Lifetime:

Click **Save** when you are done.



## **PPPoE**

Select PPPoE if your Internet connection requires you to enter a username and password. This information is provided by your Internet service provider (ISP).

**PPPoE Session:** Choose **Share with IPv4** to re-use your IPv4 PPPoE username and password, or **Create a new session**.

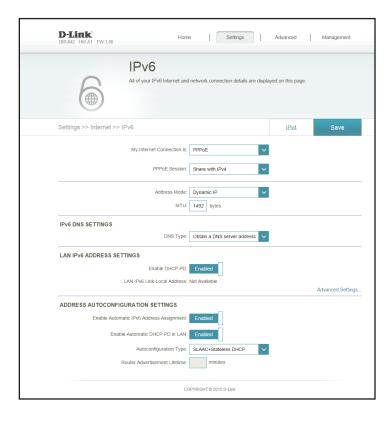
**Username:** If you selected **Create a new session** above, enter the PPPoE username provided by your ISP here.

**Password:** If you selected **Create a new session** above, enter the PPPoE password provided by your ISP here.

**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**.

MTU: Maximum Transmission Unit - you may need to change the MTU for optimal performance with your ISP.

**DNS Type:** Select either **Obtain DNS server address automatically** or **Use the following DNS address**.



**Enable DHCP-** Enable DHCP-PD for LAN IPv6.

PD:

LAN IPv6 Link- Displays the router's LAN link-local address.

**Local Address:** 

**Enable** Enable automatic IPv6 address assignment.

Automatic IPv6 Address Assignment:

**Enable** Enable or disable DHCP-PD for other IPv6 routers connected to the

**Automatic** LAN interface.

DHCP-PD in LAN:

**Note:** This feature requires a smaller subnet prefix than /64 (i.e. allowing for a larger address allocation), such as /63. Contact your ISP for more information.

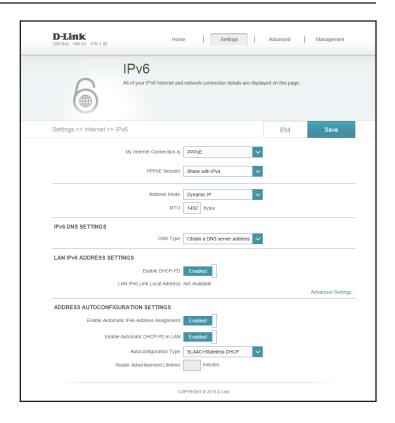
Auto Select SLAAC + RDNSS or SLAAC + Stateless DHCP, Stateful Configuration (DHCPv6).

Type:

Router Enter the IPv6 address lifetime (in minutes).

Advertisement Lifetime:

Click **Save** when you are done.



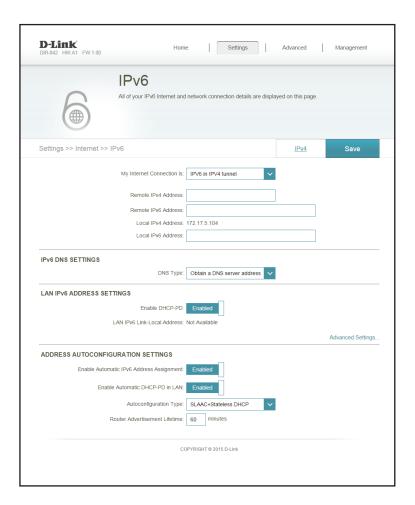
Address: router.

### **IPv6 in IPv4 Tunnel**

The user can configure the IPv6 connection to run in IPv4 Tunnel mode. IPv6 over IPv4 tunneling encapsulates IPv6 packets in IPv4 packets so that IPv6 packets can be sent over an IPv4 infrastructure.

Remote IPv4 Enter the IPv4 remote address you will use. **Address:** Remote IPv6 Enter the IPv6 remote address you will use. **Address:** Local IPv4 Enter the IPv4 local address you will use. **Address:** Local IPv6 Enter the IPv6 local address you will use. **Address: Subnet Prefix** Enter the subnet prefix length supplied by your ISP. Length: DNS Type: Select either Obtain DNS server address automatically or Use the following DNS address. Primary DNS If you selected Use the following DNS address above, enter the **Server:** primary DNS server address. Secondary DNS If you selected Use the following DNS address above, enter the **Server:** secondary DNS server address. **Enable DHCP**- Enable or disable prefix delegation services. PD:

LAN IPv6 If you disabled DHCP-PD, enter the LAN (local) IPv6 address for the



LAN IPv6 Link- Displays the router's LAN link-local address.

**Local Address:** 

**Enable** Enable or disable the Automatic IPv6 Address Assignment feature.

Automatic IPv6 Address Assignment:

**Enable** Enable or disable DHCP-PD for other IPv6 routers connected to the

**Automatic** LAN interface.

DHCP-PD in LAN:

**Note:** This feature requires a smaller subnet prefix than /64 (i.e. allowing for a larger address allocation), such as /63. Contact your ISP for more information.

Auto Select Stateful (DHCPv6), SLAAC + RDNSS or SLAAC + Stateless

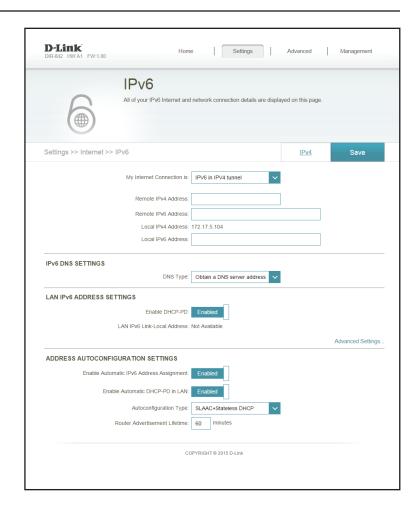
Configuration DHCPv6.

Type:

Router Enter the IPv6 address lifetime (in minutes).

Advertisement Lifetime:

Click **Save** when you are done.



## 6 to 4

In this section the user can configure the IPv6 6 to 4 connection settings. 6to 4 is an IPv6 address assignment and automatic tunneling technology that is used to provide unicast IPv6 connectivity between IPv6 sites and hosts across the IPv4 Internet.

6 to 4 Address: Displays the 6 to 4 address.

6 to 4 Relay: Enter the 6 to 4 relay supplied by your ISP.

**Primary DNS** Enter the primary DNS server address.

Server:

**Secondary DNS** Enter the secondary DNS server address.

**Server:** 

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

LAN IPv6 Link- Displays the router's LAN link-local address.

**Local Address:** 

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

IPv6 Address Assignment:

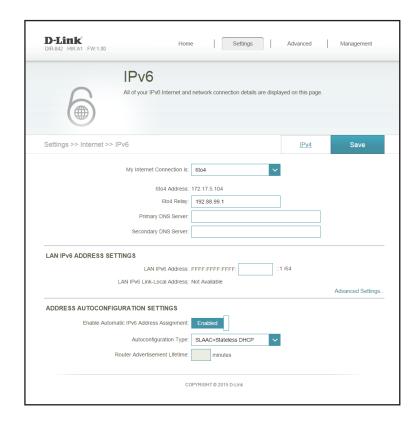
Autoconfiguration Select Stateful (DHCPv6), SLAAC + RDNSS or SLAAC + Stateless

Type: DHCPv6.

Router Enter the IPv6 address lifetime (in minutes).

Advertisement Lifetime:

Click **Save** when you are done.



#### 6rd

In this section the user can configure the IPv6 6rd connection settings.

Assign IPv6 Currently unsupported.

**Prefix:** 

**Primary DNS** Enter the primary DNS server address.

**Server:** 

**Secondary DNS** Enter the secondary DNS server address.

**Server:** 

Enable Hub and Enable if you want to minimize the number of routes to the

**Spoke Mode:** destination by using a hub and spoke method of networking.

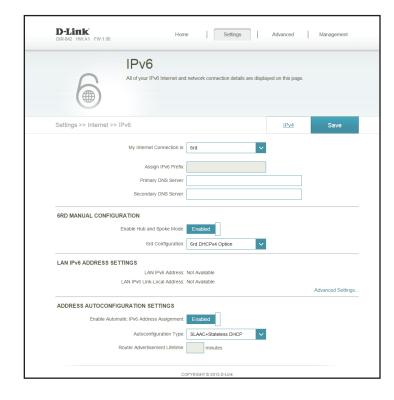
6rd Choose the 6rd DHCPv4 Option to automatically discover and

Configuration: populate the data values, or Manual Configuration to enter the

settings yourself.

LAN IPv6 Link- Displays the router's LAN link-local address.

**Local Address:** 



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

Automatic IPv6 Address Assignment:

Auto Select Stateful (DHCPv6), SLAAC + RDNSS or SLAAC + Stateless

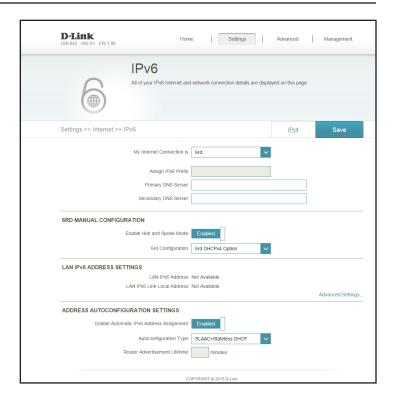
Configuration DHCPv6.

Type:

Router Enter the IPv6 address lifetime (in minutes).

Advertisement Lifetime:

Click **Save** when you are done.



## **Local Connectivity Only**

**Local Connectivity Only** allows you to set up an IPv6 connection that will not connect to the Internet.

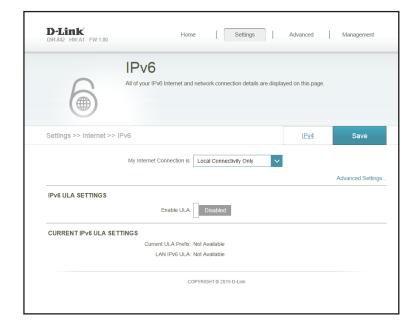
**Enable ULA:** Click here to enable Unique Local IPv6 Unicast Addresses settings.

**Use Default** Checking this box will automatically configure the ULA prefix for **ULA Prefix:** the default setting.

**Current IPv6** This section will display the current settings for your IPv6 ULA. **ULA Settings:** 

LAN IPv6 This section will display the current settings for your LAN IPv6 ULA. ULA:

Click **Save** when you are done.



# Wireless

In the Settings menu on the bar on the top of the page, click **Wireless** to see the wireless configuration options. To configure the router's guest zone, click the **Guest Zone** link. Refer to **Guest Zone** on page 49 for details. Click **Advanced Settings...** to expand the list and see all of the options. The following options apply to both the 2.4 GHz and the 5 GHz wireless frequency bands:

Status: Enable or disable the wireless frequency band.

**Wi-Fi Name** Create a name for your wireless network using up to 32 characters. (SSID):

**Password:** Create a password to use for wireless security. Wireless clients will need to enter this password to successfully connect to the network.

Security Mode: Choose None, WEP, or WPA/WPA2-(Personal) (recommended).

**802.11 Mode:** Select the desired wireless networking standards to use. The available options will depend on the wireless frequency band, as well as the

currently selected security mode.

Wi-Fi Channel: Select the desired channel. The default is Auto (recommended).

**Transmission** Select the desired wireless transmission power.

Power:

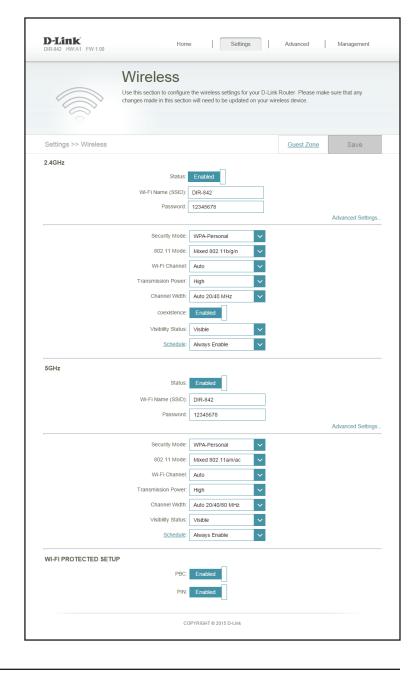
Channel Width: A higher channel width allows for faster data transmission, at the

possible expense of wireless coverage and compatibility with older wireless clients. Select the optimum channel width for your wireless

network from the drop-down menu.

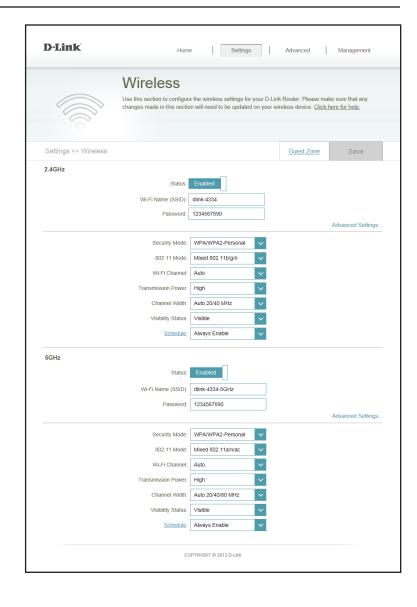
Visibility Status: The default setting is Visible. Select Invisible if you do not want to

broadcast the SSID of your wireless network.



Schedule: Use the drop-down menu to select the time schedule that the Wi-Fi network will be active during. The schedule may be set to **Always**Enable, or you can create your own schedules in the **Schedules** section (refer to **Schedule** on page 64).

Click **Save** when you are done.



#### **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 2.4 GHz and 5 GHz wireless bands.

In the Settings menu on the bar on the top of the page, click **Wireless**, then click the **Guest Zone** link. Click **Advanced Settings...** to expand the list and see all of the options. The following options apply to both the 2.4 GHz and the 5 GHz wireless frequency bands:

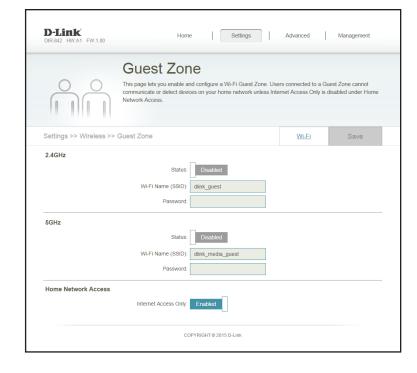
**Status:** Enable or disable the guest zone for each wireless frequency band.

**Wi-Fi Name** Enter a wireless network name (SSID) that is different from your main (SSID): wireless network.

**Password:** Create a password to use for wireless security. Wireless clients will need to enter this password to successfully connect to the guest zone.

Internet Access Enabling this option will confine connectivity to the Internet,
Only: disallowing guests from accessing other local network devices and
any other service provided by the router itself.

Click **Save** when you are done.



## **Network**

This section will allow you to change the local network settings of the router and to configure the DHCP settings. In the Settings menu on the bar on the top of the page, click **Network**. Click **Advanced Settings...** to expand the list and see all of the options.

LAN 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**, 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 of the router. The default subnet mask is **255.255.25.0**.

Management The default address to access the router's configuration is Link: http://dlinkrouter.local./ Here, you can replace dlinkrouter with a name of your choice.

**Local Domain** Enter the domain name (optional).

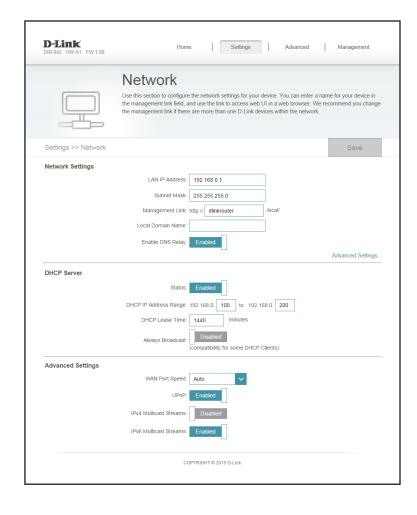
Name:

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

Status: Enable or disable the DHCP server.

**DHCP IP** Enter the starting and ending IP addresses for the DHCP server's IP **Address Range:** 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** Enter the length of time for the IP address lease in minutes. **Time:** 

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

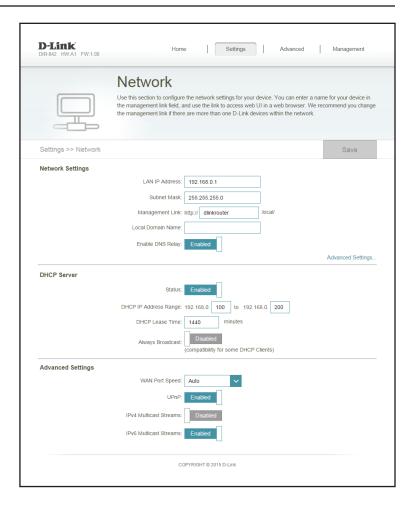
WAN Port You may set the port speed of the Internet port to 10 Mbps, Speed: 100 Mbps or Auto (recommended).

**UPnP:** Enable or disable Universal Plug and Play (UPnP). UPnP provides compatibility with networking equipment, software and peripherals.

IPv4 Multicast Enable to allow IPv4 multicast traffic to pass through the router from Stream: the Internet.

IPv6 Multicast Enable to allow IPv6 multicast traffic to pass through the router from Stream: the Internet.

Click **Save** when you are done.



# **Features QoS Engine**

This section will allow you to prioritize particular clients over others, so that those clients receive higher bandwidth. For example, if one client is streaming a movie and another is downloading a non-urgent file, you might wish to assign the former device a higher priority than the latter so that the movie streaming is not disrupted by the traffic of the other devices on the network.

In the Features menu on the bar on the top of the page, click **QoS Engine**.

Under All Devices, you will see device cards representing each connected client. If some are off-screen, you can use the < and > buttons to scroll through the cards.

A maximum of **one** device can be assigned **Highest** priority.

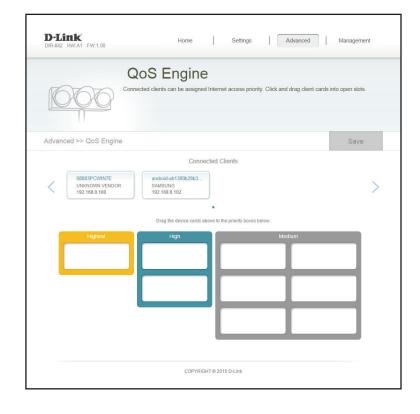
A maximum of **two** devices can be assigned **High** priority.

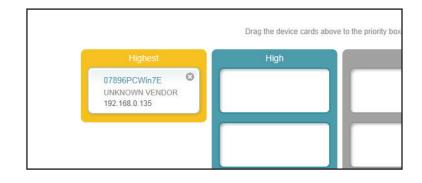
A maximum of **eight** devices can be assigned **Medium** priority.

If no devices are explicitly assigned a priority, they will all be treated with equal priority. If some devices are not assigned a priority and others are, the unassigned devices will be treated with the lowest priority.

To assign a priority level to a device, drag the device card from the All Devices list over an empty slot and release the mouse button. The card will remain in the slot. If you want to remove a priority assignment from a device and return it to the All Devices list, click the cross icon in the top right of the device card.

Click **Save** when you are done.





# **Firewall Settings**

The router's firewall protects your network from malicious attacks over the Internet. In the Features menu on the bar on the top of the page, click **Firewall Settings**. Click **Advanced Settings...** to expand the list and see all of the options.

**Enable DMZ:** Enable or disable Demilitarized Zone (DMZ). This completely exposes the client to threats over the Internet, and is not recommended in ordinary situations.

**DMZ IP** If you enabled DMZ, enter the IP address of the client you wish to **Address:** expose, or use the drop-down menu to quickly select it.

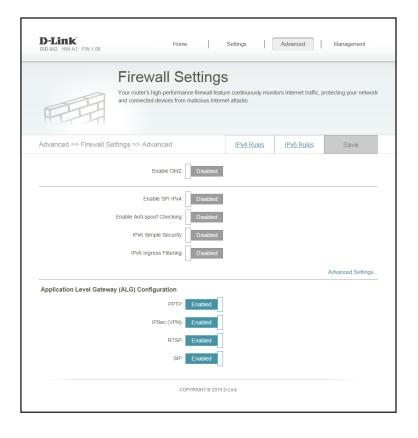
**Enable SPI IPv4:** Enabling Stateful Packet Inspection (SPI) helps to prevent cyber attacks by validating that the traffic passing through the session conforms to the protocol.

**Enable** Enable this feature to protect your network from certain kinds of **Anti-Spoof** "spoofing" attacks.

**Checking:** 

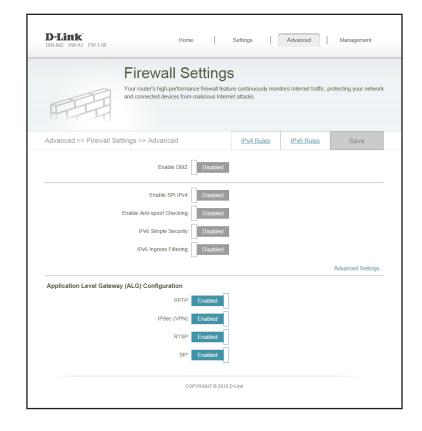
**IPv6 Simple** Enable or disable IPv6 simple security. **Security:** 

**IPv6 Ingress** Enable or disable IPv6 ingress filtering. **Filtering:** 



- **PPTP:** Allows multiple machines on the LAN to connect to their corporate network using the 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 Application Level Gateway (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.
  - RTSP: Allows applications that uses Real Time Streaming Protocol (RTSP) to receive streaming media from the Internet.
    - 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.

Click **Save** when you are done.



#### IPv4/IPv6 Rules

The IPv4/IPv6 Rules section is an advanced option that lets you configure what kind of traffic is allowed to pass through the network. To configure the IPv4 rules, from the Firewall Settings page click **IPv4 Rules**. To configure IPv6 rules, from the Firewall Settings page click **IPv6 Rules**. To return to the main Firewall Settings page, click **Advanced**.

To begin, use the drop-down menu to select whether you want to **ALLOW** or **DENY** the rules you create. You can also choose to turn filtering **OFF**.

If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Rules** button. Click **Save** when you are done. If you edit or create a rule, the following options will appear:

Name: Enter a name for the rule.

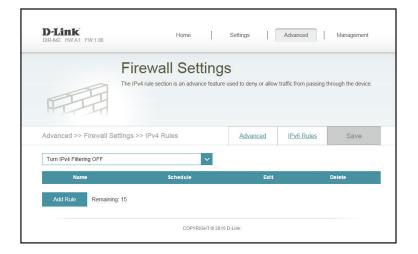
**Source IP** Enter the source IP address range that the rule will apply to, and using **Address Range:** the drop-down menu, specify whether it is a **WAN** or **LAN** IP address.

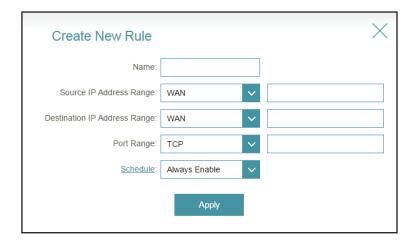
**Destination IP** Enter the destination IP address range that the rule will apply to, and **Address Range:** using the drop-down menu, specify whether it is a **WAN** or **LAN** IP address.

**Port Range:** Select the protocol of the traffic to allow or deny (**Any**, **TCP**, or **UDP**) and then enter the range of ports that the rule will apply to.

Schedule: Use the drop-down menu to select the time schedule that the rule will be enabled on. The schedule may be set to **Always Enable**, or you can create your own schedules in the **Schedules** section (refer to **Schedule** on page 64).

Click **Apply** when you are done.

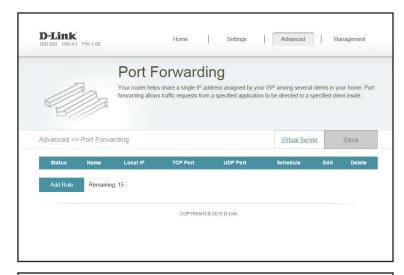




# **Port Forwarding**

Port forwarding allows you to specify a port or range of ports to open for specific devices on the network. This might be necessary for certain applications to connect through the router. In the Features menu on the bar on the top of the page, click **Port Forwarding**.

If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Rules** button. Click **Save** when you are done. If you edit or create a rule, the following options will appear:



Name: Enter a name for the rule.

**Local IP:** Enter the IP address of the computer on your local network that you want to allow the incoming service to. Alternatively, select the device from the drop-down menu.

**TCP Port:** Enter the TCP ports that you want to open. You can enter a single port or a range of ports. Separate ports with a comma (for example: 24, 1009, 3000-4000).

**UDP Port:** Enter the UDP ports that you want to open. You can enter a single port or a range of ports. Separate ports with a comma (for example: 24, 1009, 3000-4000).

**Schedule:** Use the drop-down menu to select the time schedule that the rule will be enabled on. The schedule may be set to **Always Enable**, or you can create your own schedules in the **Schedules** section (refer to **Schedule** on page 64).

Click **Apply** when you are done.



## **Virtual Server**

The virtual server allows you to specify a single public port on your router for redirection to an internal LAN IP Address and Private LAN port. To configure the virtual server, from the Port Forwarding page click **Virtual Server**. To return to the main Port Forwarding page, click **Port Forwarding**.

If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Rules** button. Click **Save** when you are done. If you edit or create a rule, the following options will appear:

Name: Enter a name for the rule.

**Local IP:** Enter the IP address of the computer on your local network that you want to allow the incoming service to. Alternatively, select the device from the drop-down menu.

**Protocol:** Select the protocol of the traffic to allow or deny (**TCP**, **UDP**, **Both**, or **Other**).

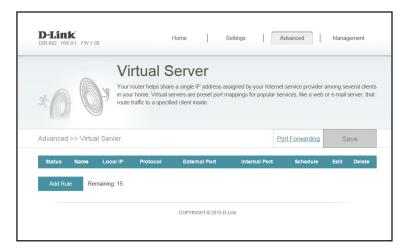
**Protocol** If you entered **Other** above, enter the protocol number. **Number**:

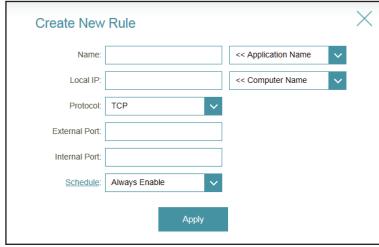
**External Port:** Enter the public port you want to open.

**Internal Port:** Enter the private port you want to open.

Schedule: Use the drop-down menu to select the time schedule that the rule will be enabled on. The schedule may be set to **Always Enable**, or you can create your own schedules in the **Schedules** section (refer to **Schedule** on page 64).

Click **Apply** when you are done.





## **Website Filter**

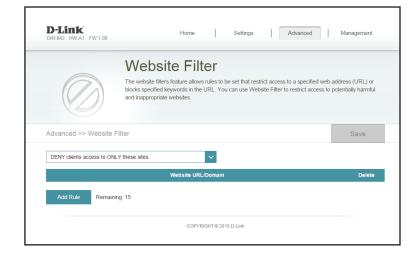
The website filter settings allow you to block access to certain web sites. You can either create a list of sites to block, or create a list of sites to allow (with all other sites being blocked).

In the Features menu on the bar on the top of the page, click **Website Filter**.

If you want to create a list of sites to block, select **DENY computers access to ONLY these sites** from the drop-down menu. All other sites will be accessible. If you want to specify a list of sites to allow, select **ALLOW computers access to ONLY these sites** from the drop-down menu. All other sites will be blocked.

You may specify a maximum of fifteen web sites. To add a new site to the list, click **Create New Rule**. Next, under Website URL/Domain enter the URL or domain. If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, simply replace the URL or domain.

Click **Save** when you are done.

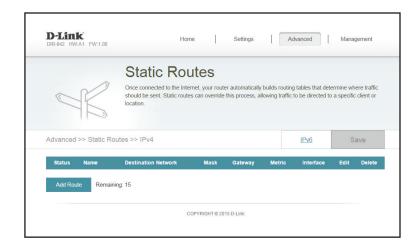


# **Static Routes**

The Static Routes section allows you to define custom routes to control how data traffic is moved around your network.

In the Features menu on the bar on the top of the page, click **Static Routes**. To configure IPv6 rules, click **IPv6** and refer to **IPv6** on page 60. To return to the main IPv4 static routes page, click **IPv4**.

If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Rules** button. Click **Save** when you are done. If you edit or create a rule, the following options will appear:



Name: Enter a name for the rule.

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

**Network:** 

Mask: Enter the netmask of the route.

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

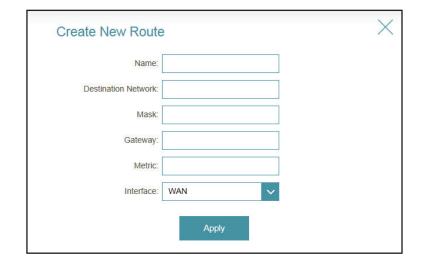
**Metric:** The route metric is a value from 1 to 16 that indicates the cost of

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.

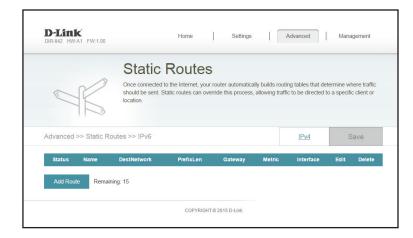
Click **Apply** when you are done.



## IPv<sub>6</sub>

To configure IPv6 rules, on the Static Routes page click **IPv6**. To return to the main IPv4 static routes page, click **IPv4**.

If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Rules** button. Click **Save** when you are done. If you edit or create a rule, the following options will appear:



Name: Enter a name for the rule.

DestNetwork: This is the IP address of the router used to reach the specified

destination.

PrefixLen: Enter the IPv6 address prefix length of the packets that will take this

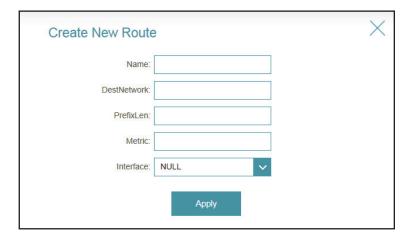
route.

Metric: Enter the metric value for this rule here.

Interface: Select the interface that the IP packet must use to transit out of the

router when this route is used.

Click **Apply** when you are done.



# **Dynamic DNS**

Most Internet Service Providers (ISPs) assign dynamic (changing) IP addresses. Using a dynamic DNS service provider, people can enter your domain name in their web browser to connect to your server no matter what your IP address is.

In the Features menu on the bar on the top of the page, click **Dynamic DNS**.

**Enable** Enabling dynamic DNS will reveal further configuration options. **Dynamic DNS:** 

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

Server Address: Enter the address of your dynamic DNS server, or select one from

the drop-down menu.

Host Name: Enter the host name that you registered with your dynamic DNS

service provider.

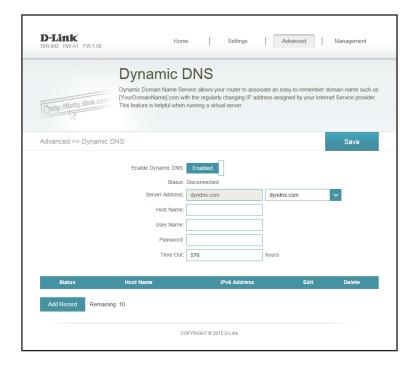
User Name: Enter your dynamic DNS username.

Password: Enter your dynamic DNS password.

Time Out: Enter a timeout time (in hours).

Click **Save** when you are done.

At the bottom of the page are the IPv6 host settings. To configure an IPv6 dynamic DNS host, refer to **IPv6 Host** on page 62.



### **IPv6 Host**

The IPv6 host settings are found at the bottom of the Dynamic DNS page.

If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Record** button. Click **Save** when you are done. If you edit or create a rule, the following options will appear:



**Host Name:** Enter the host name that you registered with your dynamic DNS service provider.

**IPv6 Address:** Enter the IPv6 address of the dynamic DNS server. Alternatively, select the server device in the drop-down menu.

Click **Apply** when you are done.



# Management Time & Schedule Time

The Time page allows you to configure, update, and maintain the correct time on the internal system clock. From here you can set the time zone, the Network Time Protocol (NTP) server, and enable or disable daylight saving time.

In the Management menu on the bar on the top of the page, click **Time & Schedule**.

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

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

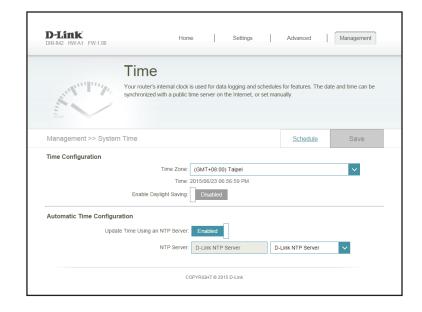
Daylight Enable or disable daylight saving time. Saving:

**Update Time** Enable or disable to allow an NTP server on the Internet to synchronize

Using an NTP the time and date with your router. If you enable this option, select **Server:** an NTP server from the drop-down menu. To configure the router's time and date manually, disable this option and use the drop-down menus that appear to input the time and date.

Click **Save** when you are done.

To configure and manage your schedules, click **Schedule** and refer to **Schedule** on page 64.



## Schedule

Some configuration rules can be set according to a pre-configured schedule. To create, edit, or delete schedules, from the Time page click **Schedule**. To return to the Time page, click **Time**.

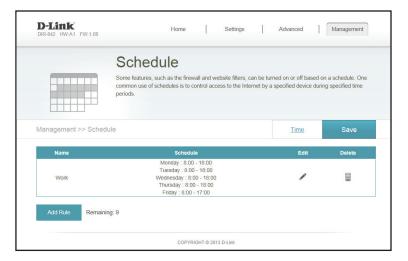
If you wish to remove a rule, click on its trash can icon in the Delete column. If you wish to edit a rule, click on its pencil icon in the Edit column. If you wish to create a new rule, click the **Add Rules** button. Click **Save** when you are done. If you edit or create a rule, the following screen will appear:

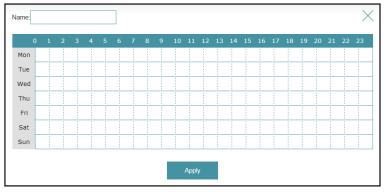
First, enter the name of your schedule in the **Name** field.

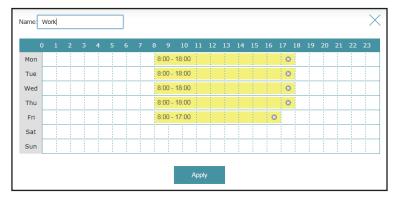
Each box represents one hour, with the time at the top of each column. To add a time period to the schedule, simply click on the start hour and drag to the end hour. You can add multiple days to the schedule, but only one period per day.

To remove a time period from the schedule, click on the cross icon.

Click **Apply** when you are done.







# **System Log**

The router keeps a running log of events. This log can be sent to a Syslog server, and sent to your email address. In the Management menu on the bar on the top of the page, click **System Log**.

**Enable Logging** Check this box to send the router logs to a SysLog Server. If this is **to Syslog** disabled, there will be no other options on this page.

Server:

Syslog Server IP Enter the IP address for the Syslog server. If the Syslog server is Address: directly connected to the router, select it from the drop-down menu to automatically populate the field.

**Enable Email** If you want the logs to be automatically sent to an email address, **Notification:** enable this option.

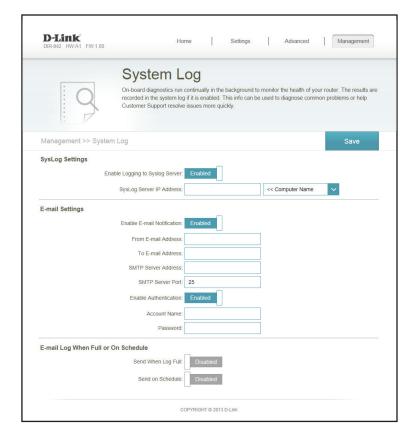
Enter the settings for your email account. These are obtained from your email service provider.

**Send when Log** If email notification is enabled, this option will set the router to send **Full:** the log by email when the log is full.

**Send on** This option can be enabled to send an email according to a pre-**Schedule:** configured schedule. See below.

Schedule: If you enable **Send on Schedule**, use the drop-down menu to select the time schedule that the rule will be enabled on. The schedule may be set to **Always Enable**, or you can create your own schedules in the **Schedules** section (refer to **Schedule on page 64**).

Click **Save** when you are done.



# **Admin**

This page will allow you to change the administrator (Admin) password and enable remote management.

In the Management menu on the bar on the top of the page, click **Admin**.

**Password:** Enter a new password for the administrator account. You will need to enter this password whenever you configure the router using a web browser.

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

Enable HTTPS Check to enable HTTPS to connect to the router securely. This means

Server: to connect to the router, you must enter https://dlinkrouter.local./

instead of http://dlinkrouter.local./

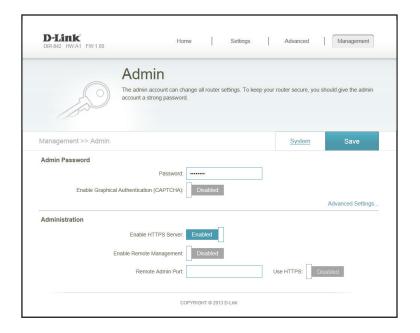
**Enable Remote** Remote management allows the DIR-842 to be configured from the **Management:** Internet by a web browser. A password is still required to access the web management interface.

**Remote Admin** The port number used to access the DIR-842 is used in the URL. Example: **Port: http://x.x.x.x:8080** where x.x.x.x is the Internet IP address of the DIR-842 and 8080 is the port used for the web management interface.

**Note:** If you enabled **HTTPS Server** and wish to access the router remotely and securely, you must enter **https://** at the beginning of the address.

Click **Save** when you are done.

To load, save, or reset settings, or reboot the router, click **System** and refer to **System** on page 67.



## **System**

This page allows you to save the router's current configuration, load a previously saved configuration, reset the router to its factory default settings, or reboot the router.

From the Admin page click **System**. To return to the Admin page, click **Admin**.

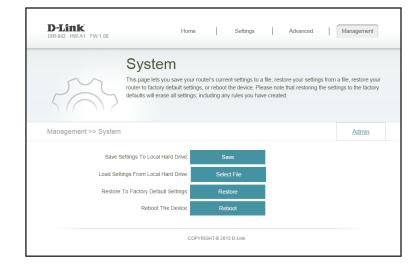
Save Settings This option will save the current router configuration settings to a file To Local Hard on your computer.

**Drive:** 

Load Settings This option will load previously saved router configuration file. This will From Local overwrite the router's current configuration. **Hard Drive:** 

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

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



# **Upgrade**

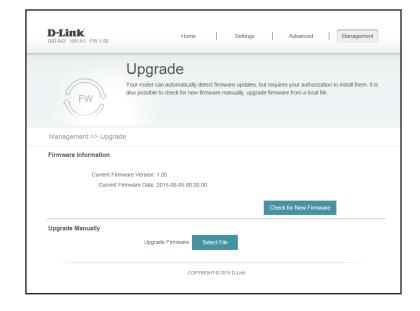
This page will allow you to upgrade the router's firmware or language pack, either automatically or manually. To manually upgrade the firmware or language pack, you must first download the relevant file from **http://support.dlink.com**.

In the Management menu on the bar on the top of the page, click **Upgrade**.

**Firmware** The current firmware's version and date will be displayed. **Information**:

**Check for New** Click this button to prompt the router to automatically check for a new **Firmware:** firmware version. If a newer version is found, it will prompt you to install it.

Upgrade If you wish to upgrade manually, first download the firmware file you Firmware: wish to upgrade to. Next, click the **Select File** button and browse to the file to install the new firmware. You can also browse to a language pack file to install a new language pack.



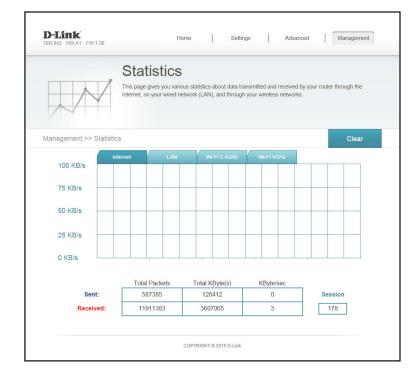
## **Statistics**

On the Statistics page you can view the amount of packets that pass through the router on the WAN, LAN, and wireless segments.

In the Management menu on the bar on the top of the page, click **Statistics**.

You can view the **Internet**, **LAN**, **Wi-Fi 2.4GHz**, or **Wi-Fi 5GHz** by clicking on the respective tabs at the top. The graph will update in real time. To clear the information on the graph, click **Clear**.

The traffic counter will reset if the device is rebooted.



# 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-842 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-842 for about 1 second. The Internet LED on the front will start to blink.

**Note:** If you press and hold the WPS button for 8 seconds or longer, the DIR-842 will reset to factory defaults.



- **Step 2** Within 2 minutes, press the WPS button on your wireless client (or launch the software utility and start the WPS process).
- **Step 3** Allow up to 1 minute to configure. Once the Internet light stops blinking, you will be connected and your wireless connection will be secure with WPA2.

## Windows® 8 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 (Wi-Fi password) being used.

To join an existing network, locate the wireless network icon in the taskbar, next to the time display.



Clicking on this icon will display a list of wireless networks which are within connecting proximity of your computer. Select the desired network by clicking on the network name.



You will then be prompted to enter the network security key (Wi-Fi password) for the wireless network. Enter the password into the box and click **Next**.

If you wish to use Wi-Fi Protected Setup (WPS) to connect to the router, you can also press the WPS button on your router at the point to enable the WPS function.



When you have established a successful connection a wireless network, the word **Connected** will appear next to the name of the network to which you are connected.



# 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).



2. The utility will display any available wireless networks in your area.

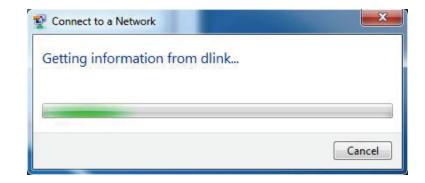


3. Highlight the wireless connection with Wi-Fi name (SSID) you would like to connect to and click the **Connect** button.

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 (Wi-Fi password) 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.

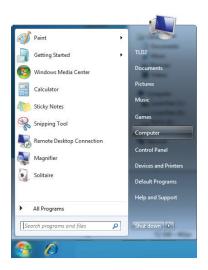


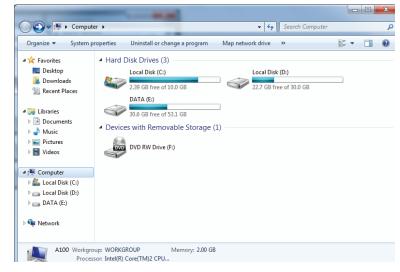
## **WPS**

The WPS feature of the DIR-842 can be configured using Windows® 7. Carry out the following steps to use Windows® 7 to configure the WPS feature:

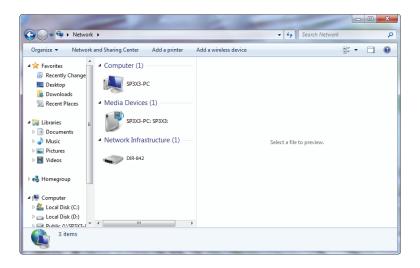
1. Click the **Start** button and select **Computer** from the Start menu.

2. Click **Network** on the left side.

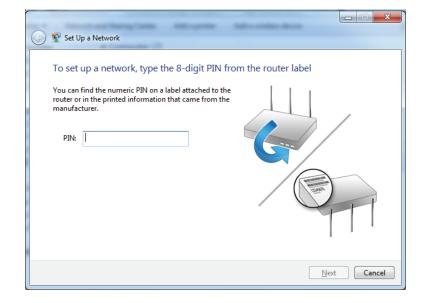




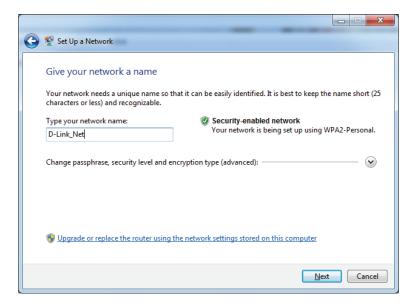
3. Double-click the DIR-842.



4. Input the WPS PIN number (on the router label) in the **Setup** > **Wireless Setup** menu in the router's web UI) and click **Next**.

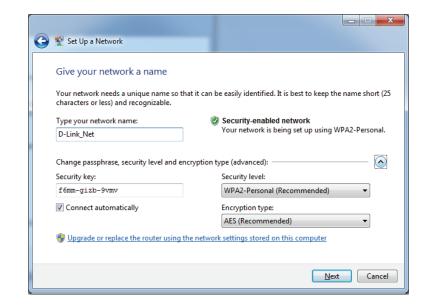


5. Type a name to identify the network.



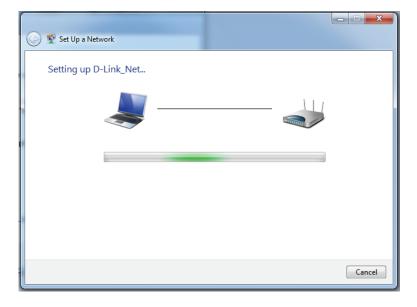
6. To configure advanced settings, click the vicon.

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**.

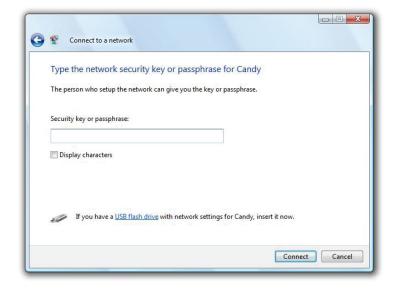


2. Highlight the Wi-Fi name (SSID) you would like to connect to and click **Connect**.



3. Enter the same security key or passphrase (Wi-Fi password) 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.



## Windows® XP

Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. 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.

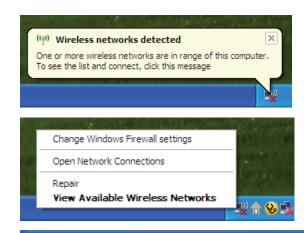
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

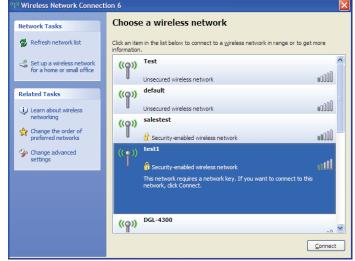
or

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 Wi-Fi 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.





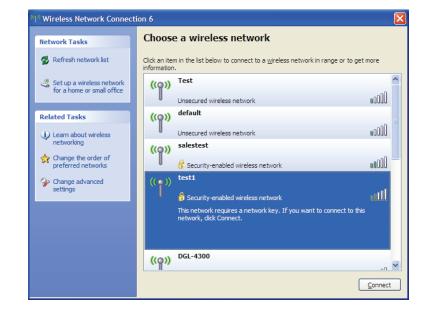
## WPA/WPA2

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 Wi-Fi network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK Wi-Fi password 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 Wi-Fi password must be exactly the same as on the wireless router.



# **Troubleshooting**

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-842. 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® 9 and higher
  - Mozilla Firefox 20 and higher
  - Google™ Chrome 25 and higher
  - Apple Safari 5.1 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 ZoneAlarm, BlackICE, 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 rear panel 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. The default IP address is 192.168.0.1. When logging in, the username is **admin** and leave the password box empty.

## 3. Why can't I connect to certain sites or send and receive emails when connecting through my router?

If you are having a problem sending or receiving email, 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 -1 1482
Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
Packet needs to be fragmented but DF set.
Ping statistics for 66.94.234.13:
     Packets: Sent = 4, Received = 0, Lost = \frac{4}{100} (100% loss)
Approximate round trip times in milli-seconds:
     Minimum = Oms, Maximum = Oms, Average = Oms
C:∖>ping yahoo.com -f -1 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
```

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, lets 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.

## **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 phone 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 as seen in the picture, 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 as 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 you 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 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 adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start** > **Run**. In the run box type **cmd** and click **OK**. (Windows® 7/Vista® users type **cmd** in the **Start Search** box.)

At the prompt, type *ipconfig* and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.

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:

## Step 1

Windows® 7 - Click on Start > Control Panel > Network and Internet > Network and Sharing Center.

Windows Vista® - Click on Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.

Windows® XP - Click on Start > Control Panel > Network Connections.

Windows® 2000 - From the desktop, right-click **My Network Places** > **Properties**.

## Step 2

Right-click on the Local Area Connection which represents your network adapter and select Properties.

## Step 3

Highlight Internet Protocol (TCP/IP) and click Properties.

## Step 4

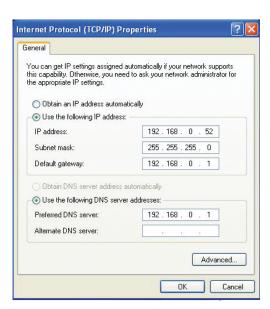
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

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 the Default Gateway the same as the LAN IP address of your router (I.E. 192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

## Step 5

Click **OK** twice to save your settings.



# **Technical Specifications**

### **Hardware Specifications**

- LAN Interface: Four 10/100/1000 Mbps Gigabit Ethernet LAN ports •
- WAN Interface: One 10/100/100 Mbps Gigabit Ethernet WAN port
- Wireless Interface (2.4 GHz): IEEE 802.11b/g/n
- Wireless Interface (5 GHz): IEEE 802.11ac/n/ac

## **Operating Voltage**

- Input: 100~240 V AC, 50~60 Hz
- Output: 12 V DC, 1 A

#### **Temperature**

- Operating: 32 ~ 104 °F (0 ~ 40 °C)
- Non-Operating: -4 ~ 149 °F (-20 ~ 65 °C)

## Humidity

- Operating: 10% 90% non-condensing
- Non-Operating: 5% 95% non-condensing

## **Wireless Frequency Range**

- IEEE 802.11a: 5180 MHz~5240 MHz, 5745 MHz~5825 MHz
- IEEE 802.11b: 2400 MHz~2483 MHz
- IEEE 802.11g: 2400 MHz~2484 MHz
- IEEE 802.11n: 2400 MHz~2484 MHz, 5180 MHz~5240 MHz, 5745 MHz~5825 MHz
- IEEE 802.11ac: 5180 MHz~5240 MHz, 5745 MHz~5825 MHz

#### Wireless Bandwidth Rate

- IEEE 802.11a: 54, 48, 36, 24, 18, 12, 9, and 6 Mbps
- IEEE 802.11b: 11, 5.5, 2, and 1 Mbps

- IEEE 802.11g: 54, 48, 36, 24, 18, 12, 9, and 6 Mbps
- IEEE 802.11n: 6.5 to 300 Mbps
- IEEE 802.11ac: 6.5 to 867 Mbps

## **Antenna Type**

Four external antennas

#### **Wireless Security**

WPA/WPA2-Personal and WPS (PIN & PBC)

#### Certifications

- CE
- FCC
- RoHS
- CCC

## **Dimensions & Weight**

- 189.94 x 132.97 x 38.1 mm (7.47 x 5.23 x 1.5 inches)
- 288 g (9.28 oz)

# **Regulatory Information**

#### **Federal Communication Commission Interference 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.

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.

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.

Operation of this device is restricted to indoor use only

#### **IMPORTANT NOTE:**

## **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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country Code selection feature to be disabled for products marketed to the US/CANADA

### **Industry Canada statement:**

This device complies with Industry Canada's licence-exempt RSSs. 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.

Cet appareil est conforme aux CNR exemptes de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes:

(1) Ce dispositif ne peut causer d'interférences; et(2) Ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

#### **Caution:**

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

#### **Avertissement:**

(i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

## **Radiation Exposure Statement:**

This equipment complies with IC 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.

## Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.