D-Link®

Version 1.00 | 05/17/2017

User Manual

Wireless N300 ADSL2+/VDSL2 Modem Router

DSL-G225

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
1.00	May 17, 2017	• Release for revision J1

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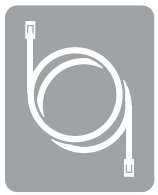
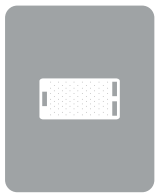
Package Contents

DSL-G225 Wireless N300 ADSL2+/VDSL2 Modem Router

Power Adapter



Ethernet Cable



xDSL Microfilter/Splitter & Cable

Quick Install Guide

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

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

System Requirements

Network Requirements	• Wired 10/100 Ethernet Devices/Computers or Wireless Ethernet 802.11 n/g/b Devices/Computers • A DSL enabled Internet Connection with a subscription to an Internet Service Provider
Web-based Configuration Utility Requirements	**Computer with the following:** • Windows®, Macintosh, or Linux-based operating system • An installed Ethernet adapter **Browser Requirements:** • Internet Explorer 9 or higher • Firefox 23 or higher • Safari 7 or higher • Chrome 28 or higher **Windows® Users:** Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.

Introduction

The DSL-G225 Wireless N300 ADSL2+/VDSL2 Modem Router is everything you need for high-speed Internet access in your home. It combines a VDSL2 modem and high-end wireless router together to create a single, easy-to-use device that connects to the Internet, and shares that connection with all of your devices. Plug in a USB storage drive to effortlessly share your documents, video, photos, and music or connect to a printer.

Combination ADSL2+/VDSL2 Modem and Router
The DSL-G225 combines the functionality of a high-speed VDSL2 broadband modem and a wireless router in one device, meaning there is no need for separate modem and wireless router devices. Connect to your VDSL2 Internet Service Provider and share the Internet connection with both wireless and wired devices. Lastly, the DSL-G225 gives you the option to connect to your broadband modem using the WAN Ethernet port so you have the flexibility to access the Internet via DSL, Cable, or other connection types.

Fast and Reliable Home Network
With the Wireless N300 ADSL2+/VDSL2 Modem Router, you can create a home network with high-speed wireless, for a reliable connection to wireless devices, and Fast Ethernet LAN ports for quick wired connection speeds. 802.11n wireless gives you the bandwidth to stream HD multimedia and feature-rich content across your home, so you can browse the Internet and stream digital media at combined speeds of up to 300 Mbps1. Using Quality of Service (QoS) technology the DSL-G225 can be configured to give certain devices network priority over others so their Internet connection is always optimized.

USB Port for Additional Connectivity
The DSL-G225 features a built-in USB port to provide additional functionality for your network. Attach a printer or portable hard drive to share files with everyone, or even plug in a 3G/4G USB modem to enjoy Internet connectivity in places without a wired Internet connection.

Easy to Set Up
Get the DSL-G225 up and running in no time using the intuitive web-based configuration utility. Simply connect the DSL-G225 to your computer, launch the configuration utility, and follow a few easy steps to get your home network configured. You can also set up a encrypted network with the touch of a button using Wi-Fi Protected Setup (WPS). Simply press the WPS button to effortlessly establish an encrypted connection to a new device. Protect your network with WPA/WPA2 wireless encryption and a built-in NAT firewall, so you can shop online and do your online banking with confidence.

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

Features

- **Faster Wireless Networking** - The DSL-G225 provides up to 300 Mbps* wireless connection with other 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.

- **Compatible with 802.11b and 802.11g Devices** - The DSL-G225 is still fully compatible with the IEEE 802.11b and g standards, so you can use keep your existing 802.11b and g devices.

- **Precise ATM Traffic Shaping** - Traffic shaping is a method of controlling the flow rate of ATM data cells. This function helps to establish Quality of Service for ATM data transfer.

- **High Performance** - Very high rates of data transfer are possible with the router-providing up to 100 Mbps downstream for VDSL2

- **Full Network Management** - The DSL-G225 incorporates SNMP (Simple Network Management Protocol) support for web-based management and text-based network management via a Telnet connection.

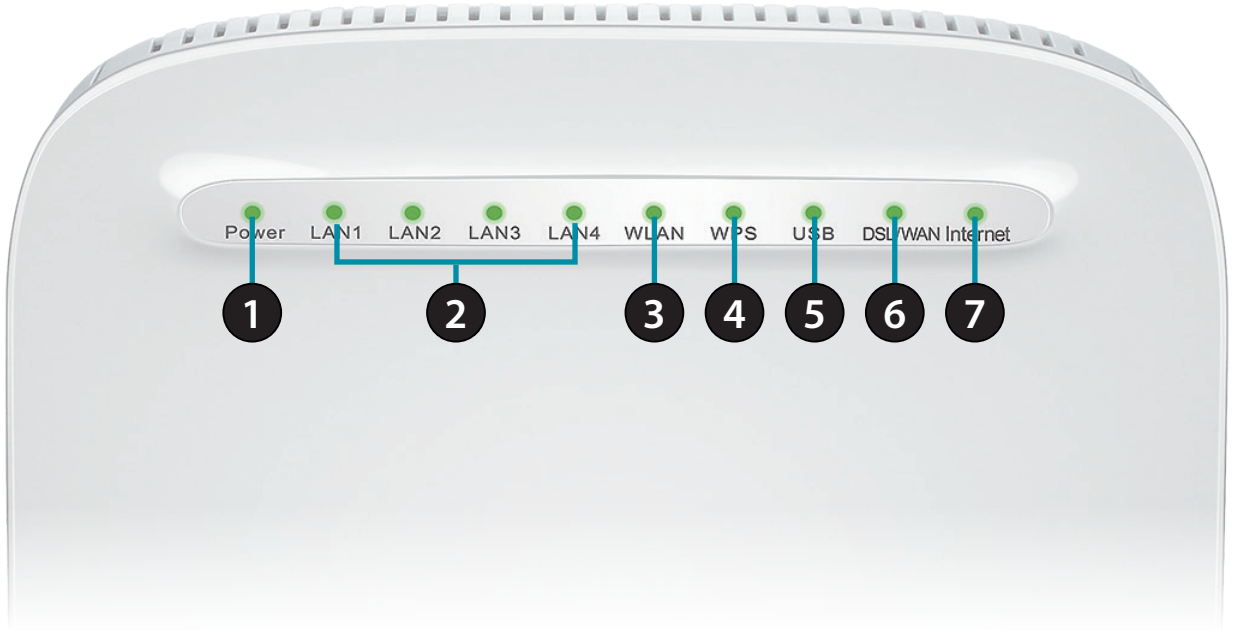
- **Easy Installation** - The DSL-G225 can be configured and managed easily using a web-based UI. Any common web browser software can be used to manage the router.

- **USB Support** - The DSL-G225 provides a USB port for easy file sharing and printer sharing. The DSL-G225 supports USB storage devices to share files through a SAMBA file server. It also supports sharing USB printers to network members. Besides the sharing function, the DSL-G225 also supports connection to the Internet via a USB 3G/4G modem.

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

Hardware Overview

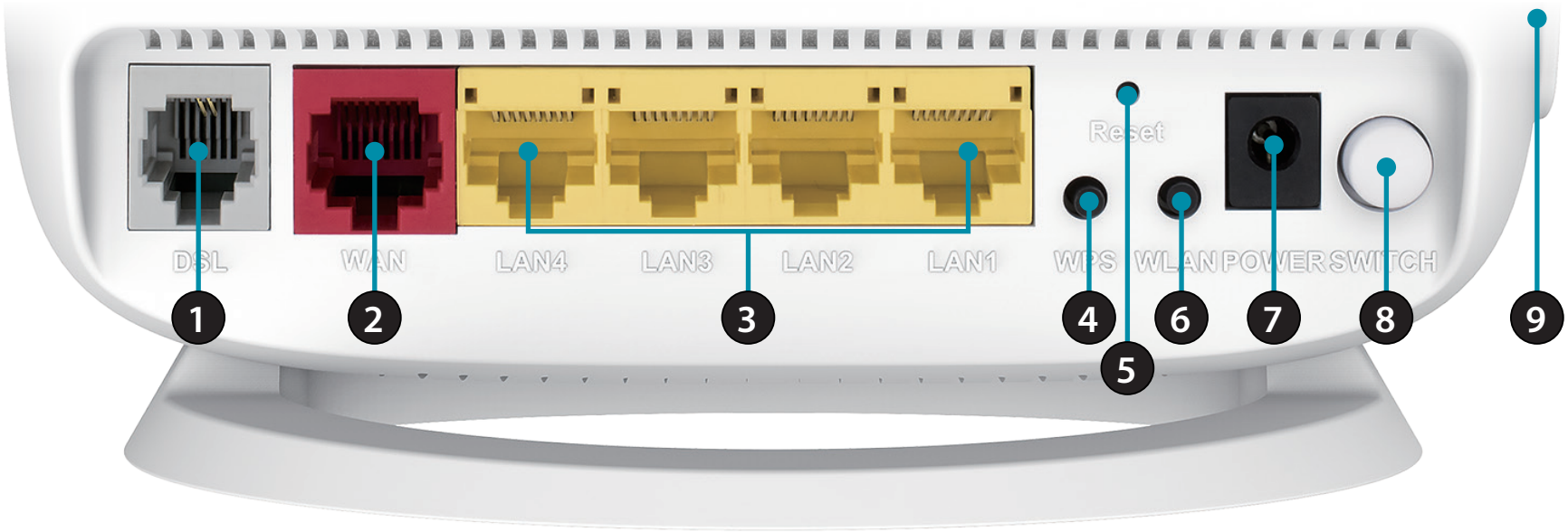
Front LED Panel



1	Power LED	A solid green light indicates the unit is powered on. A red light indicates device malfunction.
2	LAN LEDs 1-4	A solid green light indicates a connection to a device. The light will blink during data transmission.
3	WLAN LED	A solid green light indicates that the Wi-Fi is ready.
4	WPS LED	The light will blink during the WPS process.
5	USB LED	A solid green light indicates a connection to a USB device.
6	DSL LED	A solid green light indicates a proper connection to the ADSL/VDSL enabled telephone line.
7	Internet	A solid green light indicates a proper connection to a broadband service. A red light indicates that IP assignment has failed.

Hardware Overview

Back



1	DSL Port	Connect to an DSL-enabled telephone line and with the supplied microfilter/splitter.
2	WAN Port	If using an external modem, connect your broadband modem to this port.
3	LAN Ports (1-4)	Connect Ethernet devices such as computers, switches, storage (NAS) devices and game consoles.
4	WPS Button	Press to start the WPS process and automatically create a secure connection to a WPS client.
5	Reset Button	Insert a paperclip in the hole on the bottom of the device located the serial number sticker and wait for several seconds to reset the router to default settings.
6	Wireless On/Off	Press and hold this button for about 10 seconds to enable or disable the Wi-Fi network.
7	Power Connector	Connector for the supplied power adapter.
8	Power Button	Press to power the router on or off.
9	USB Port	Connect a USB storage device to this port to share media to your network.

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, attic, or garage.

Note: This installation section is written for users who are setting up their home Internet service with the DSL-G225 Wireless N300 ADSL2+/VDSL2 Modem Router for the first time. If you are replacing an existing DSL modem and/or router, you may need to modify these steps.

Before you Begin

- Make sure to have your DSL service information provided by your Internet Service Provider handy. This information is likely to include your DSL account's Username and Password. Your ISP may also supply you with additional WAN configuration settings which are necessary to establish a connection. This information may include the connection type (DHCP IP, Static IP, PPPoE, or PPPoA) and/or ATM PVC details.

- If you are connecting a considerable amount of networking equipment, it may be a good idea to take the time to label each cable or take a picture of your existing setup before making any changes.

- We suggest setting up your DSL-G225 from a single device and verifying that it is connected to the Internet before connecting additional devices.

- If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE connection software such as WinPoET, BroadJump, or EnterNet 300 from your computer as the DSL-G225 will be providing this functionality.

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.

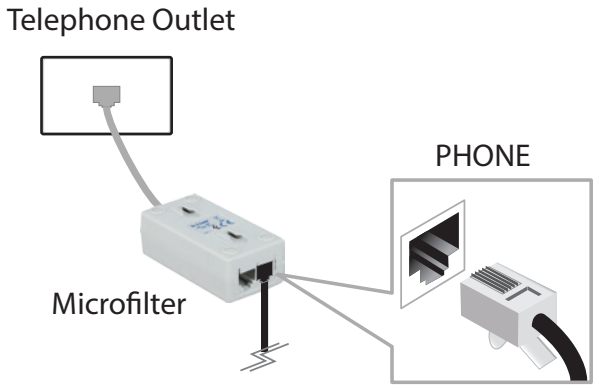
5. If you are using 2.4 GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4 GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

Manual Setup

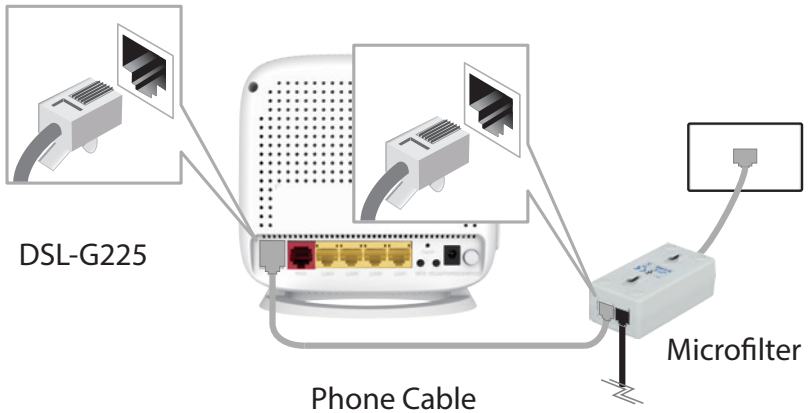
1. Position your router close to a wall jack which provides DSL service. Place the router in an open area of your intended work area for better wireless coverage.

2. Connect your existing phone cable from a telephone outlet to the LINE port on the microsplitter and your telephone handset into the PHONE port.

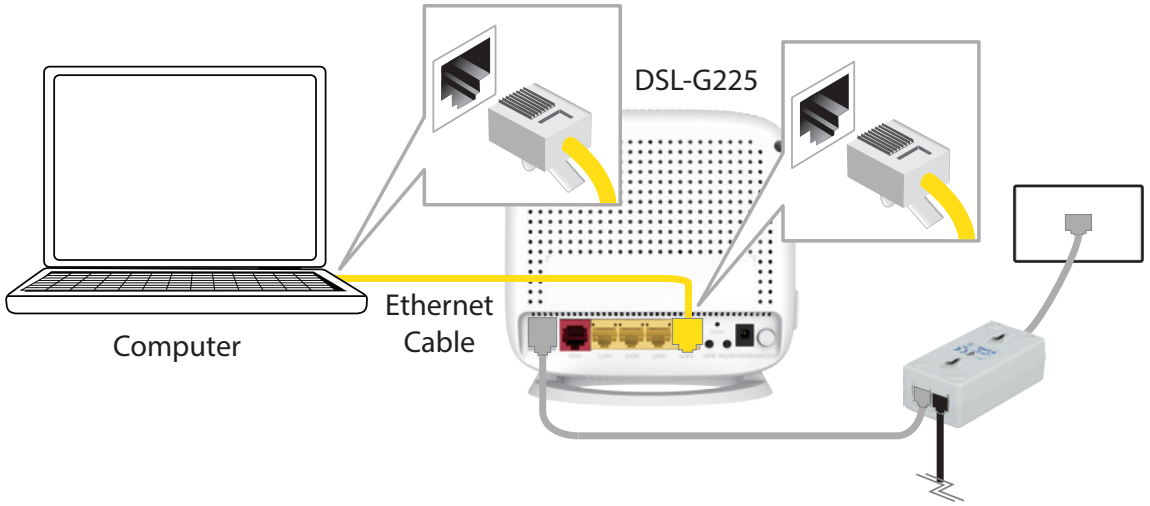
   Caution: *- To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.*



3. Connect the Phone cable from the DSL port on the microsplitter to the DSL port of the modem router.

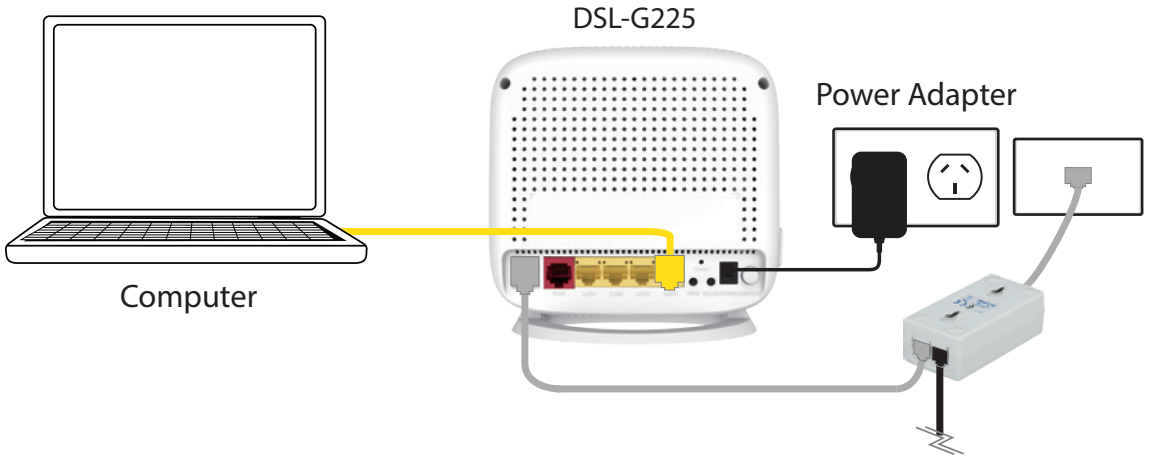


4 If you wish to use a wired connection, connect the Ethernet cable from a LAN port of the DSL-G225 to the Ethernet port on your computer.

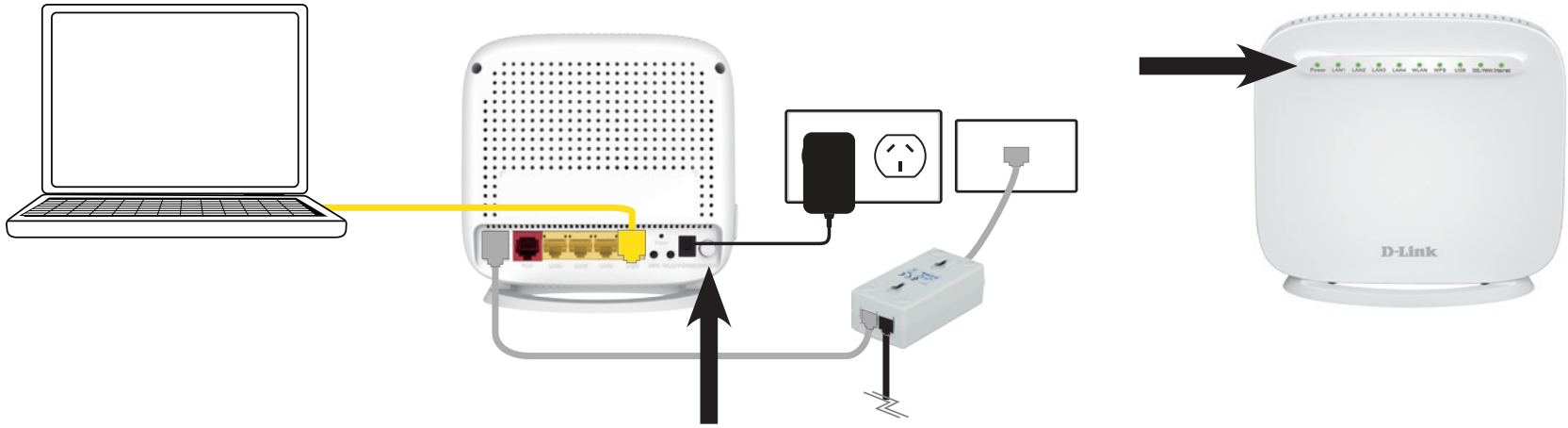


5 Plug the power adapter into your modem router and connect to an available power outlet or surge protector.

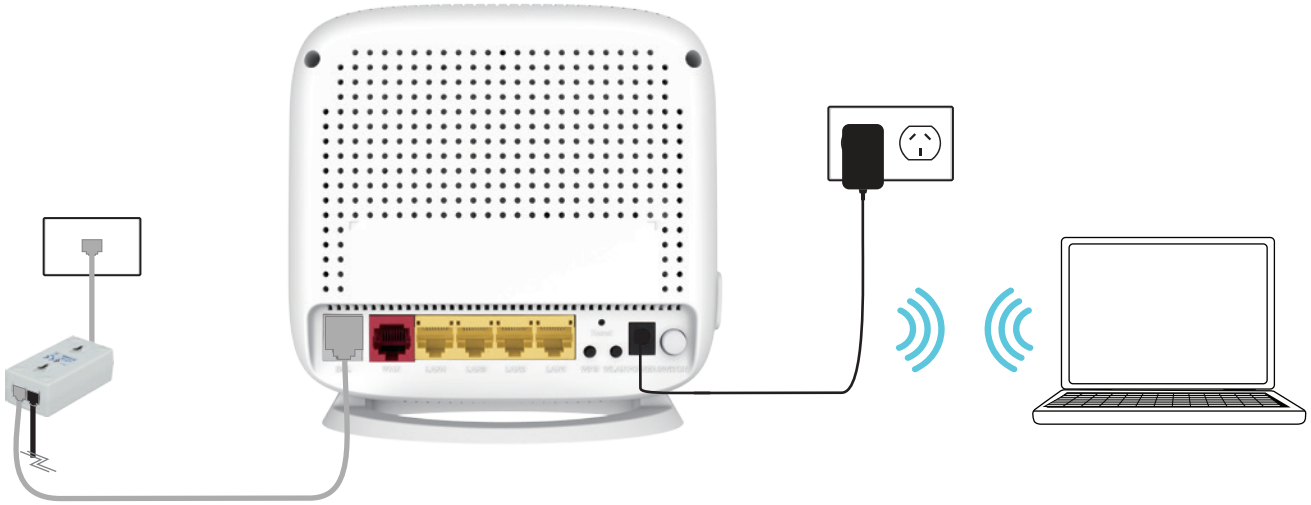
Caution: *- Use only the included power adapter with this product.*



6 Press the power button and verify that the power LED is lit. Allow 1 minute for the router to boot up.



7 If connecting to the DSL-G225 wirelessly, access the wireless utility on your computer or mobile device. Scan for available Wi-Fi networks (SSID). Select and join a Wi-Fi network and use the password which corresponds to the information printed on the bottom of the device.



Getting Started

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

- **D-Link One Touch App** - Use your Android device, iPhone, iPad, or iPod touch to configure your modem router. Refer to **One-Touch App Setup on page 12**.

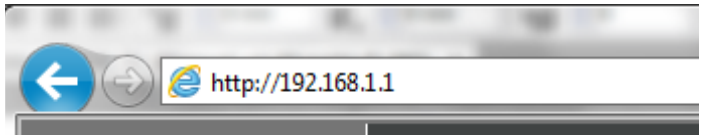
- **Web-based Setup Wizard** - This wizard will launch when you log into the modem router for the first time. Refer to **Web-based Configuration Utility** on page 12.

- **Manual Setup** - Log into the router and manually configure your router. Refer to **Manual Setup** on page 12.

Web-based Configuration Utility

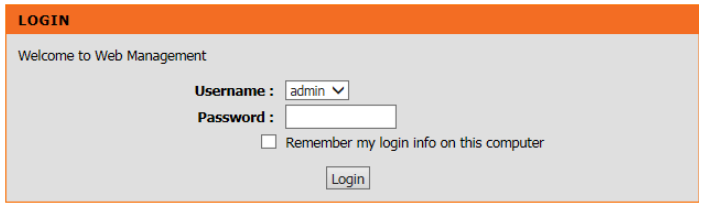
This section will show you how to configure your D-Link wireless router using the web-based configuration utility.

If you wish to change the default settings or adjust the configuration of the DSL-G225 you may use the web-based configuration utility.



To access the configuration utility, open a web browser such as Internet Explorer and enter **http://192.168.1.1** in the address field.

Select **admin** from the drop-down menu and then enter your password. The default password is **admin**.



On your first login you will be directed to the **Setup Wizard** page.

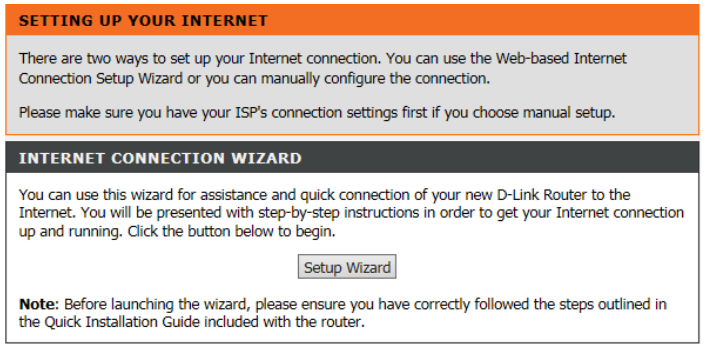
If you want to configure the router manually without running the wizard, skip to **Configuration** on page 13.

Wizard

Use the **Setup Wizard** to quickly and easily configure the DSL-G225. This wizard is designed to guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.

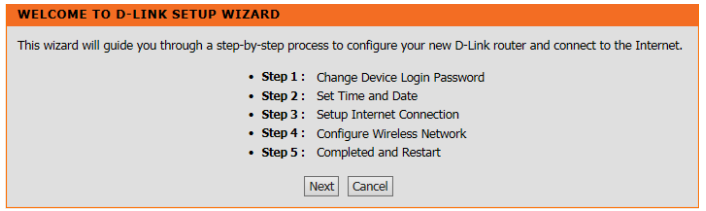
Click the **Setup Wizard** button to continue.

If you want to configure the router manually without running the wizard, skip to **Configuration** on page 14.



SETUP WIZARD

The Setup Wizard will guide you through the following steps:



Step 1: Change Device Login Password

Step 2: Set Time and Date

Step 3: Setup Internet Connection

Step 4: Configure Wireless Network

Step 5: Completed and Restart

Click **Next** to begin.

Step 1: Change Device Login Password

This step of the wizard allows you to configure your password settings.

Enter a new **Password** and **Verify Password** to secure your modem router.

Click **Next** to continue. Otherwise, click **Skip** to leave the password unchanged.

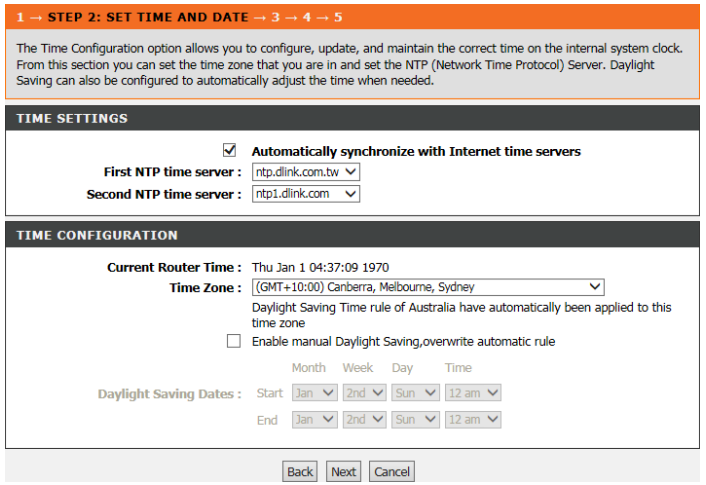
Step 2: Set Time and Date

This step of the wizard allows you to configure your Time and Date settings.

Check **Automatically synchronize with Internet time servers** to enable time and date setup, and select your **Time Zone** from the drop-down menu. Daylight saving time will be automatically configured for your time zone. Check **Enable Daylight Saving** only if you want to override the default settings for your time zone.

If necessary, change the Network Time Protocol (NTP) servers.

Click **Next** to continue.



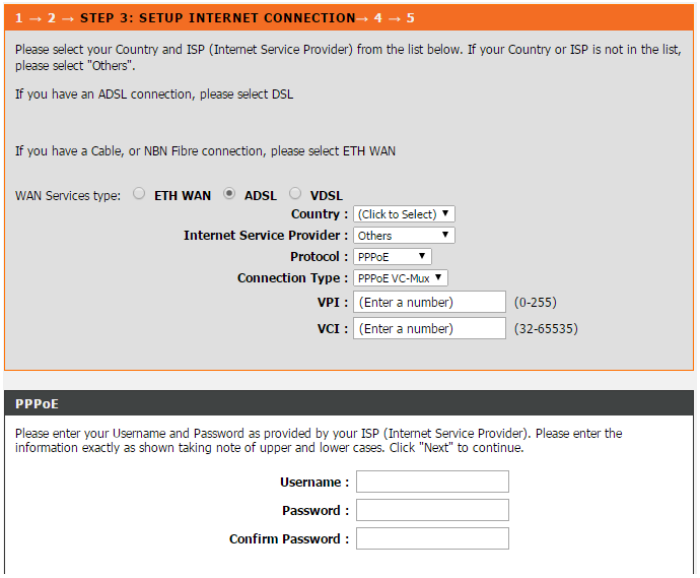
Step 3: Setup Internet Connection

This step of the wizard allows you to configure your Internet connection type.

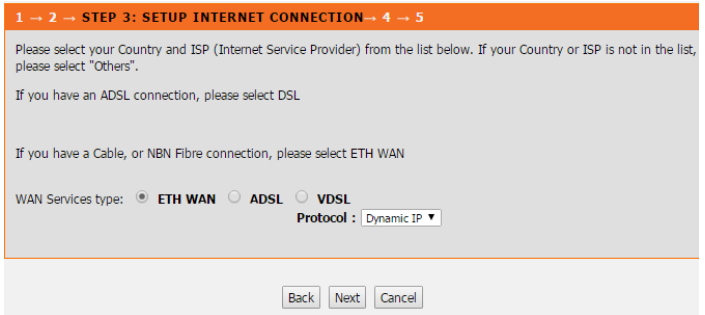
If you have an ADSL connection, select **ADSL**. If you have a VDSL connection, select **VDSL**. If you have a cable or NBN Fiber connection and are connecting via the WAN port, select **ETH WAN**.

If you selected **ADSL** or **VDSL**, choose your **Country** and **Internet Service Provider** (ISP) from the drop-down menu. The necessary settings will automatically populate.

If you cannot find your country or ISP, select **Others**. You will need to enter the data provided by your ISP manually. Select the Protocol used by your ISP: **Dynamic IP, Static IP, PPPoE, PPPoA,** or **Bridged**. Also select the **Connection Type**, and input the **VPI** and **VCI** settings for ADSL, or **VLAN** and **VLAN ID** for VDSL.



If you selected **ETH WAN**, select and configure the Internet **Protocol** used by your ISP: **Dynamic IP, Static IP, PPPoE,** or **Bridged**.

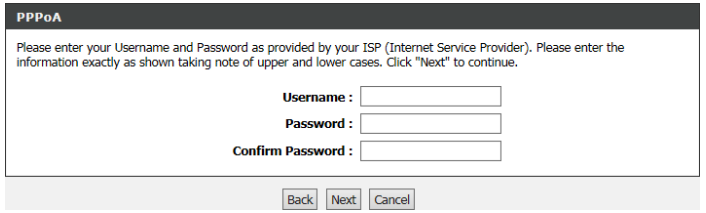


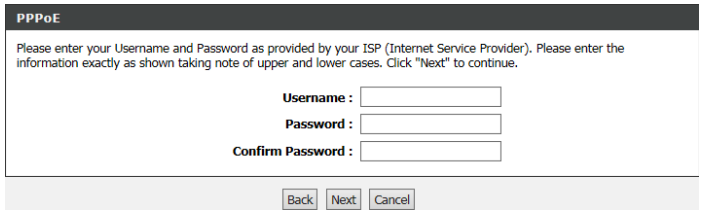
If you selected **Dynamic IP** or **Bridged**, click **Next** to continue.

PPPoE/ PPPoA

If the router detected or you selected **PPPoE** or **PPPoA**, a box will appear to enter your PPPoE/PPPoA username and password. Once you have entered your PPPoE/PPPoA credentials, click **Next** to continue.

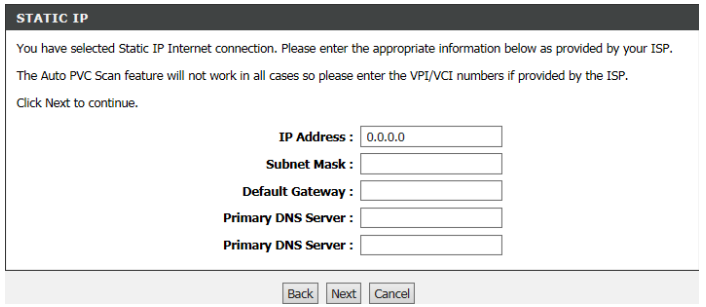
Note: *Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.*





STATIC IP

If you selected **Static IP**, enter your Static IP information as supplied by your ISP. Click **Next** to continue.



Step 4: Configure Wireless Network

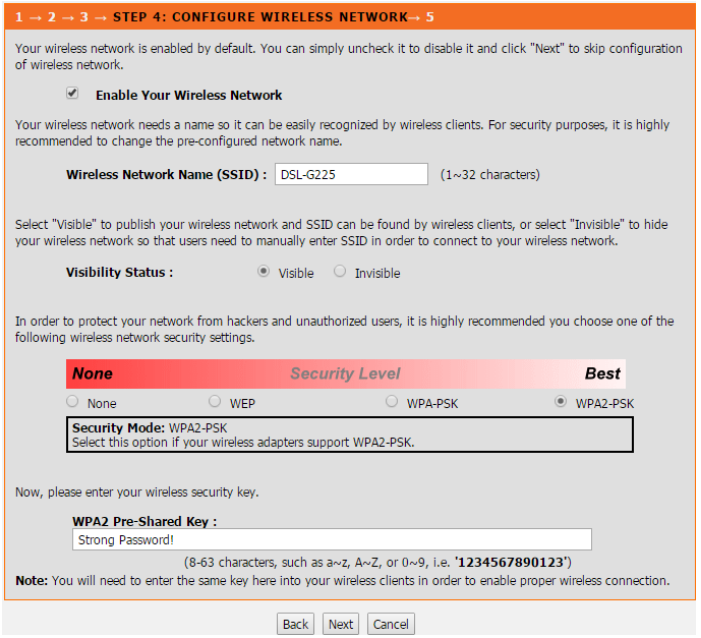
This step of the wizard allows you to configure your Wireless network settings.

By default, wireless is enabled. If you want to disable the DSL-G225's wireless capability, uncheck **Enable Your Wireless Network**.

Under **Wireless Network Name (SSID)** you can change the SSID of your wireless network, for easier identification by wireless clients. If **Visibility Status** is set to **Visible**, this name will show up when a client in range scans for wireless networks. Otherwise, if your network is **Invisible**, clients will have to enter the SSID in order to connect.

Choose the best security level that is compatible with your wireless clients. **WPA2-PSK** is recommended. Unless you chose **None** (this is NOT recommended), you will need to enter a key below. Wireless clients requesting a connection with the network will need to enter this key in order to connect.

Click **Next** to continue.

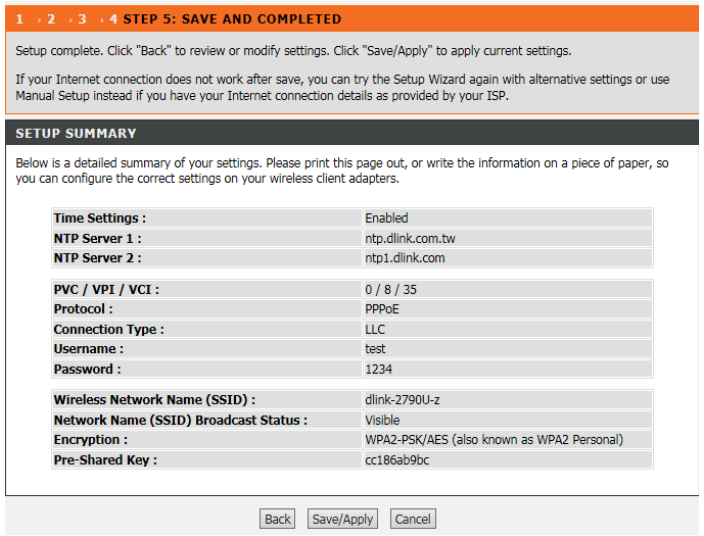


Step 5: Save and Completed

Congratulations! You have completed the setup of your modem router. You will see a summary of the settings you chose. It is recommended that you make a note of this information for future reference.

If you are satisfied with these settings, click **Save/Apply** to complete the setup wizard.

Otherwise, click **Back** to return to the previous step(s) or **Cancel** to exit the wizard without saving your changes.



Configuration

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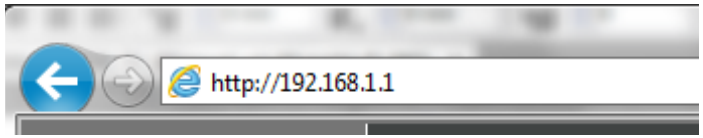

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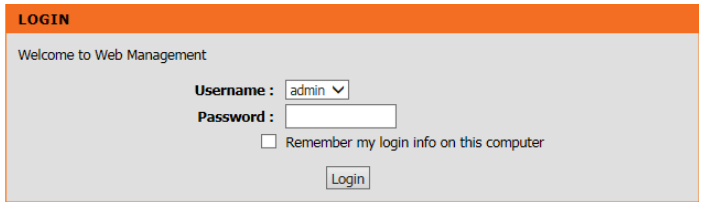
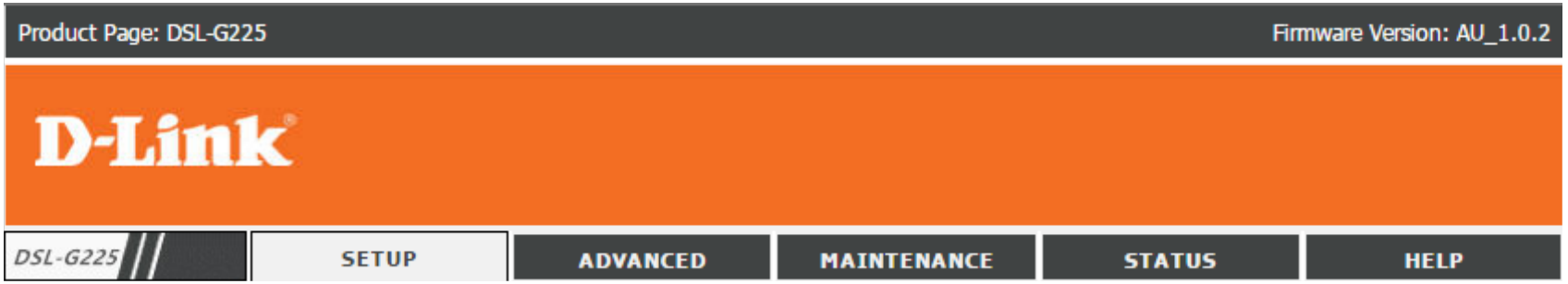
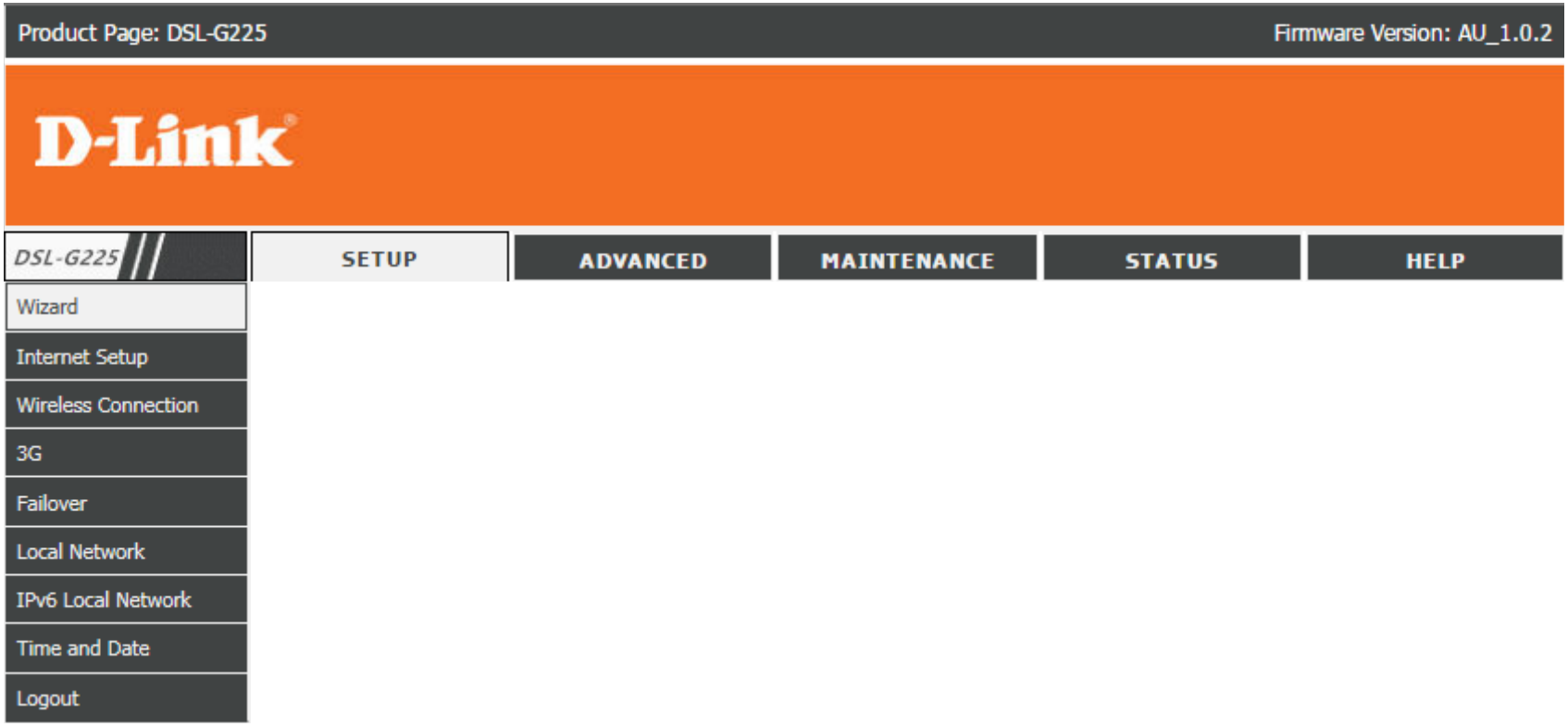


Once logged in you will see the that the user interface is divided into five horizontal tabs, each with a vertical menu bar running along the left side.



Setup

The Setup Tab provides access to configure the most commonly used settings of your DSL-G225.

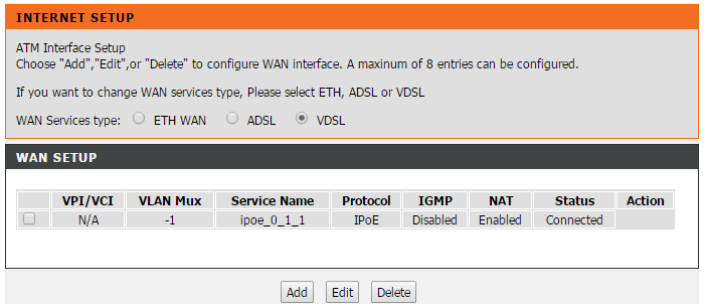


Wizard

If you wish to configure the router using the wizard, refer to **Wizard** on page 22.

Internet Setup

Click **Internet Setup** on the left menu to configure your connection manually. This section is only recommended for advanced users. It is recommended to use the **Setup Wizard** to set up your Internet connection.



Select whether to use an Ethernet WAN connection, ADSL, or VDSL connection.

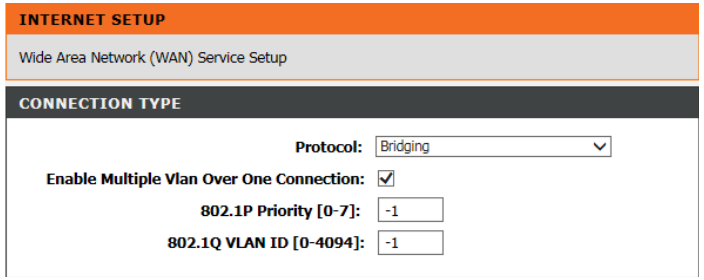
Click the **Add** button to reveal the DSL/Ethernet WAN configuration options, or click **Edit** to change an existing configuration. Click **Delete** to remove a connection.

For instructions on adding an Ethernet WAN connection refer to **Add an Ethernet WAN Connection** on page 23.

For instructions on adding a DSL connection refer to **Add an ADSL WAN Connection** on page 23.

Add an Ethernet WAN Connection

If you are adding an Ethernet WAN connection you will be presented with the following configuration options.



CONNECTION TYPE

Protocol: Select the protocol type **MAC Encapsulation Routing (MER)**, **PPP over Ethernet (PPPoE)**, or **Bridging** from the dropdown menu.

Multiple Vlan: If you wish to Enable Multiple Vlan Over One Connection, check the box.

802.1P Priority [0-7]: Enter the 802.1P priority number.

802.1Q VLAN ID [0-4094]: Enter the VLAN ID.

PPP USERNAME AND PASSWORD

If you selected **PPP over Ethernet (PPPoE)**, enter your PPP details and proceed to the **Network Address Translation Settings**.

NETWORK ADDRESS TRANSLATION SETTINGS

Enable NAT: Check this to enable the router to use NAT to assign IP addresses for your devices.

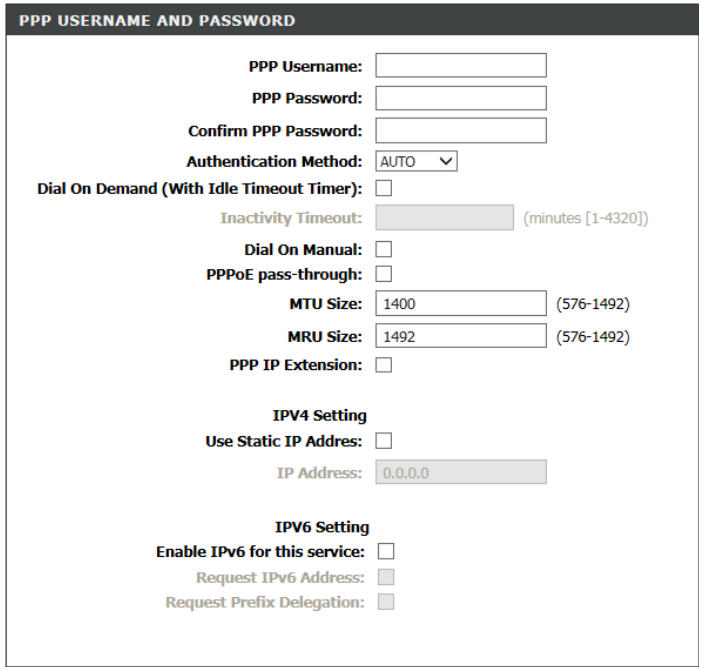
Enable Firewall: Check to enable the firewall.

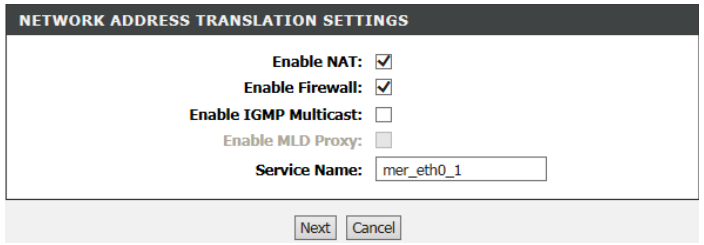
Enable IGMP Multicast: Check to enable IGMP Multicast.

Enable MLD Proxy: Check to enable the MLD proxy.

Service Name: Enter the service name.

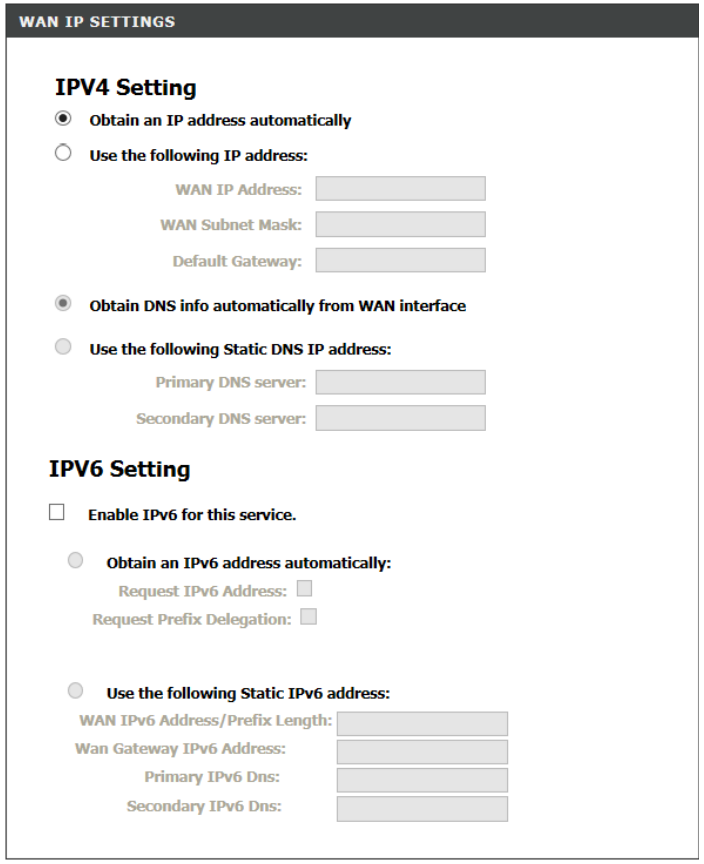
Click **Next** to continue.





WAN IP SETTINGS

If you selected **MAC Encapsulation Routing (MER)**, enter your IPv4 and/or IPv6 details and proceed to the **Network Address Translation Settings**.



NETWORK ADDRESS TRANSLATION SETTINGS

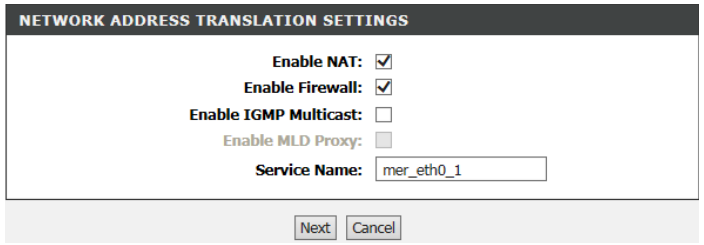
Enable NAT: Check this to enable the router to use NAT to assign IP addresses for your devices.

Enable Firewall: Check to enable the firewall.

Enable IGMP Multicast: Check to enable IGMP Multicast.

Enable MLD Proxy: Check to enable the MLD proxy.

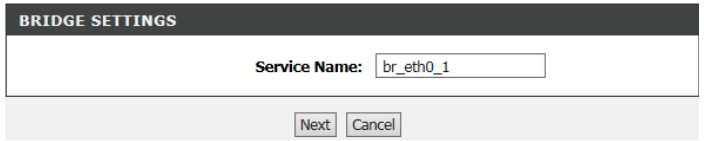
Service Name: Enter the service name.



Click **Next** to continue.

BRIDGE SETTINGS

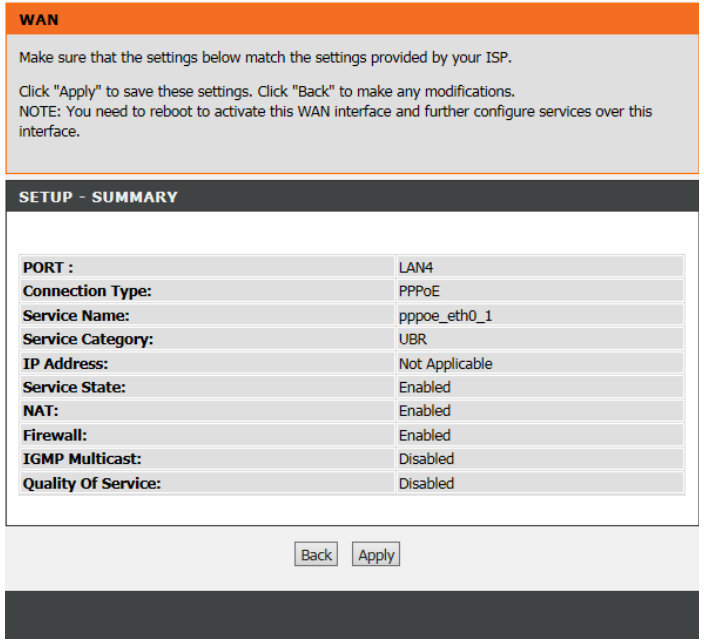
If you selected **Bridging**, confirm the **Service Name** and click **Next** to continue.



Click **Next** to continue.

Add Ethernet WAN Summary

Once you have input your Ethernet WAN settings, you will be presented with a summary screen. Click **Apply** to apply your Ethernet WAN settings or **Back** to make adjustments.



Add an ADSL WAN Connection

If you are adding an ADSL WAN connection you will be presented with the following configuration options.

ATM PVC CONFIGURATION

VPI: Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is between 0 and 255. Enter the correct VPI provided by your ISP. By default, VPI is set to 8.

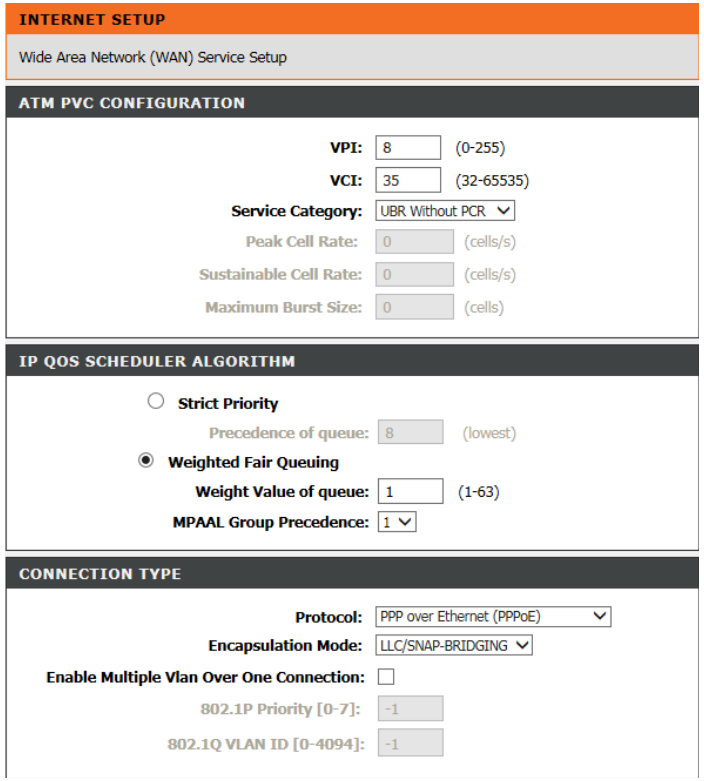
VCI: Virtual channel identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is between 1 and 65535. Enter the correct VCI provided by your ISP. By default, VCI is set to 8.

Service Category: Select the Quality of Service types for this Virtual Circuit. The ATM QoS types include CBR (Constant Bit Rate), VBR (Variable Bit Rate) and UBR (Unspecified Bit Rate). These QoS types are all controlled by the parameters specified below, including PCR, SCR and MBS.

Peak Cell Rate: Peak cell rate (PCR) is the maximum rate at which cells can be transmitted along a connection in the ATM network.

Sustainable Cell Rate: Sustainable cell rate (SCR) is the maximum rate that traffic can pass over PVC without the risk of cell loss.

Maximum Burst Size: Maximum burst size (MBS) is the maximum number of cells that can be transmitted at the PCR.



IP QOS SCHEDULER ALGORITHM

Select whether to use **Strict Priority** or **Weighted Fair Queuing**.

If you selected **Strict Priority**, enter the **precedence of the queue** (0-8).

If you selected Weighted Fair Queueing, enter the **Weight Value of the queue** and the **MPAAL Group Precedence**.

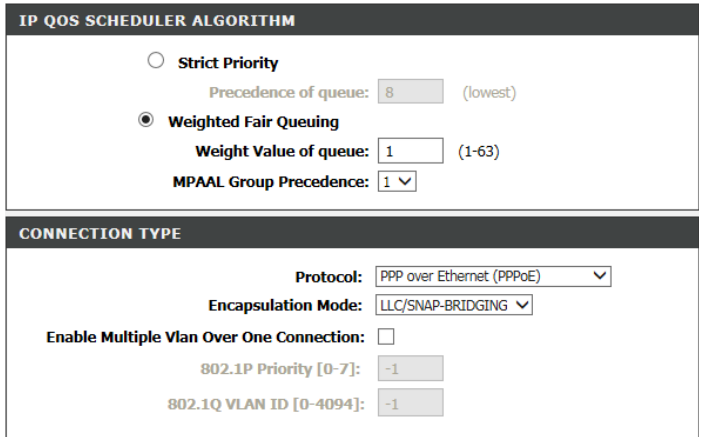
CONNECTION TYPE

Protocol: Select the protocol type **MAC Encapsulation Routing (MER)**, **PPP over Ethernet (PPPoE)**, or **Bridging** from the dropdown menu.

Multiple Vlan: If you wish to Enable Multiple Vlan Over One Connection, check the box.

802.1P Priority [0-7]: Enter the 802.1P priority number.

802.1Q VLAN ID [0-4094]: Enter the VLAN ID.



PPP USERNAME AND PASSWORD

If you selected **PPP over Ethernet (PPPoE)**, enter your PPP details and proceed to the **Network Address Translation Settings**.

NETWORK ADDRESS TRANSLATION SETTINGS

Enable NAT: Check this to enable the router to use NAT to assign IP addresses for your devices.

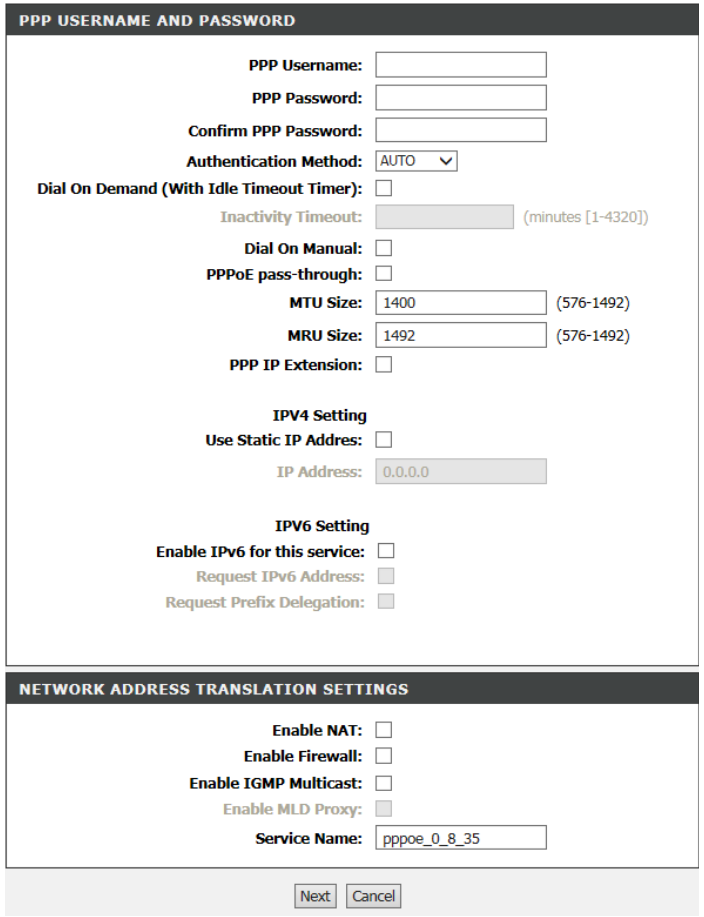
Enable Firewall: Check to enable the firewall.

Enable IGMP Multicast: Check to enable IGMP Multicast.

Enable MLD Proxy: Check to enable the MLD proxy.

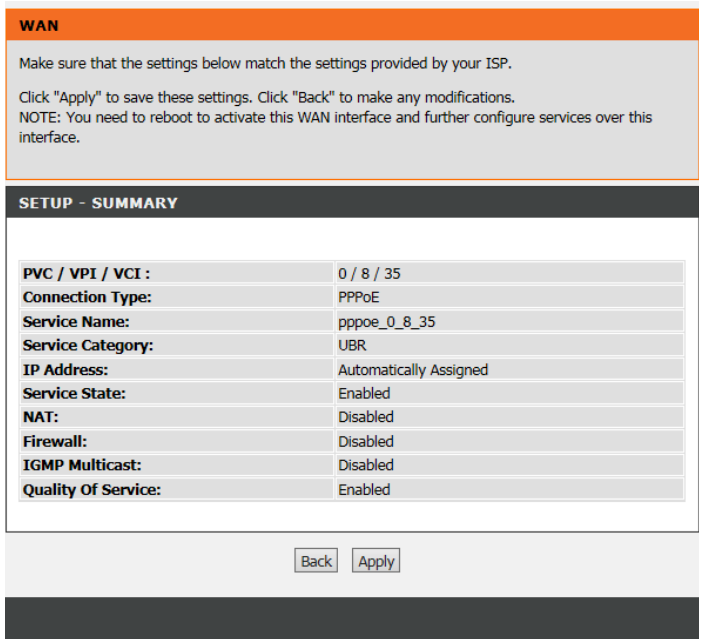
Service Name: Enter the service name.

Click **Next** to continue.



Add DSL WAN Summary

Once you have input your DSL WAN settings, you will be presented with a summary screen. Click **Apply** to apply your Ethernet WAN settings or **Back** to make adjustments.



Add a VDSL WAN Connection

If you are adding an VDSL WAN connection you will be presented with the following configuration options.

PTM CONFIGURATION

Select DSL Latency: Enable or disable **Fast** and **Interleaved** DSL latency settings.

IP QOS SCHEDULER ALGORITHM

Select whether to use **Weighted Round Robin** and **Weighted Fair Queing**.

Specify the **Default Queue Weight**, **Default Queue Precedence**, **VC WRR Weight**, and **VC Precendence.**

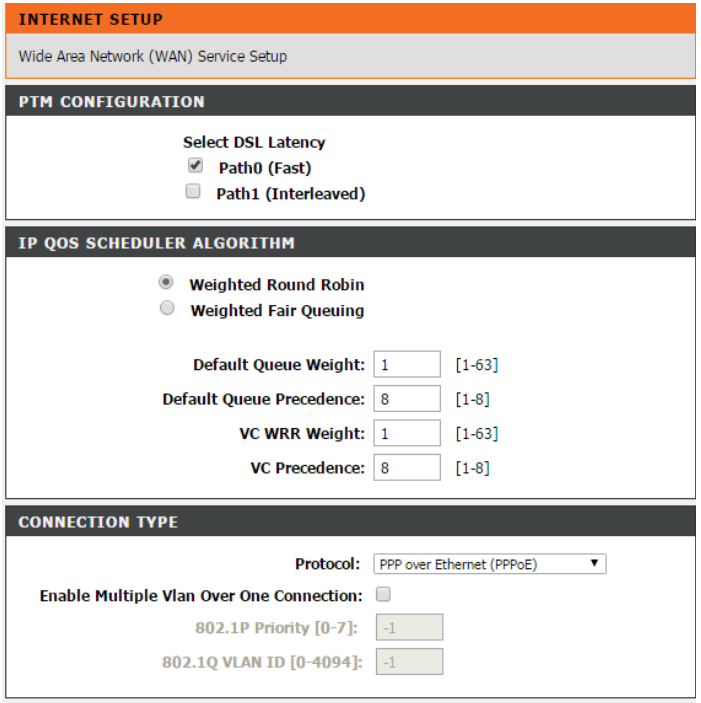
CONNECTION TYPE

Protocol: Select the protocol type **MAC Encapsulation Routing (MER)**, **PPP over Ethernet (PPPoE)**, or **Bridging** from the dropdown menu.

Enable Multiple Vlan Over One Connection Check the box to enable this feature.

802.1P Priority [0-7]: Enter the 802.1P priority number.

802.1Q VLAN ID [0-4094]: Enter the VLAN ID if Multiple VLAN is enabled.



PPP USERNAME AND PASSWORD

If you selected **PPP over Ethernet (PPPoE)**, enter your PPP details and proceed to the **Network Address Translation Settings**.

NETWORK ADDRESS TRANSLATION SETTINGS

Enable NAT: Check this to enable the router to use NAT to assign IP addresses for your devices.

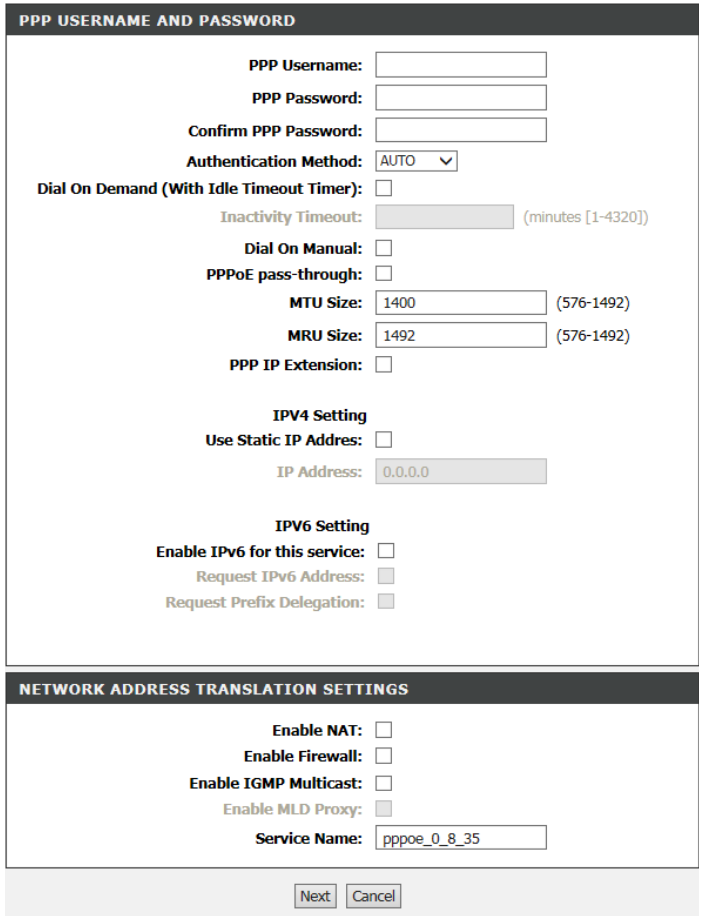
Enable Firewall: Check to enable the firewall.

Enable IGMP Multicast: Check to enable IGMP Multicast.

Enable MLD Proxy: Check to enable the MLD proxy.

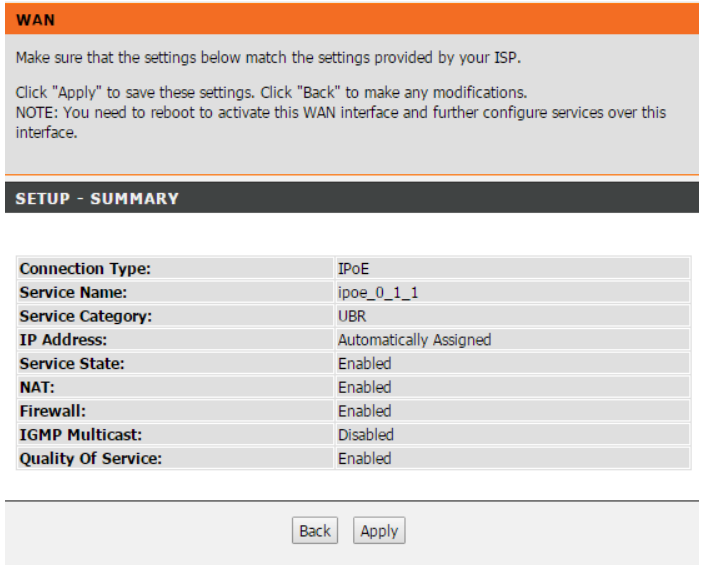
Service Name: Enter the service name.

Click **Next** to continue.



Add VDSL WAN Summary

Once you have input your DSL WAN settings, you will be presented with a summary screen. Click **Apply** to apply your Ethernet WAN settings or **Back** to make adjustments.



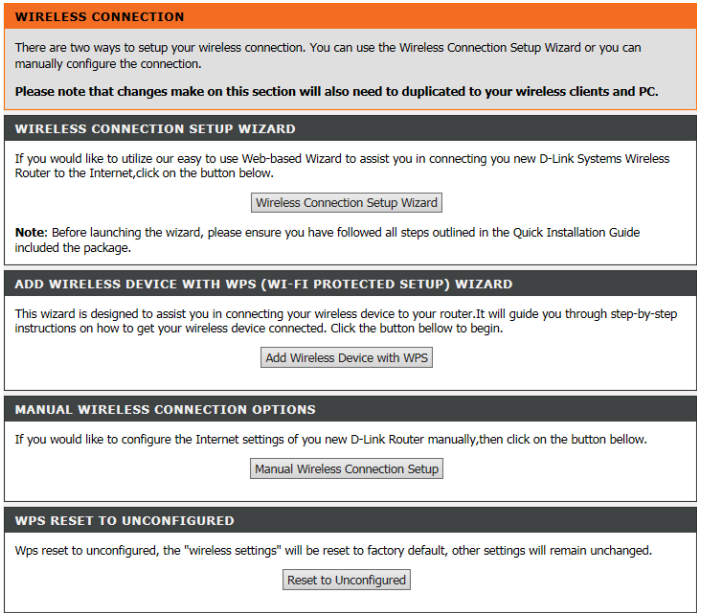
Wireless Connection

If you want to configure the wireless settings on your router using a guided wizard, click **Wireless Connection Setup Wizard**.

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

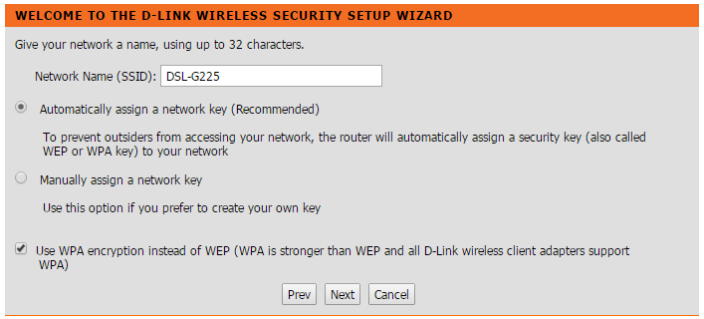
If you want to manually configure the wireless settings on your router, click **Manual Wireless Connection Setup**. Refer to **Wireless Basics** on page 36.

Finally, to reset the wireless configuration to the default settings, click **Reset to Unconfigured**.



Wireless Connection Setup Wizard

If you clicked **Wireless Connection Setup Wizard**, the opening screen of the wizard will be displayed.



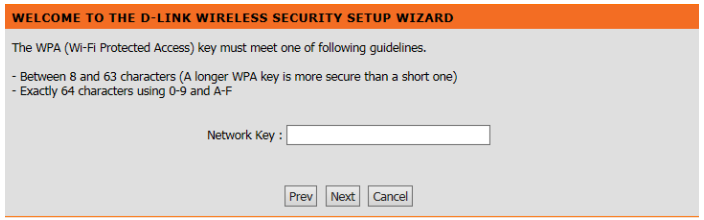
Enter a unique **Network Name (SSID)** to identify your network.

Choose either **Automatically assign a network key** and **Manually assign a network key**. Automatic is recommended.

Unless your clients do not support WPA encryption, it is recommended that you check **Use WPA encryption instead of WEP** as WPA encryption is more robust.

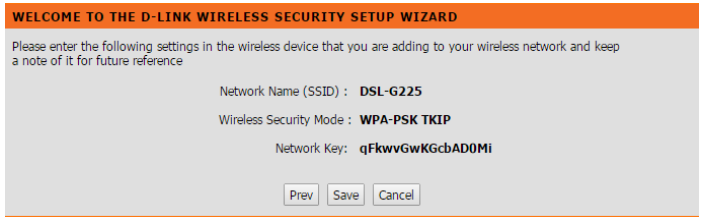
Click **Next** when you are done.

If you selected **Manually assign a network key**, you will be prompted to enter your own network key.



Enter a **Network Key** that adheres to the stated guidelines and click **Next**.

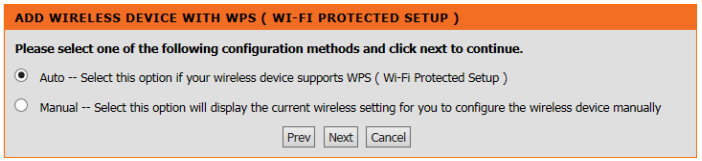
Finally, you will see a summary of your chosen wireless configuration.



If you are satisfied with these settings, click **Save**, or click **Prev** to go back and amend your choices.

Add Wireless Device with WPS

If you clicked **Add Wireless Device with WPS**, the opening screen of the Wi-Fi Protected Setup (WPS) wizard will be displayed.

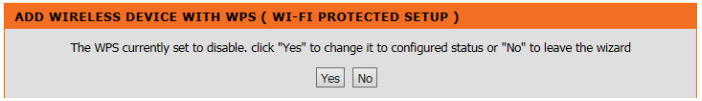


To connect a WPS client, select **Auto**.

If you select **Manual**, you will see a summary of your current wireless security settings. Clients will need to input these settings manually if they wish to connect to your wireless network.

Click **Next** to continue.

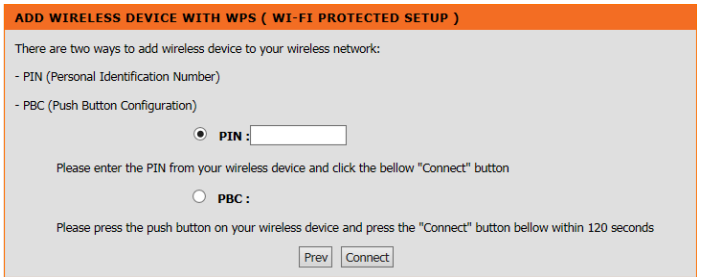
If you selected **Auto**, then if WPS is not already enabled you will be prompted to enable it. Click **Yes** to enable WPS.



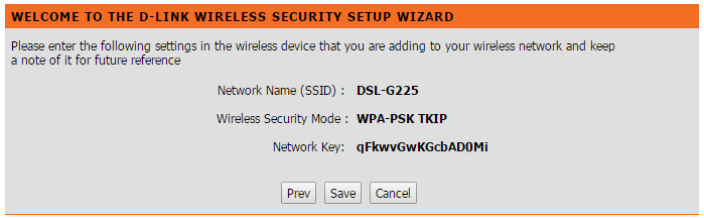
Choose whether you want to connect via Personal Identification Number (**PIN**) or Push Button Configuration (**PBC**).

If you selected **PIN**, simply enter your PIN of your wireless device.

Click **Connect** to proceed to the next step.



Press the button on your wireless client device within the indicated time period and wait for the connection to be established.



3G/4G Network

This page is used to configure a 3G/4G connection. If you want to access the Internet using a 3G connection, a 3G USB dongle is required. Refer to **Connecting a 3G/4G USB Dongle** on page 39 for more information.

3G/4G SETTINGS

Enable: Check the box to enable a 3G connection.

ISP SETTINGS

Country: Select the country you are operating the DSL-G225 in.

ISP: Select your mobile Internet Service Provider.

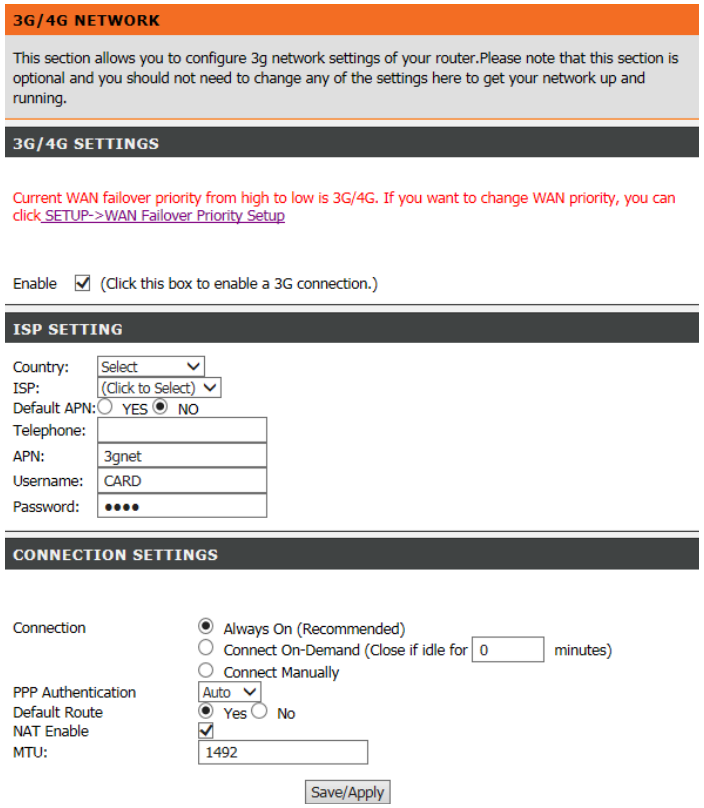
Default APN: Select whether to use the default APN.

Telephone: Enter the telephone number if applicable.

APN: Enter the APN.

Username: Enter your username if applicable.

Password: Enter your password if applicable.



CONNECTION SETTINGS

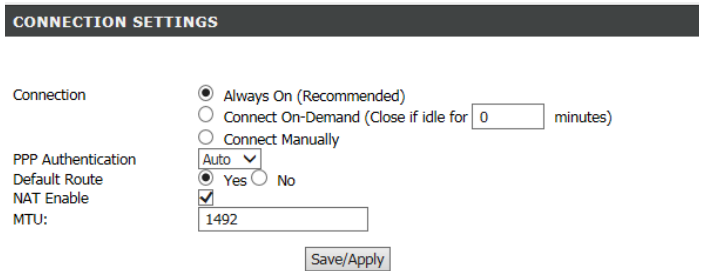
Connection: Select either **Always-on**, **On-Demand** and set the idle time, or **Connect Manually**. Mobile data charges may apply.

PPP Authentication: Select a proper authentication method in the drop-down list. You can select **Auto**, **PAP**, or **CHAP**.

Default Route: Select to use the **Default Route**.

NAT Enable: Check this to enable the router to use NAT to assign IP addresses for your devices.

MTU: If you experience connection issues, you may need to change the MTU setting for optimal performance with your specific ISP. 1492 is the default MTU.



Click **Save/Apply** when you are done.

Connecting a 3G/4G USB Dongle

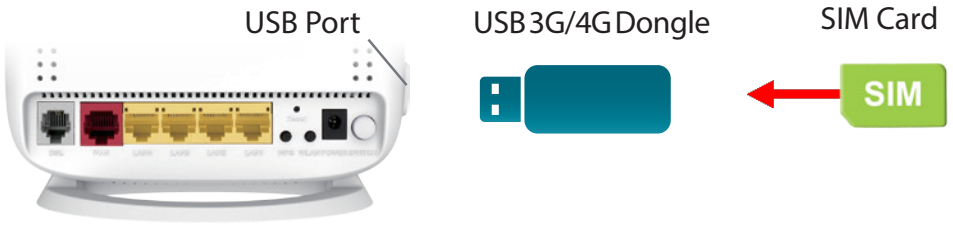
If you want to connect to the Internet using a 3G/4G connection on your DSL-G225, a 3G/4G USB dongle and SIM card with a subscription to a mobile ISP is required. The following 3G/4G USB dongles have been tested to work with firmware 1.0.2. Refer to **www.dlink.com** for the latest available firmware and information on compatible 3/4G USB dongles.

Manufacturer	Compatible USB Dongle Models			
ZTE	AC796			
Huawei	EC169	EC315	EC397	
D-Link	DWM-156 A3			

3G/4G Dongle Installation and Configuration

Step 1 - Refer to your USB dongle's documentation for SIM card installation instructions.

Step 2 - Connect your compatible 3G/4G USB dongle to the USB port on the DSL-G225. Confirm the USB light on the display panel is lit solid green.



Step 3 - Using the information provided by your ISP, navigate to **Setup** > **3G** in the web configuration utility to configure your connection. Refer to **3G/4G Network on page 41** for more information.

Step 4 - Navigate to **Status** > **Device Info** > **Internet Info** > **Enabled WAN Connections** to confirm your 3G/4G dongle is properly installed, configured, and connected to the Internet.

Step 5 - Navigate to **Setup** > **Failover** to configure your 3G/4G connection as either the primary link or backup connection. Refer to **Failover** on page 41 for more information.

Step 6 - Congratulations. Your 3G/4G USB dongle is now configured to work with your DSL-G225.

Failover

This section will allow you to configure your Internet failover priority. In the event that your primary Internet connection method fails, this device can automatically fall back to using a secondary connection in order to maintain Internet connectivity.

FAILOVER SETTINGS

Primary Uplink Select the primary Internet connection.

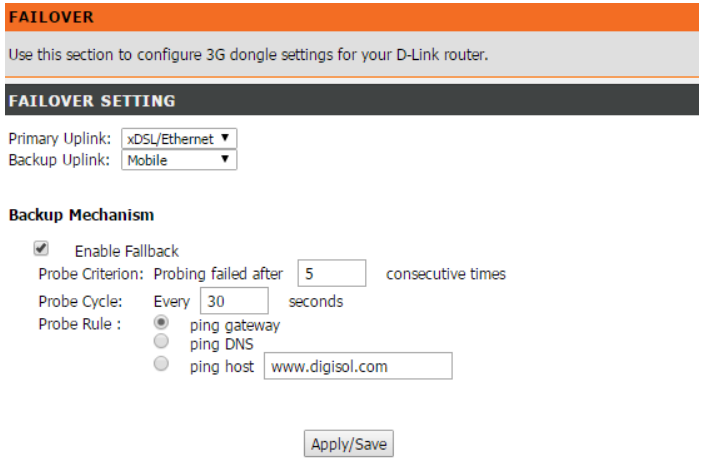
Backup Uplink: Select the backup Internet connection.

Enable Fallback: Check this box to enable Internet connection failover. The following options will appear:

Probe Criterion: Enable fallback to the backup connection after the allotted number of failures.

Probe Cycle: Test for Internet connectivity for the following interval.

Probe Rule: Select the method of testing for Internet connectivity.



Click **Save/Apply** when you are done.

Local Network

This optional section allows you to configure the local network and DHCP settings of your device. The DHCP service supplies IP settings to clients configured to automatically obtain IP settings that are connected to the device through the Ethernet port.

ROUTER SETTINGS

Interface Group: Select the interface group used locally by the router. Leave this as the default if you are not sure.

Router IP Address: Enter the IP address of the router. The default IP address is **192.168.1.1**. **Note:** If you change the IP address, once you click **Apply** you will need to enter the new IP address in your browser in order to access the configuration utility.

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

Configure the second IP Address...: If you wish to add another IP address to use to configure the router, check this box and enter the IP address and subnet mask.

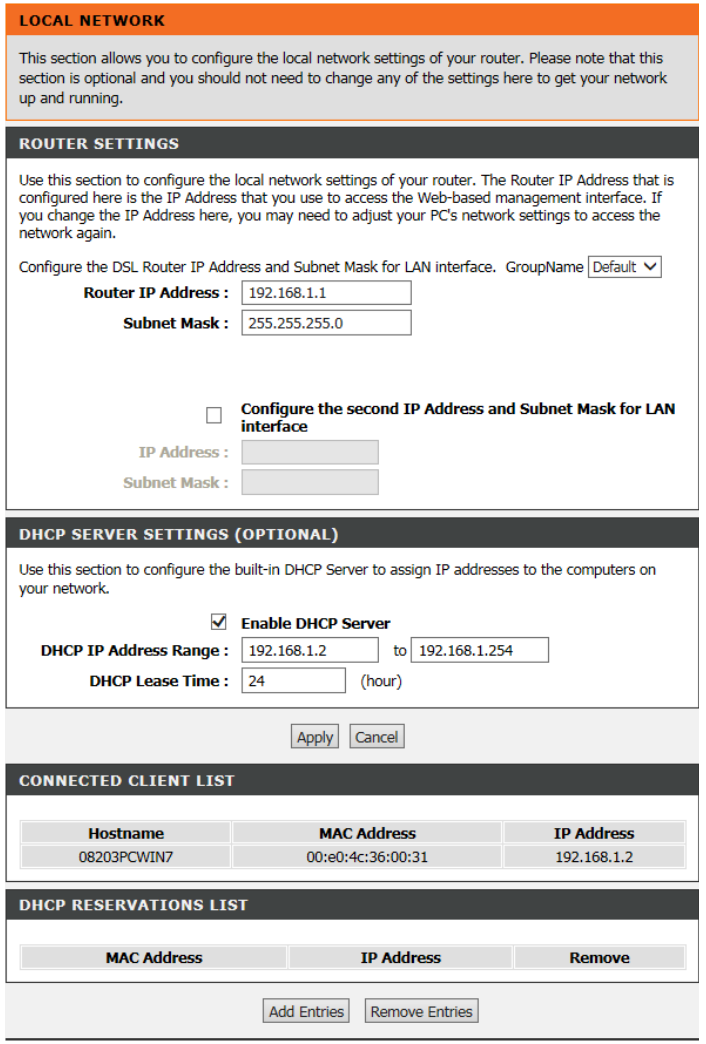
DHCP SERVER SETTINGS (OPTIONAL)

Enable/Disable DHCP Server: By default, DHCP is enabled. You can disable DHCP if required.

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

DHCP Lease Time: 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 experience an IP address conflict.

Click **Apply** when you are done.



CONNECTED CLIENT LIST

This table lists each DHCP client, including its hostname, MAC address, IP address, and expiration time.

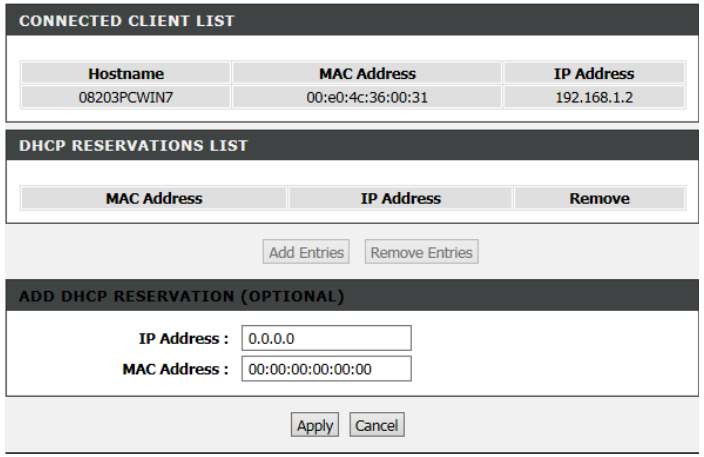
DHCP RESERVATIONS LIST

A list of DHCP reservations is displayed. Click **Remove Entries** to delete the selected reservation(s) and **Add Entries** to bring up the Add DHCP Reservation panel.

ADD DHCP RESERVATIONS (OPTIONAL)

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

MAC Address: Enter the MAC address of the computer or device. Click **Copy Your PC's MAC Address** to copy the MAC address of the computer you are currently using into the MAC address field.



Click **Apply** when you are done.

IPv6 Local Network

This section enables you to specify various IPv6 settings.

STATIC LAN IPV6 ADDRESS CONFIGURATION

Interface Address: Use this option to specify a static IPv6 Address.

STATIC LAN IPV6 ADDRESS CONFIGURATION

Enable DHCPv6 Server: Enable or disable the DHCPv6 server function.

LAN Address Config Mode: Select either stateless (host requests) or stateful (server provisions) LAN IPv6 addressing.

Start/End Interface ID: Enter the range of IP addresses the DHCPv6 server can issue from.

Leased Time: The lease time determines the period that the host retains the assigned IP addresses before the IP addresses change.

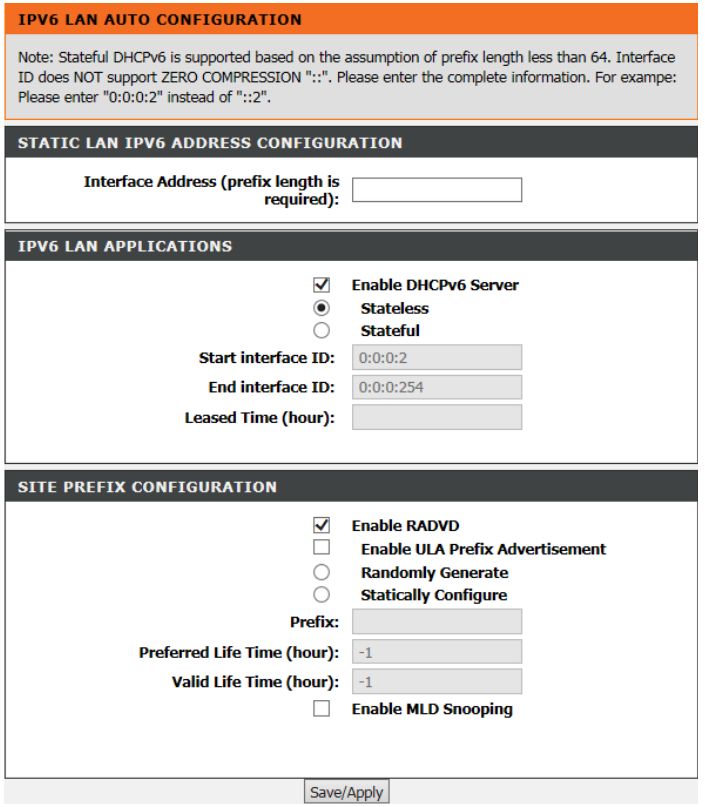
SITE PREFIX CONFIGURATION

Enable RADVD: Enable or disable the Router Advertisement Daemon.

Enable ULA Prefix Advertisement Select whether to enable ULA Prefix advertisement. If selected, choose to either **Randomly Generate** the ULA Prefix or **Statically Configure** the ULA Prefix by inputting the **Prefix**, **Preferred Life Time** in hours, and **Valid Life Time** in hours.

Enable MLD Snooping Select to enable Multicast Listener Discovery.

Click **Save/Apply** when you are done.



Time and Date

This section enables you to use an international time server to set the internal time and date for the router.

TIME SETTINGS

Automatically Synchronize: Enable or disable automatic synchronisation with an Internet Time Server.

1st NTP Time Server: Specify an address for the primary Internet Time Server.

2nd NTP Time Server: Specify an address for the secondary Internet Time Server.

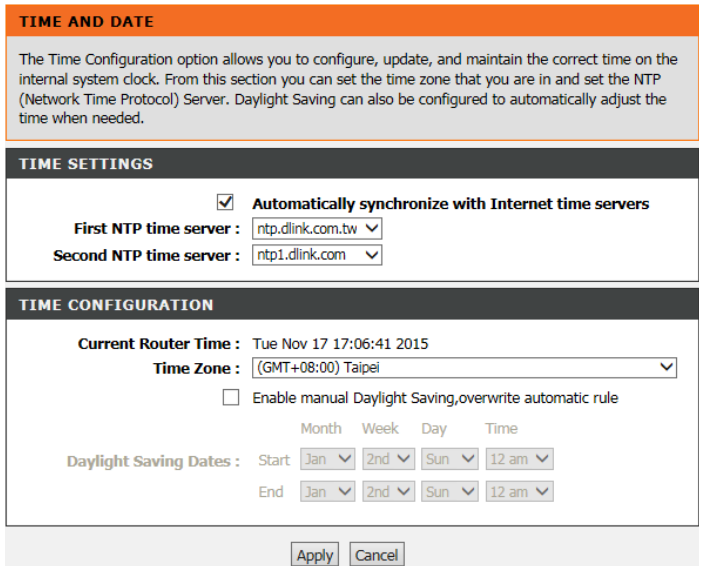
TIME CONFIGURATION

Current Local Time: Displays the current local time.

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

Enable Daylight Saving: Enable or disable daylight saving.

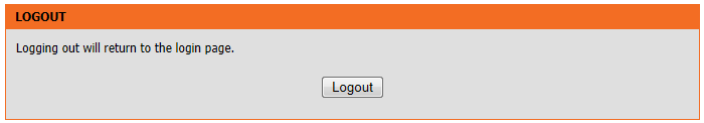
Daylight Saving Start/End: Specify the time and date when daylight saving should start/end.



Click **Apply** when you are done.

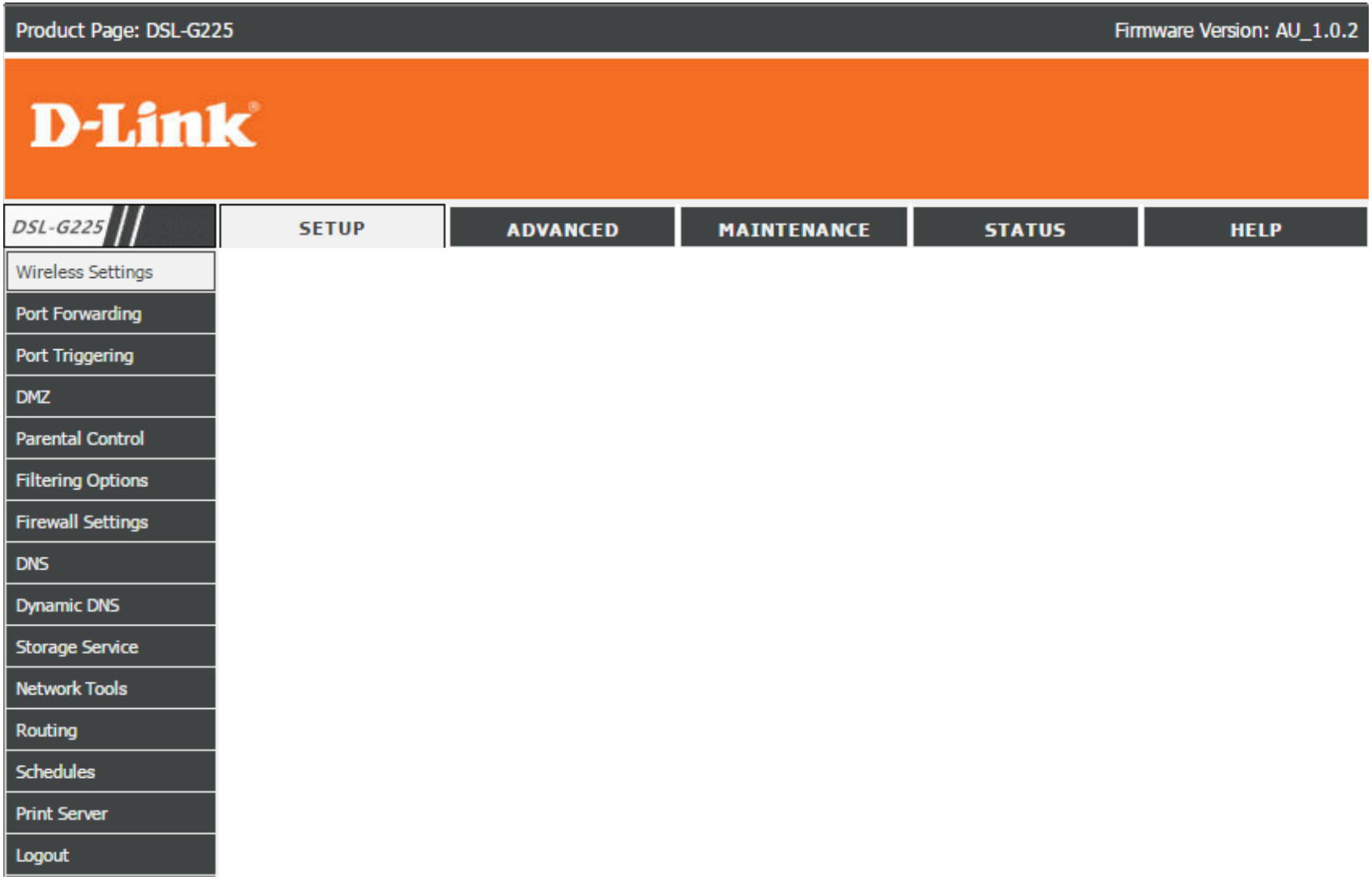
Logout

Click **Logout** when you are done configuring your router.



Advanced

The Advanced tab provides access to configure the less commonly used settings of your DSL-G225.



Wireless Settings

This page allows you to manually configure the router's wireless connectivity and security. For details, see **Wireless Connection** on page 49.

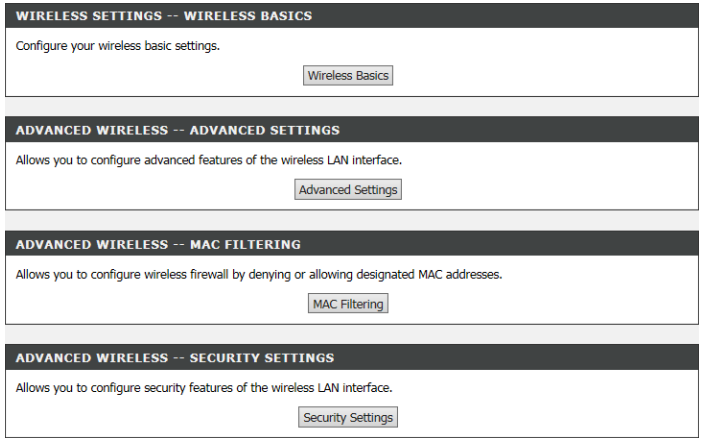
This page allows you to manually configure the router's wireless connectivity and security.

For basic wireless settings, click **Wireless Basics**.

For advanced wireless settings, click **Advanced Settings**.

To configure MAC address filtering, click **MAC Filtering**.

To configure the router's wireless security, click **Security Settings**.



Wireless Basics

WIRELESS NETWORK SETTINGS

Enable Wireless: Check this box to enable the router's wireless functionality. The **Wireless On/Off** button on the back of the DSL-G225 performs the same function.

Wireless Network Name (SSID): Create a name for your wireless network using up to 32 characters. The SSID is case-sensitive. Choose something for easy identification by wireless clients.

Visibility Status: **Visible** networks conveniently advertise their existence to devices looking for Wi-Fi networks to join. **Invisible**, or hidden, networks do not. To join an invisible network users must manually input its SSID.
Note: Making a network **Invisible** is not a form of security alone.

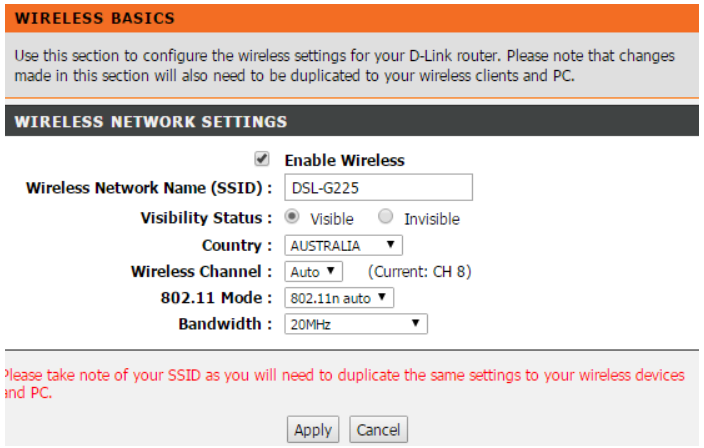
Country: Select the country in which your router resides. This will automatically configure the transmit power, frequencies, and available channels the router's wireless radios will use. This is based on the regulation provisions set by each country.

Wireless Channel: Select the desired channel you wish your wireless network to operate on. **Auto** is the default and recommended setting. The router will automatically select the clearest wireless channel available. The current channel in use is displayed to the right of the selection box.
Advanced users may wish to manually select a channel. This is typically for areas with a large number of wireless networks nearby, in order to improve wireless transmission.

802.11 Mode: Select from the desired 802.11 mode of operation you desire. **802.11n auto** is the default and recommended setting.

Bandwidth: Use the drop-down menu to select the channel bandwidth. **Auto** or **20 MHz** are the default and recommended settings.
Note: Not all wireless devices support 40 MHz bandwidth.

Click **Apply** when you are done.



Advanced Settings

ADVANCED WIRELESS SETTINGS

Multicast Rate: **Auto** is the default and recommended setting.

Fragmentation Threshold: **2346** is the default and recommended setting. Packets exceeding this threshold, in bytes, will be fragmented before transmission. Advanced users may wish to adjust this value to improve performance in the presence of radio frequency (RF) interference.

RTS Threshold: **2347** is the default and recommended setting. Advanced users may wish to make minor adjustments if data flow problems exist.

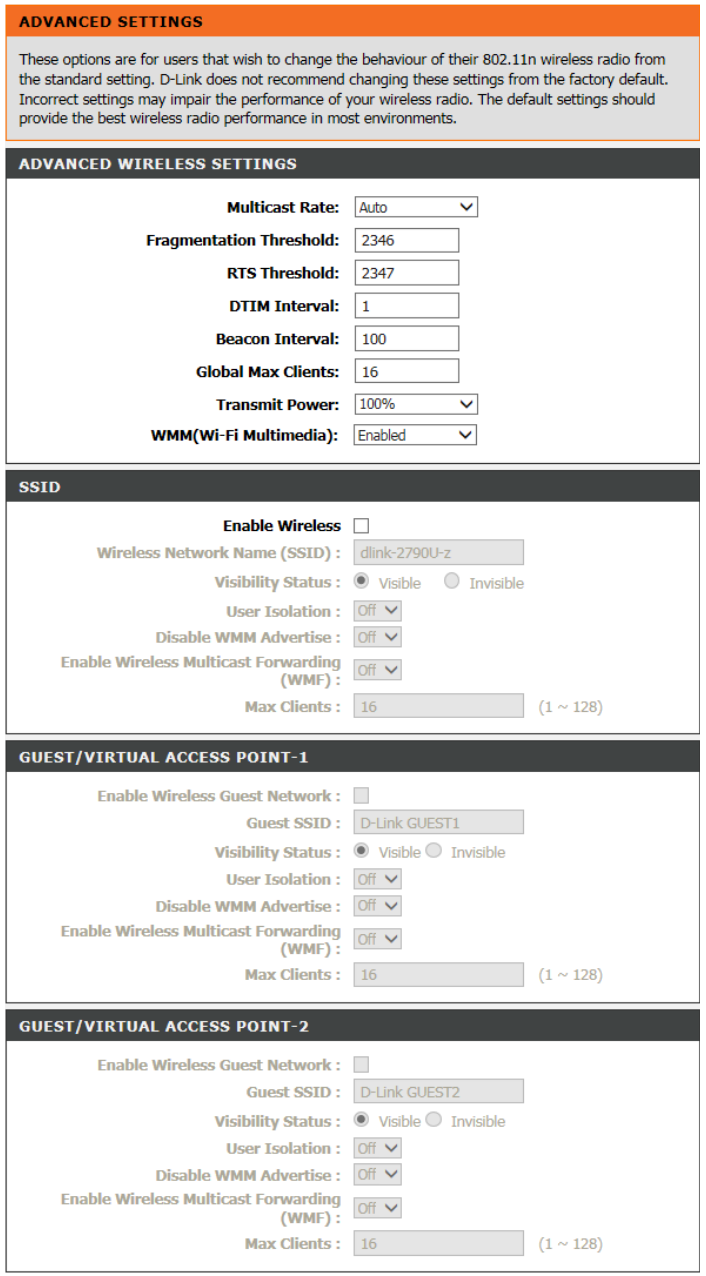
DTIM Interval: **1** is the default and recommended setting. Delivery traffic indication messages inform wireless clients of how often to listen for buffered multicast or broadcast data.

Beacon Interval: **100** is the default and recommended setting. Specify a value for the beacon interval. Beacons are packets sent to synchronize a wireless network.

Global Max Clients: **16** is the default and recommended setting. Specify the maximum number of wireless clients allowed to connect.

Transmit Power: **100%** is the default and recommended setting. You may set the transmit power from 20-100% in 20% increments.

WMM(Wi-Fi Multimedia): WMM (Wi-Fi Multimedia) is a QoS (Quality of Service) system for improving the quality of video and voice applications on your wireless network. **Enable** is the default and recommended setting.



SSID

Enable Wireless: Check this box to enable the router's wireless functionality. The **Wireless On/Off** button on the back of the DSL-G225 performs the same function.

Wireless Network Name (SSID): Create a name for your wireless network using up to 32 characters. The SSID is case-sensitive. Choose something for easy identification by wireless clients.

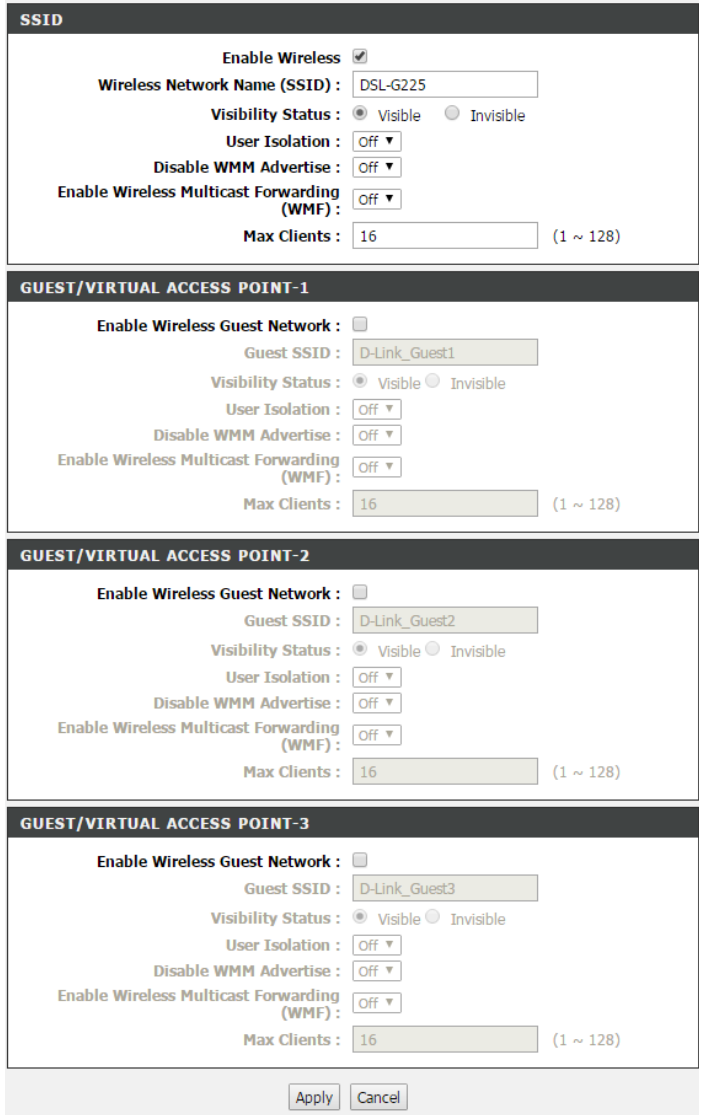
Visibility Status: **Visible** networks conveniently advertise their existence to devices looking for Wi-Fi networks to join. **Invisible**, or hidden, networks do not. To join an invisible network users must manually input its SSID. **Note:** Making a network **Invisible** is not a form of security alone.

User Isolation: **Off** is the default and recommended setting. Turning on user isolation will prevent wireless clients from communicating with each other. This may be desired if the DSL-G225 will be used in a public setting.

Disable WMM Advertise: WMM (Wi-Fi Multimedia) is a QoS (Quality of Service) system for improving the quality of video and voice applications on your wireless network.

Enable Wireless Multicast Forwarding (WMF): Enable or Disable Wi-Fi Wireless Multicast Forwarding (WMF). The transmission quality of video service such as IPTV may be improved with this option enabled.

Global Max Clients: **16** is the default and recommended setting. Specify the maximum number of wireless clients allowed to connect.



Click **Apply** when you are done.

GUEST/VIRTUAL ACCESS POINT 1-3

Enable Wireless Guest Network: Check **Enable** to create a guest wireless network. This network will be separate from your main wireless network.

Guest (SSID): Create a name for your wireless network using up to 32 characters. The SSID is case-sensitive. Choose something for easy identification by wireless clients.

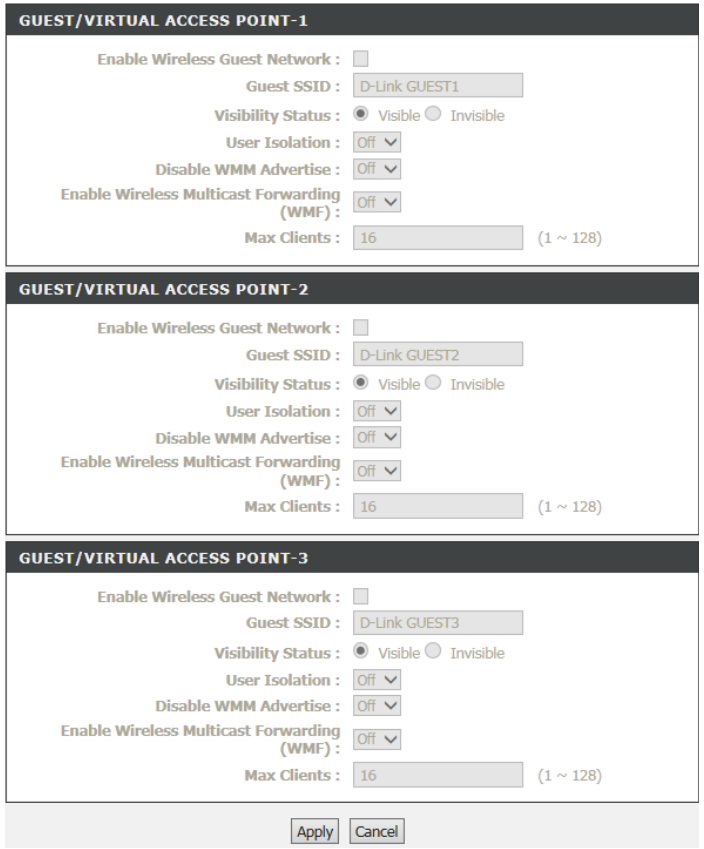
Visibility Status: **Visible** networks conveniently advertise their existence to devices looking for Wi-Fi networks to join. **Invisible**, or hidden, networks do not. To join an invisible network users must manually input its SSID.
Note: Making a network **Invisible** is not a form of security alone.

User Isolation: **Off** is the default and recommended setting. Turning on user isolation will prevent wireless clients from communicating with each other. This may be desired if the DSL-G225 will be used in a public setting.

Disable WMM Advertise: WMM (Wi-Fi Multimedia) is a QoS (Quality of Service) system for improving the quality of video and voice applications on your wireless network.

Enable Wireless Multicast Forwarding (WMF): Enable or Disable Wi-Fi Wireless Multicast Forwarding (WMF). The transmission quality of video service such as IPTV may be improved with this option enabled.

Global Max Clients: **16** is the default and recommended setting. Specify the maximum number of wireless clients allowed to connect.



Click **Apply** when you are done.

MAC Filtering

Check **Enable Wireless MAC Filtering Policy** to begin denying or allowing wireless access to a specific list of devices based on their MAC address.

WIRELESS MAC FILTERING LIST

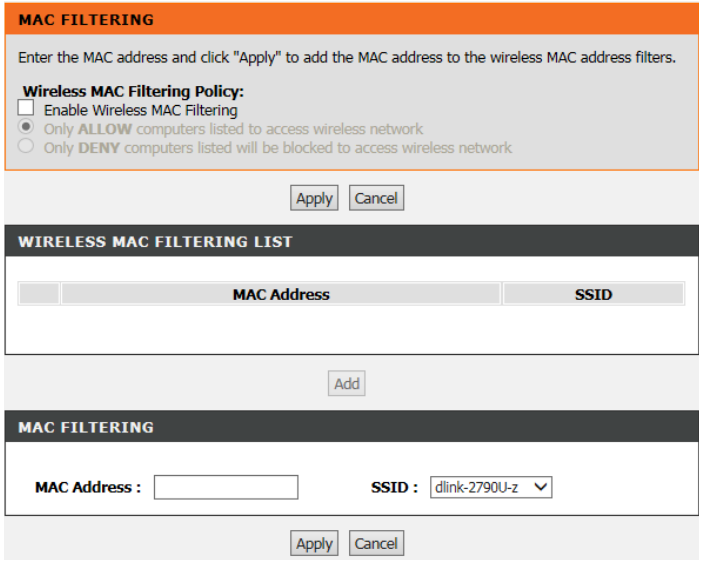
This list displays the current devices allowed or denied access (based on your selection above) to the specified wireless network.

Click **Add** to add a device to the list.

MAC FILTERING

Enter the **MAC Address** of the device you wish to add to the list along with the SSID you wish to apply the rule to. You may specify the SSID from the drop down box.

Click **Apply** to add the rule to the list.



Security Settings

This page allows you to manually configure the router's wireless security settings. The page will change depending on the selected authentication type.

WPS SETUP

Enable WPS: If you want to enable Wi-Fi Protected Setup (WPS), select **Enable** from the drop-down menu.

Add Client: Select the desired WPS connection method, and click **Add Enrollee** to add a new device using WPS. See **Add Wireless Device with WPS** on page 55 for more details.

Set WPS AP Mode: Select the desired WPS AP mode.

Device PIN: If applicable, enter the WPS PIN.

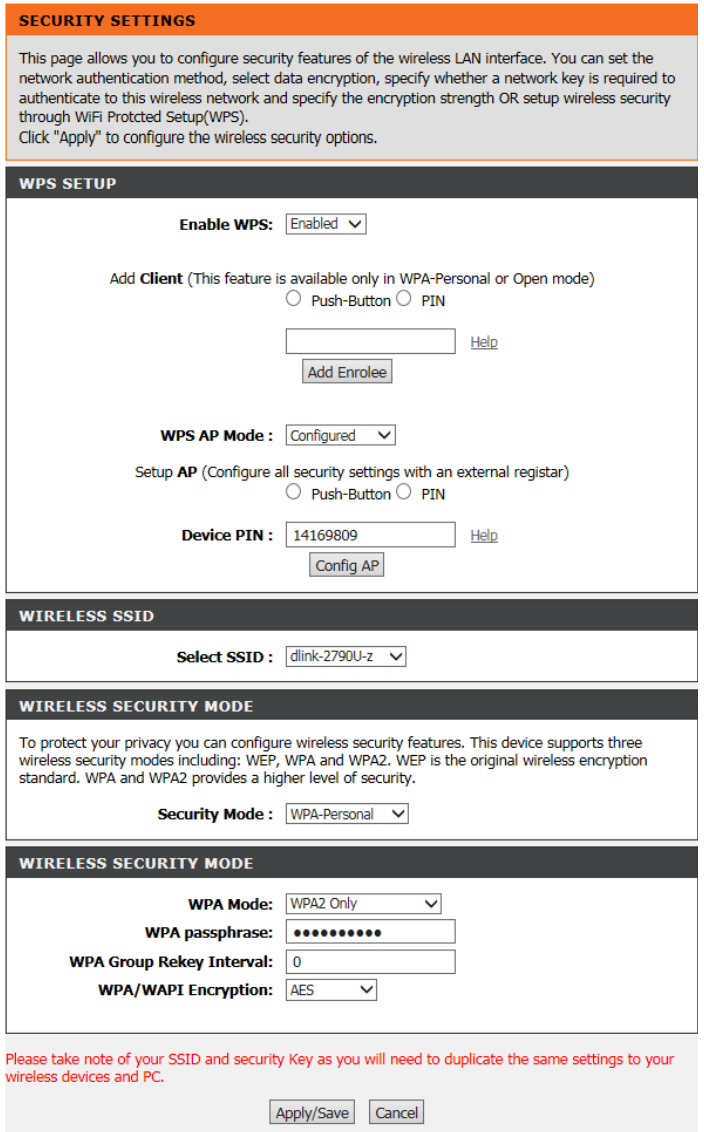
WIRELESS SSID

Select SSID: Select your wireless SSID.

WIRELESS SECURITY MODE

Network Authentication: Select the desired security type. The remaining settings on the page will change depending on the type you select. Fill out these settings as required.

Click **Apply** when you are done.

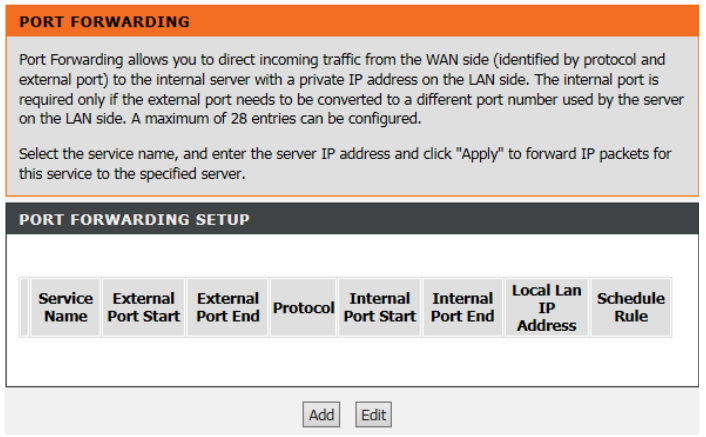


Port Forwarding

This page allows you to manually configure the router's Port Forwarding settings.

This function is used to open ports in your device and re-direct data through those ports to a single PC on your network (WAN-to-LAN traffic). It allows remote users to access services on your LAN, such as FTP for file transfers or SMTP and POP3 for e-mail. The device accepts remote requests for these services at your global IP address. It uses the specified TCP or UDP protocol and port number, and redirects these requests to the server on your LAN with the LAN IP address you specify. Note that the specified private IP address must be within range.

On this page you will see a list of current port forwarding configurations. Click **Add** to add a virtual server.



PORT FORWARDING SETUP

This list displays the currently forwarded ports.

Click **Add** to add a new rule or **edit** to edit an existing rule.

PORT FORWARDING

WAN Connection: Select the interface to use with the rule.

Select a Service: Select an service for a preset application or enter a name in Custom Server.

Schedule: Select a schedule or choose **Always**.

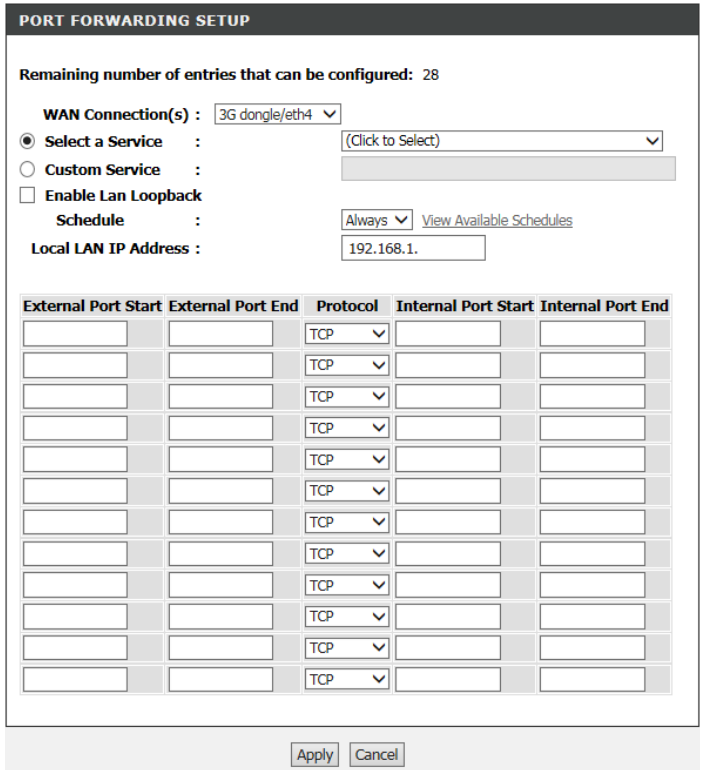
Server IP Address: Enter an IP address to appoint the corresponding client to receive forwarded packets.

External Port Start/End: Enter the external port(s).

Protocol: Select **TCP** or **UDP**.

Internal Port Start/End: Enter the internal port(s).

LAN Loopback: Check the box to enable the LAN loopback feature.



Click **Apply** when you are done.

Port Triggering

This page allows you to manually configure the router's Port Triggering settings.

PORT TRIGGERING

On this page you will see a list of current port forwarding configurations. Click **Add** to add a port trigger

Use Interface: Select the interface to use with the rule.

Select an application: Select an application you want to setup for port triggering or enter a name in Custom application.

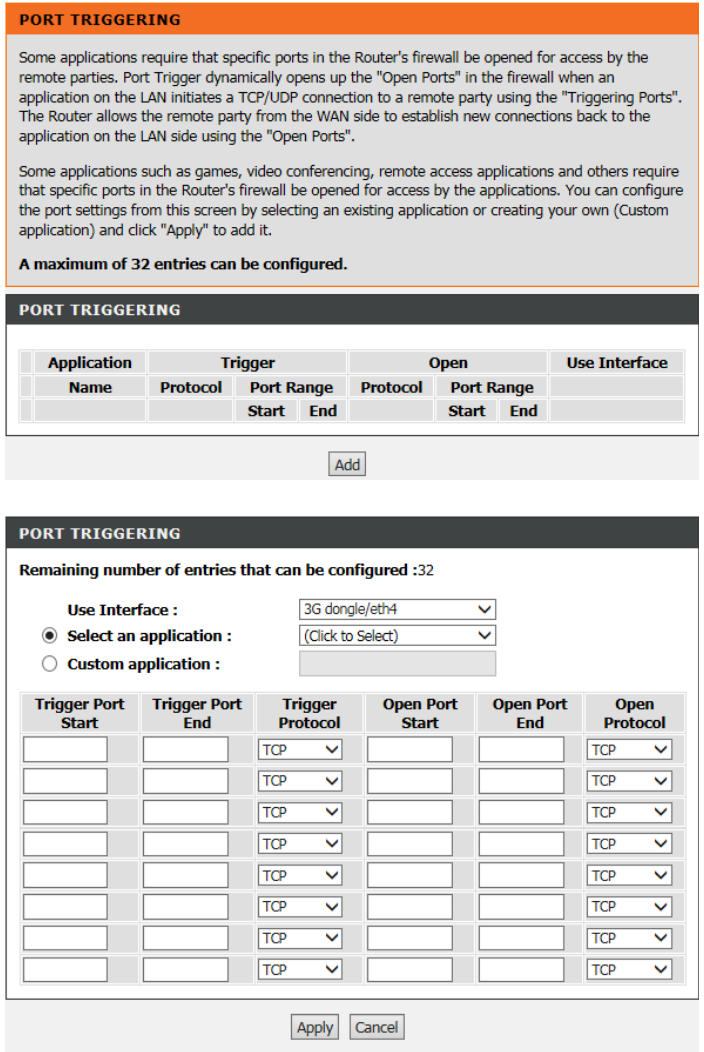
Schedule: Select a schedule or choose Always.

Trigger Port Start/ End: Enter the trigger port(s).

Trigger Protocol: Select TCP or UDP.

Open Port Start/ End: Enter the port(s) to open.

Click **Apply** when you are done.

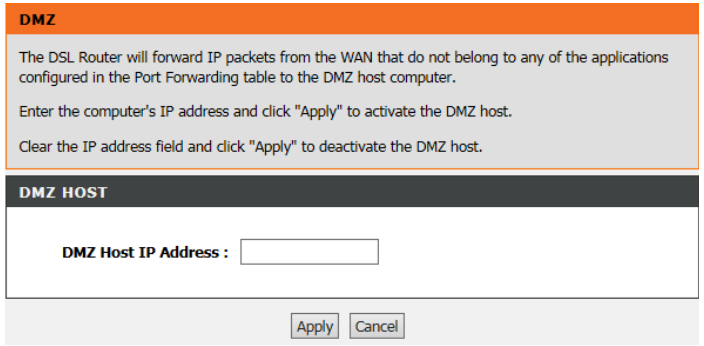


DMZ

This page allows you to manually configure the router's DMZ settings.

To configure a DMZ host, enter the **DMZ Host IP Address**. If the field is blank, then no DMZ will be configured.

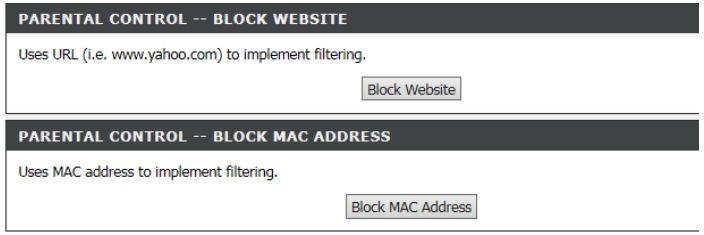
Click **Apply** when you are done.



Parental Control

This page allows you to manually configure the router's Parental Control settings.

This page provides two useful tools for restricting the Internet access. **Block Websites** allows you to quickly create a list of all websites that you wish to stop users from accessing. **Block MAC Address** allows you to control when clients or PCs connected to the device are allowed to access the Internet.



To set controls based on URL, click **Block Website**.

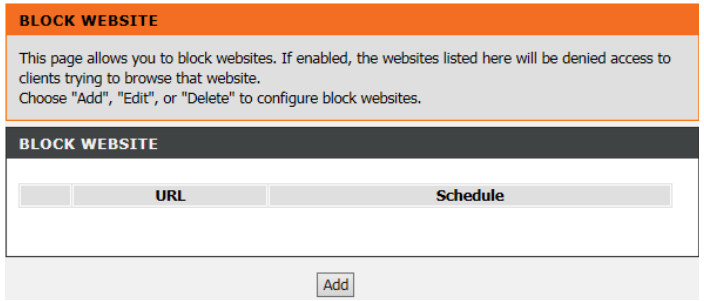
To set controls based on MAC address, click **Block MAC Address**.

Block Website

BLOCK WEBSITE

Displays a list of currently blocked URLs and their schedule.

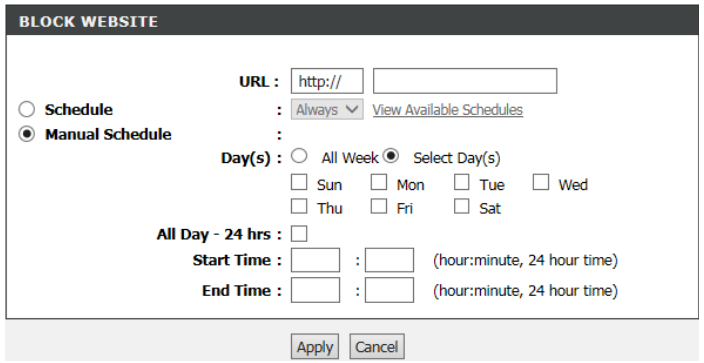
Click **Add** to add a website to the blocked list.



BLOCK WEBSITE

Enter the website to be blocked in the **URL** field. Select the **Schedule** from the drop-down list, or select **Manual Schedule** and input the desired schedule.

Click **Apply** to add the website to the blocked list.

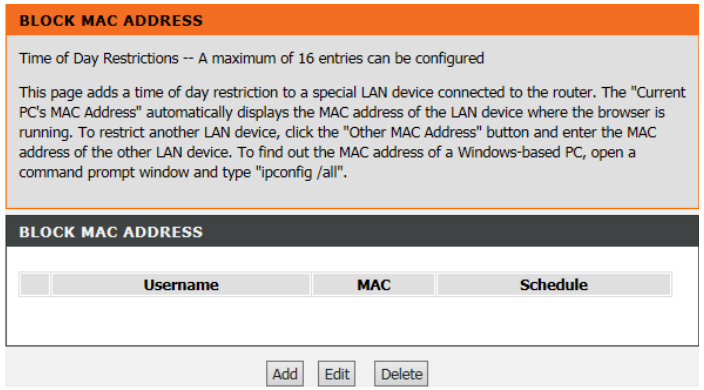


Block MAC Address

BLOCK MAC ADDRESS

Displays a list of currently blocked MAC Addresses and their schedule.

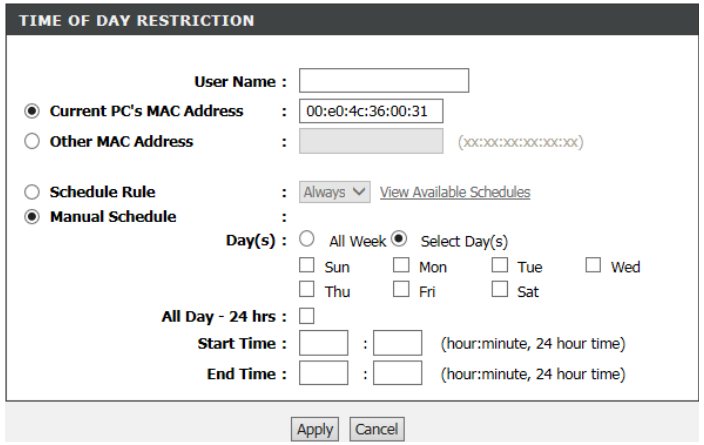
Click **Add** to add a new restriction.



TIME OF DAY RESTRICTION

Enter a **User Name** for the blocked user. Select either the **Current PC's MAC Address** or an **Other MAC Address** (which you will need to input into the text field). Enter the desired schedule for the restriction below.

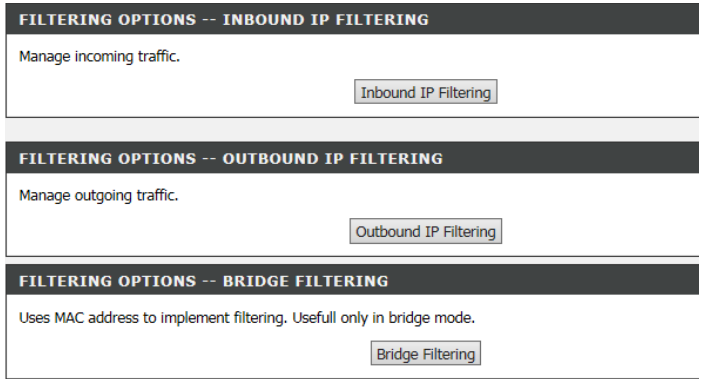
Click **Apply** to add the MAC Address to the blocked list.



Filtering Options

This page allows you to manually configure the router's Filtering settings.

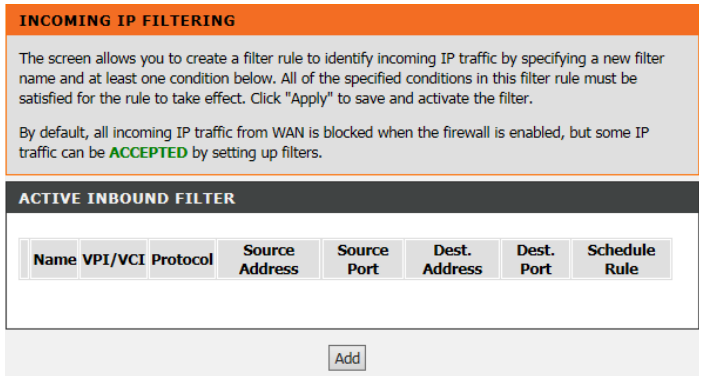
Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). The Filtering Options section is an advanced option that lets you configure what kind of traffic is allowed to pass through the network.



Incoming IP Filtering

The screen allows you to create a filter rule to identify incoming IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

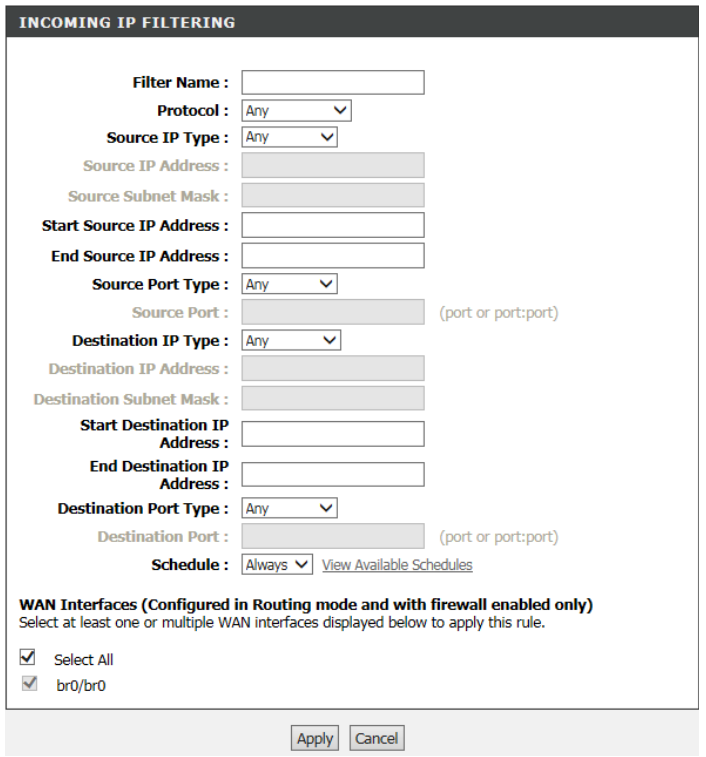
By default, all incoming IP traffic from WAN is blocked when the firewall is enabled, but some IP traffic can be ACCEPTED by setting up filters.



ACTIVE INBOUND IP FILTERING.

The current active inbound IP filters will be listed here.

Click **Add** to add a new rule to the inbound filter list.



INCOMING IP FILTERING.

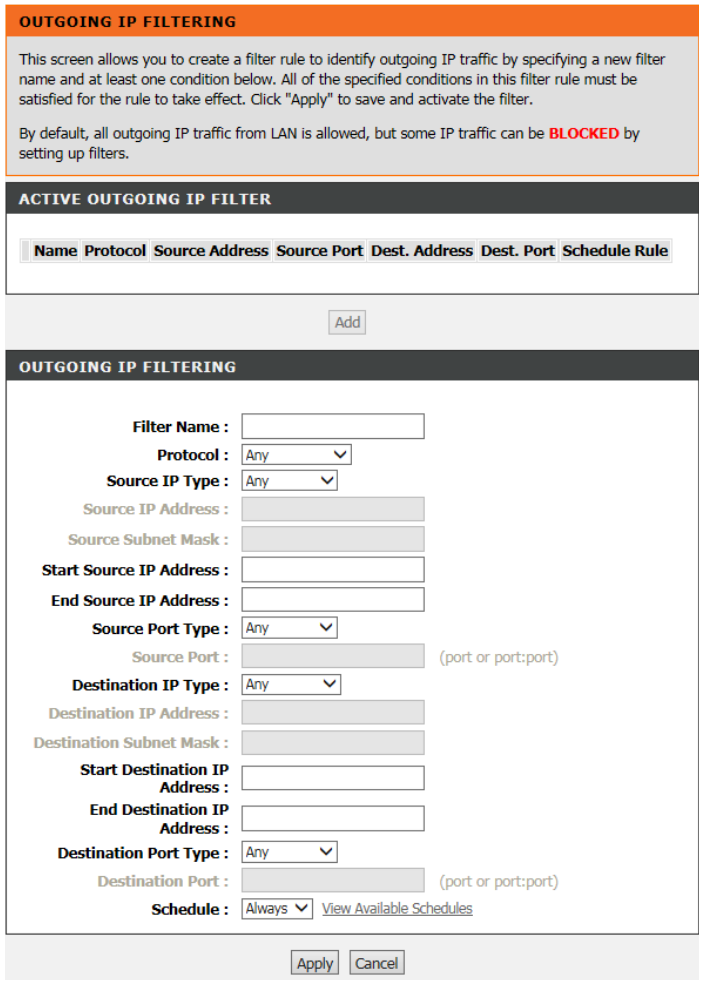
Enter the incoming IP filter rules.

Click **Apply** when you are done.

Outgoing IP Filtering

This screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect.

By default, all outgoing IP traffic from LAN is allowed, but some IP traffic can be BLOCKED by setting up filters.



ACTIVE OUTGOING IP FILTERING.

The current active outgoing IP filters will be listed here.

Click **Add** to add a new rule to the outgoing filter list.

OUTGOING IP FILTERING.

Enter the outgoing IP filter rules.

Click **Apply** when you are done.

Bridge Filtering

Bridge Filtering only effects ATM PVCs configured for Bridge mode. ALLOW means that all MAC layer frames will be ALLOWED except those matching with any of the specified rules in the following table. DENY means that all MAC layer frames will be DENIED except those matching with any of the specified rules in the following table.

Set the Bridge Filtering Global Policy to either **ALLOW** or **DENY** the following rules. Click **Apply** after changing the setting.

BRIDGE FILTER SETUP

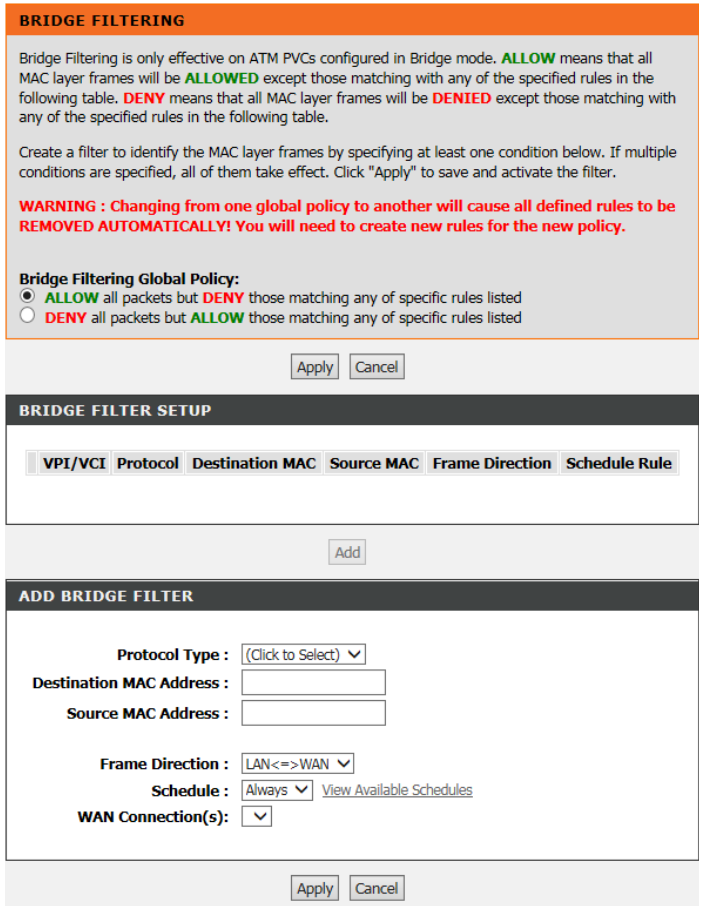
The current active bridge filters will be listed here.

Click **Add** to add a new rule to the bridge filter list.

ADD BRIDGE FILTER

Enter the Bridge Filter rules.

Click **Apply** when you are done.



Firewall Settings

The router's firewall protects your network from malicious Denial of Service (DoS) attacks over the Internet. If you suspect your network to be the target of a DoS attack you may enable these.

FIREWALL CONFIGURATION

Enable Attack Prevent: Select the interface to use with the rule.

ICMP Echo: Check to enable ICMP echo protection.

Fraggle: Check to enable UDP echo (port 7) protection.

Echo Chargers: Check to enable UDP character generator (port 19) protection.

IP Land: Check to enable Local Area Network Denial attack protection.

Port Scan: Check to enable Port Scan protection.

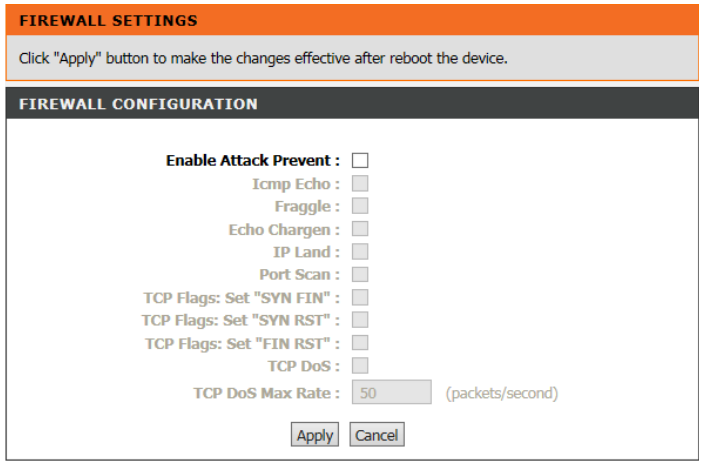
TCP Flags: "SYN FIN": Check to enable SYN FIN protection.

TCP Flags: "SYN RST": Check to enable SYN RST protection.

TCP Flags: "FIN RST": Check to enable FIN RST protection.

TCP DoS Check to enable TCP DoS protection.

TCP DoS Max Rate: Enter the maximum number of packets per second to prevent DoS attacks.

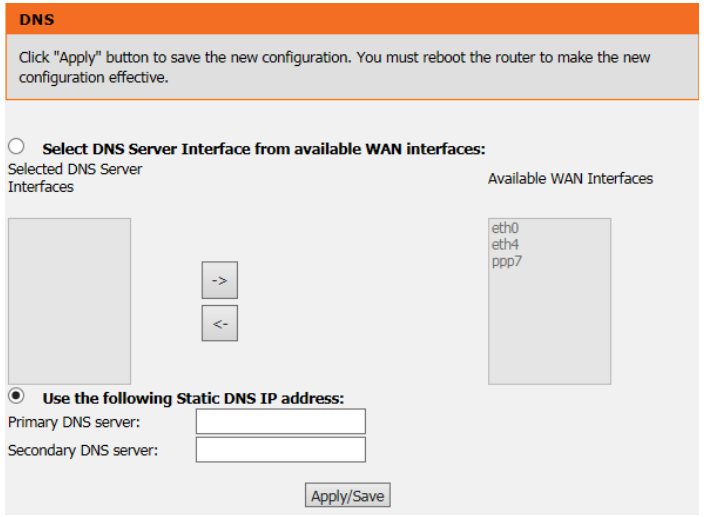


Click **Apply** when you are done.

DNS

This page allows you to manually configure the router's DNS settings.

Domain Name System (DNS) is an Internet service that translates domain names into IP addresses. Because domain names are alphanumeric, they are easier to remember. The Internet, however, is actually based on IP addresses. Each time you use a domain name, a DNS service must translate the name into the corresponding IP address. For example, the domain name www.example.com might be translated to 198.105.232.4.



The DNS system is, in fact, its own network. If one DNS server does not know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

If you are using the device for DHCP service on the LAN or if you are using DNS servers on the ISP network, select **Obtain DNS Info from a WAN interface**.

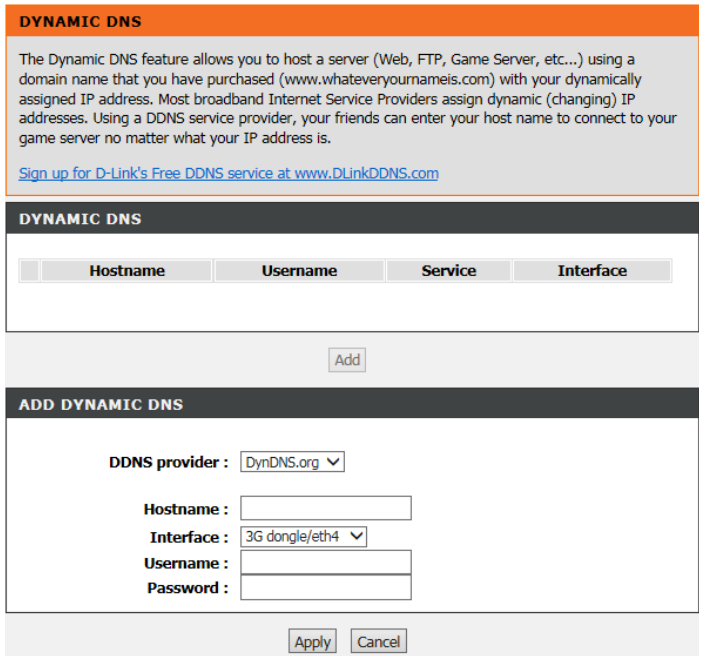
If you have DNS IP addresses provided by your ISP, select **Use the following DNS server addresses** and enter these IP addresses in the available entry fields of the **Preferred DNS server** and the **Alternate DNS server**.

Click **Apply** when you are done.

Dynamic DNS

This page allows you to manually configure the router's Dynamic DNS settings.

The DDNS (Dynamic Domain Name System) feature allows you to host a server (e.g. a Web, FTP, or game server) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your domain name to connect to your server no matter what your IP address is.



DYNAMIC DNS

This list displays the current dynamic DNS settings including the hostname, username, DNS service provider, and the interface the account is associated to.

Click **Add** to add a Dynamic DNS account.

ADD DYNAMIC DNS

DDNS provider: Select one of the Dynamic DNS organizations from the menu.

Hostname: Enter the hostname you registered with the Dynamic DNS provider.

Interface: Select the appropriate interface.

Username: Enter the username for your Dynamic DNS account.

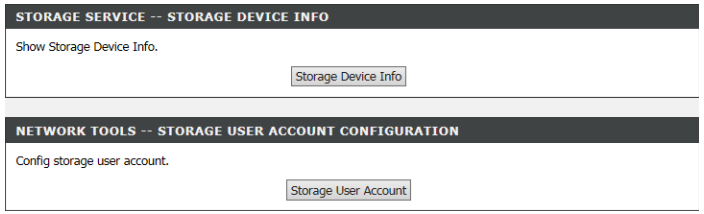
Click **Apply** when you are done.

Storage Device Information

The Storage Service allows you to remotely access storage devices connected to your router.

To view information about connected storages, click **Storage Device Info**.

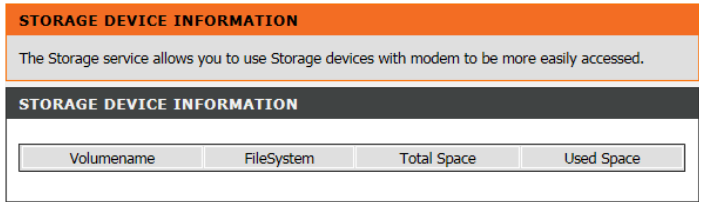
To configure user accounts to manage storage, click **Storage User Account**.



Storage Device Information

STORAGE DEVICE INFORMATION

Storage Device Info displays a detailed list of connected storage devices.

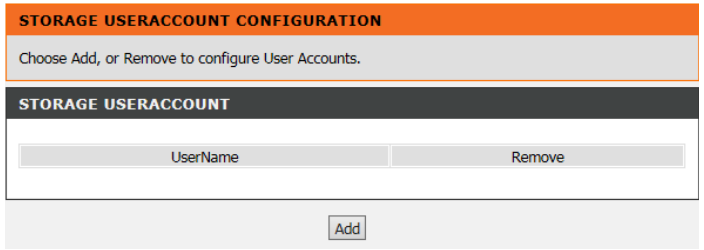


Storage User Account

STORAGE USER ACCOUNT

Storage User Account allows you to add or remove an account.

Click **Add** to add a Storage User Account.



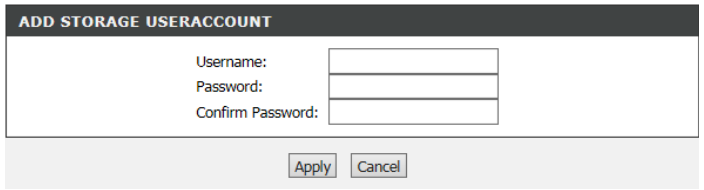
ADD STORAGE USER ACCOUNT

Username: Enter the username for your Storage User Account.

Password: Enter the password for your Storage User Account.

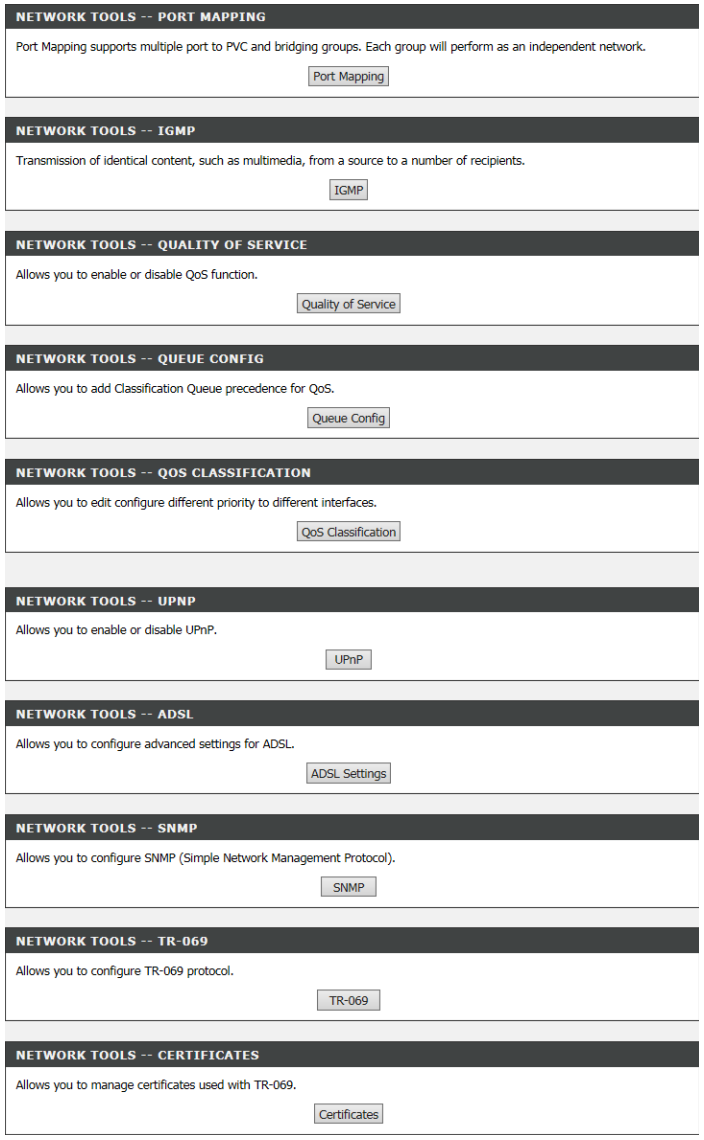
Confirm Password: Re-enter the password for your Storage User Account.

Click **Apply** to add the Storage User Account.



Network Tools

This page allows you to configure the device's routing settings. Clicking each button will take you to a new page to configure the relevant network tools category.

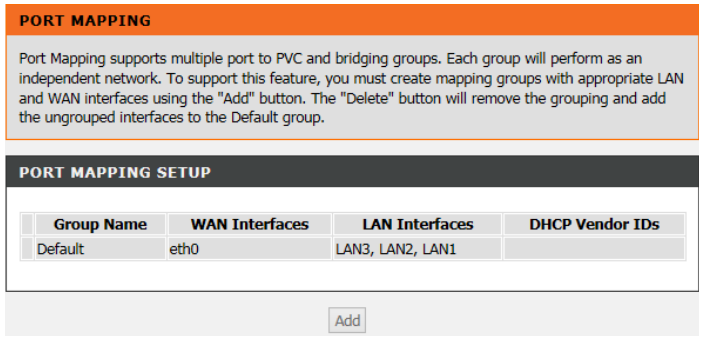


Port Mapping

PORT MAPPING SETUP

To configure WAN and LAN interfaces groupings, click **Port Mapping**.

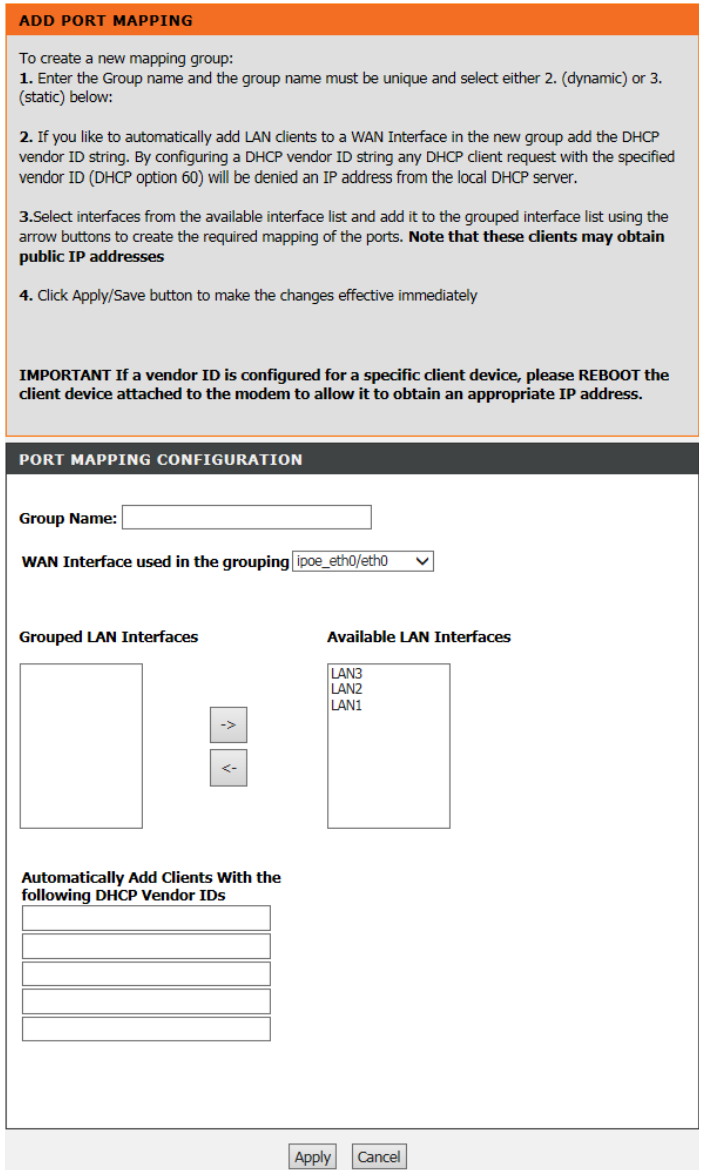
A list of the currently-configured groups will appear. Click **Add** to bring up the Add Port Mapping panel.



PORT MAPPING CONFIGURATION

Enter the **Group Name**. Next, select a **WAN Interface** you wish to use for the group. Finally, from the **Available LAN Interfaces** box, click the left arrow to move any LAN interfaces you want to include in the group into the **Grouped LAN Interfaces** box.

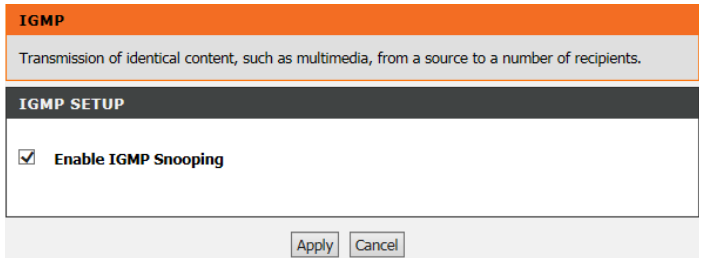
Click **Apply** when you are done.



IGMP

IGMP SETUP

Check the box to enable Internet Group Management Protocol (IGMP) snooping for extra network traffic security.



Click **Apply** when you are done.

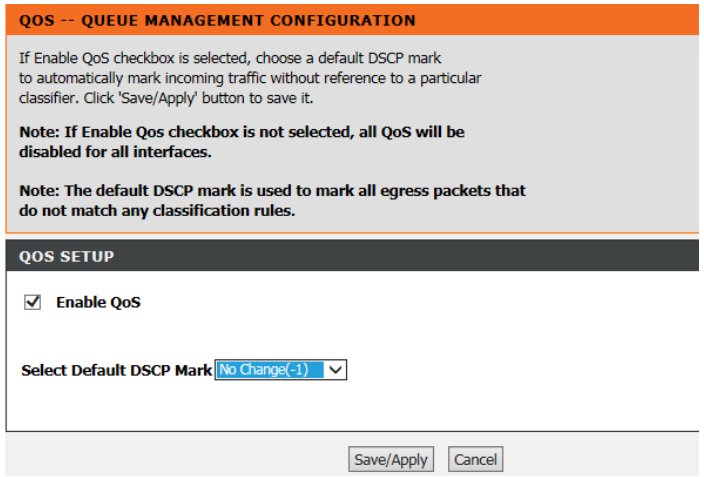
Quality of Service

QOS SETUP

To enable Quality of Service (QoS), click Quality of Service.

Under Select Default DSCP Mark, select the required DSCP mark or leave the default setting in place.

Click **Apply** when you are done.

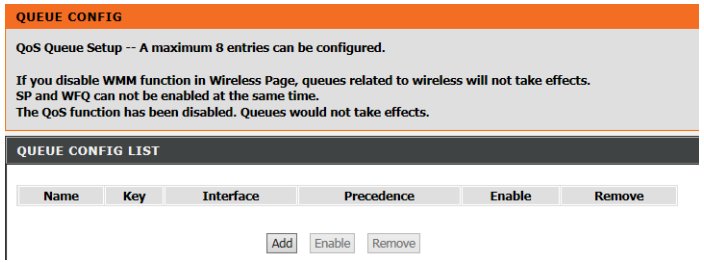


Queue Config

QOS SETUP

To set up the QoS queue, click **Queue Config**.

A list of the currently-configured queues will appear. Click **Add** to add a new queue, **Enable** to enable the selected queues, or **Remove** to remove the selected queues.

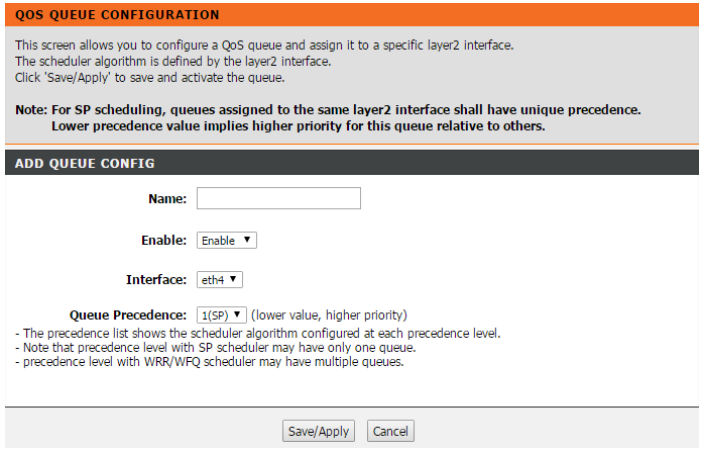


ADD QUEUE CONFIG

If you clicked **Add**, the following page will be displayed.

Enter a name for your queue under **Queue Name**, **Enable** or **Disable** it, and choose the **Interface** that the queue will use and the **Queue Precedence**.

Click **Save/Apply** when you are done.

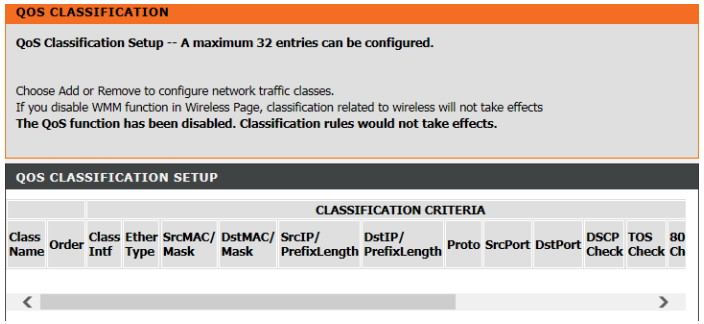


QOS Classification

QOS CLASSIFICATION SETUP

To set up network traffic classes, click **QoS Classification**.

A list of the currently-configured classes will appear. Click **Add** to add a new class, **Enable** to enable the selected classes, **Edit** to edit an existing class, or **Remove** to remove the selected classes.



ADD NETWORK TRAFFIC CLASS RULE

If you clicked **Add**, the following page will be displayed.

Under **Traffic Class Name** enter the name of your class. Choose one or more criteria for the classification and configure it accordingly.

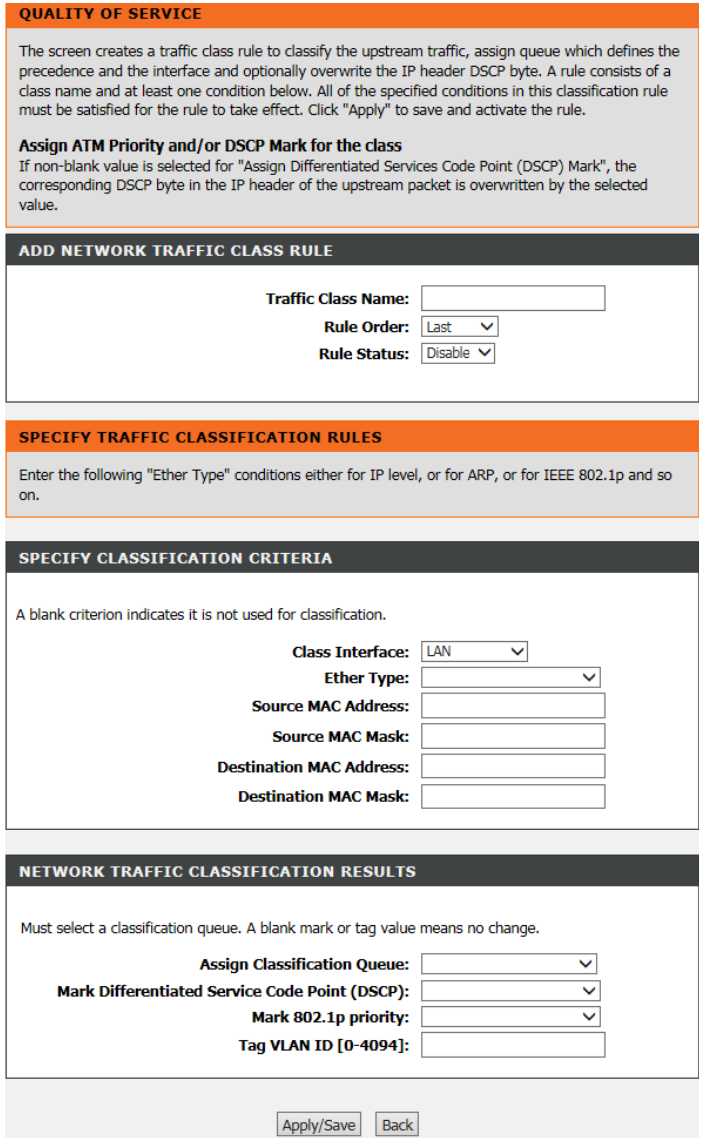
SPECIFY CLASSIFICATION CRITERIA

Define your QoS Criteria here.

NETWORK TRAFFIC CLASSIFICATION RESULTS

Enter your classification results.

Click **Apply/Save** when you are done.

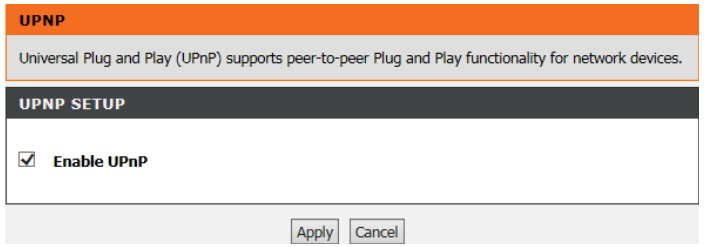


UPNP

UPNP SETUP

To enable or disable Universal Plug and Play (UPnP), click **UPnP**.

Check the box to **Enable UPnP**.



Click **Apply** when you are done.

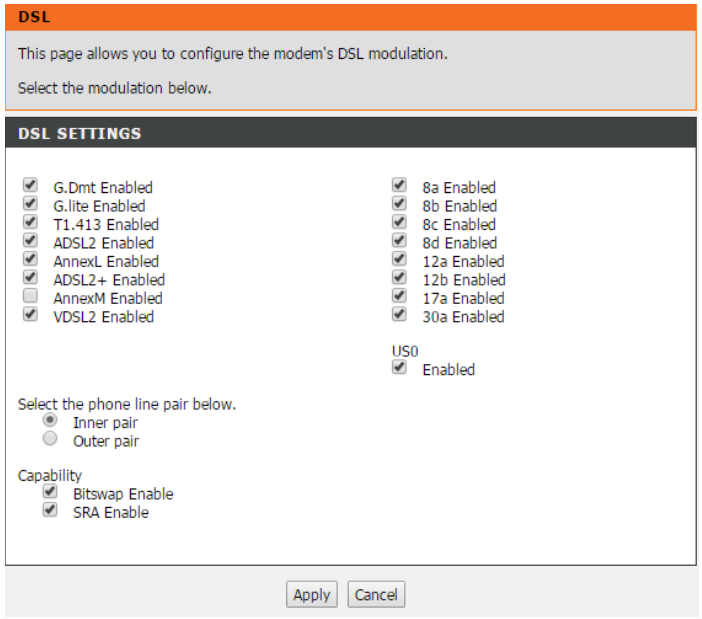
DSL

ADSL SETTINGS

To configure the ADSL-VDSL modulation, click **DSL Settings**.

In most cases you can leave the settings at their default values.

Click **Apply** when you are done.



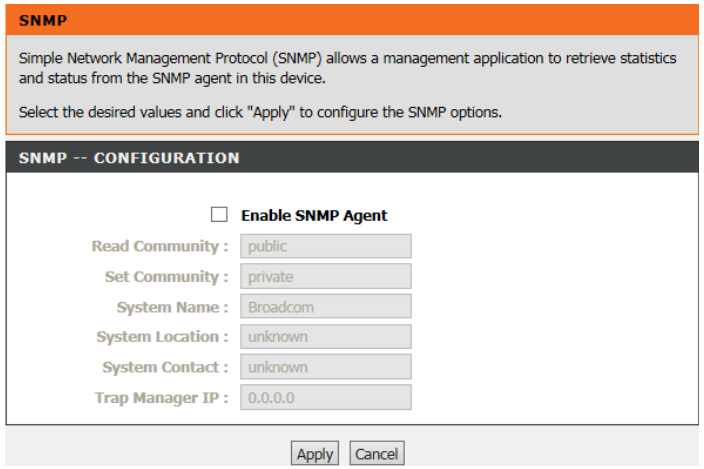
SNMP

SNMP CONFIGURATION

To configure the Simple Network Management Protocol, click **SNMP**.

Check the box to **Enable SNMP Agent**. This will unlock the SNMP configuration options.

Click **Apply** when you are done.



TR-069

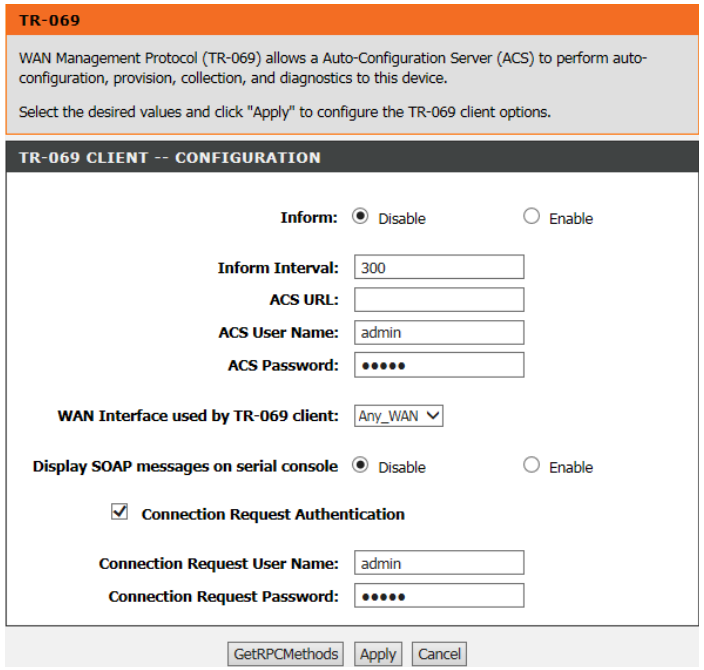
TR-069 CLIENT CONFIGURATION

To configure the WAN management protocol (TR-069), click **TR-069**.

TR-069 allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics on this device.

Check the box to **Enable WAN Management Protocol (TR-069)**. This will unlock the TR-069 configuration options.

Click **Apply** when you are done.

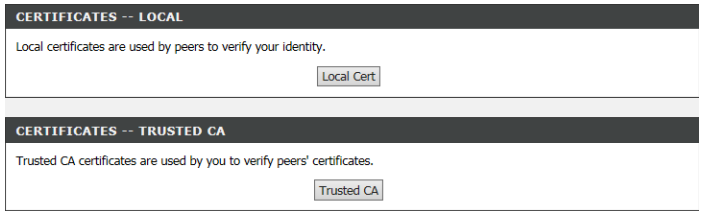


Certificates

To configure the certificates, click **Certificates**.

Click **Local Cert** to import local certificates that are used by peers to verify your identity.

Click **Trusted CA** to import the CA certificates used by you to verify peers' identities.



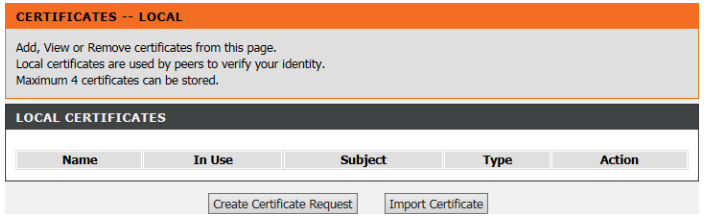
Local Cert

LOCAL CERTIFICATES

On this page, you can acquire the local certificate by creating a certificate request or importing a certificate. You may also create or remove a certificate.

Click **Create a New Certificate Request** to bring up the Create New Certificate Request page.

Click **Import Certificate** to import a local certificate.



CREATE NEW CERTIFICATE REQUEST

If you clicked **Create a New Certificate Request**, you will see the following page.

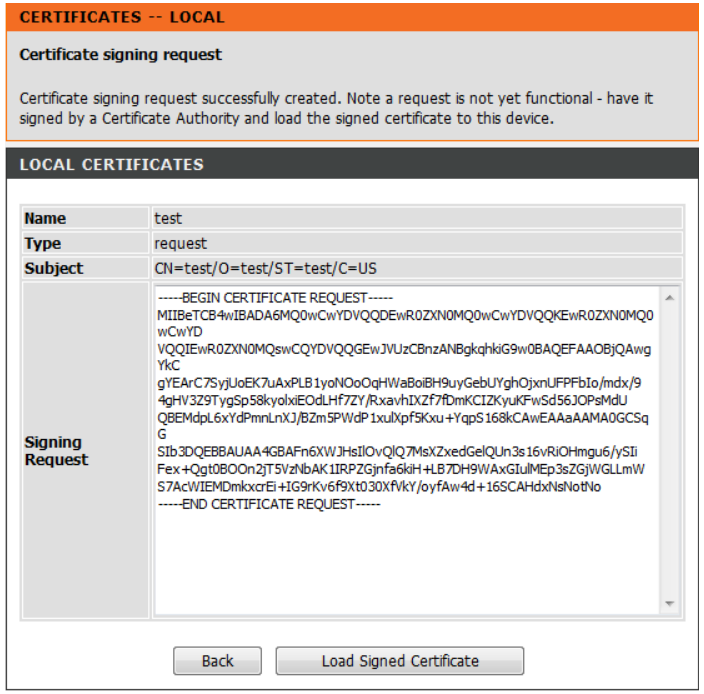
The **Common Name** is the "fully qualified domain name," (or FQDN) used for DNS lookups of your server (for example, www.mydomain.com). Browsers use this information to identify your web site. Some browsers will refuse to establish a secure connection with your site if the server name does not match the common name in the certificate. Please do not include the protocol symbol "http://", port numbers, or pathnames in the common name. Do not use wildcard characters such as "*" or "?", and do not use an IP address.

Click **Apply** when you are done. You will see the generated certificate request.

LOCAL CERTIFICATES

The certificate request needs to be submitted to a certification authority to sign the request.

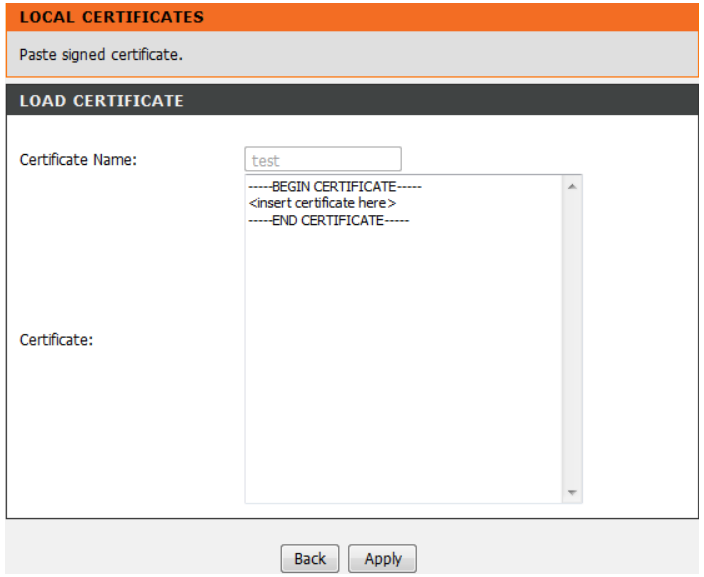
Once you have a signed request click **Load Signed Certificate** to bring up the Load Certificate page.



LOAD CERTIFICATE

Paste the signed certificate into the **Certificate** field.

To create the new signed certificate, click **Apply**.

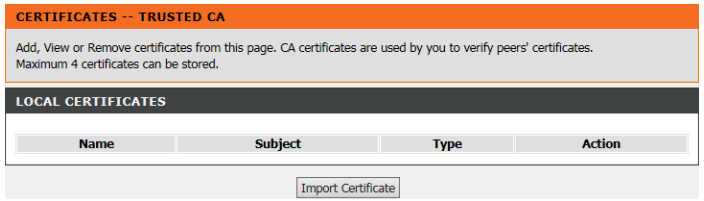


Trusted CA

CERTIFICATES - TRUSTED CA

If you clicked **Trusted CA**, you will see the following page.

You will see a list of trusted CA certificates. Click **Import Certificate** to import a CA certificate.

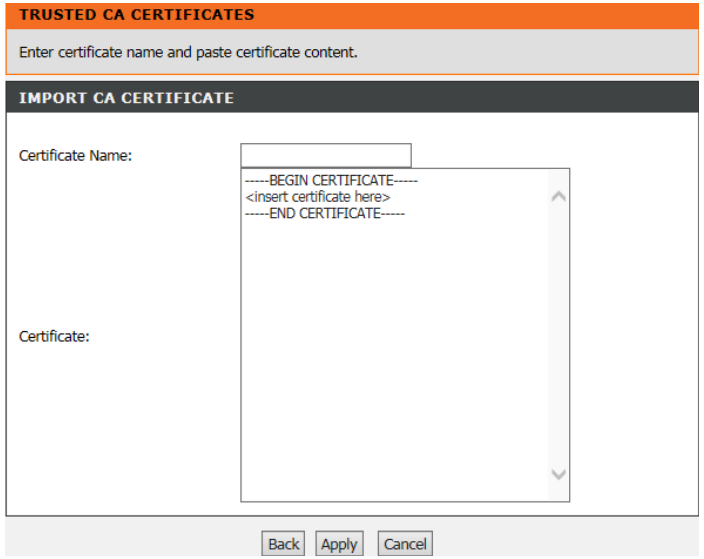


IMPORT CA CERTIFICATE

If you clicked **Import Certificate**, you will see the following page.

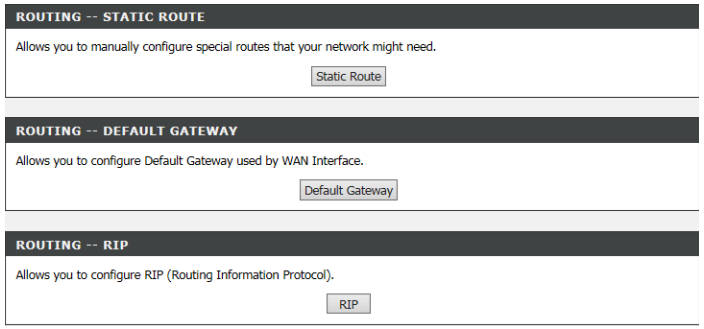
Enter the **Certificate Name**, and paste in the **Certificate**.

Click **Apply** to save the certificate.



Routing

This page allows you to configure the device's routing settings. Clicking each button will take you to a new page to configure the relevant routing category.

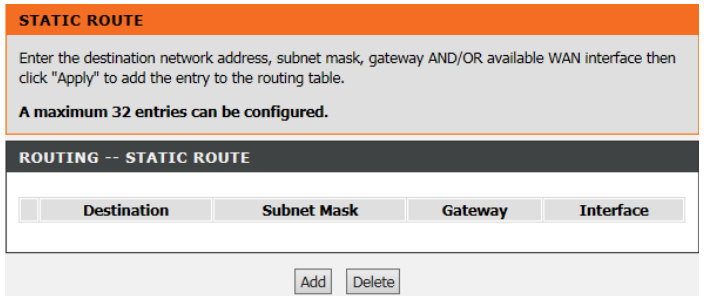


Static Route

ROUTING - STATIC ROUTE

To configure a static route, click **Static Route**.

You will see a list of current routes. Click **Add** to open the Static Route Add panel.



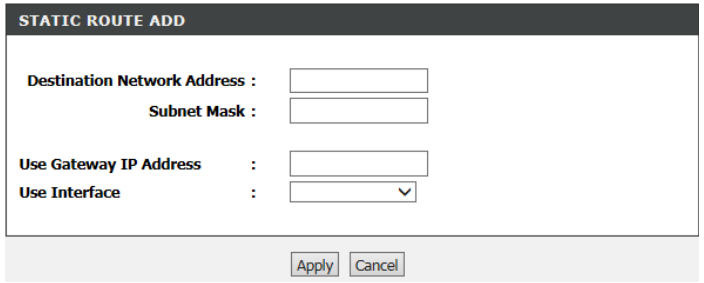
STATIC ROUTE ADD

Destination Network Address: Enter the destination address.

Subnet Mask Enter the subnet mask.

Use Gateway IP Address: Enter the Gateway IP address.

Use Interface Select the correct interface for the rule.

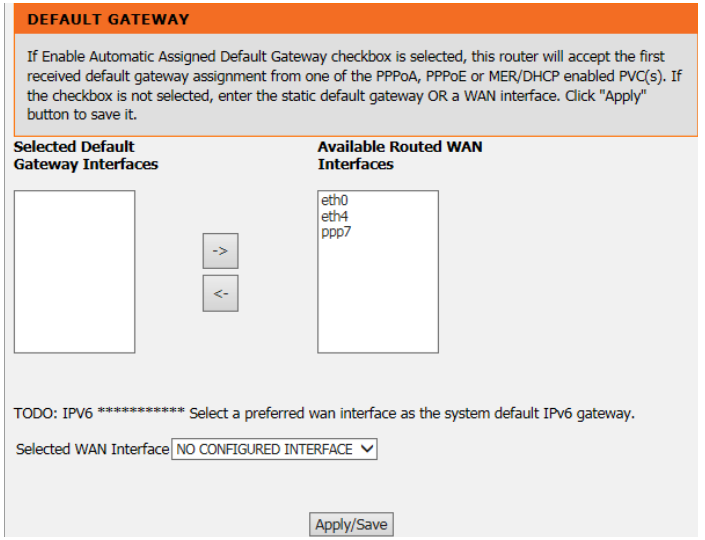


Click **Apply** when you are done.

Default Gateway

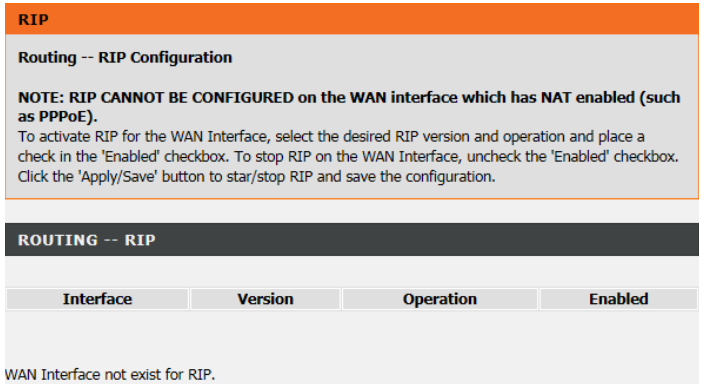
If Enable Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default gateway assignment from one of the PPPoA, PPPoE, or MER/DHCP enabled PVC(s). If the checkbox is not selected, enter the static default gateway OR a WAN interface.

Click the **Apply/Save** button to save your settings.



RIP

From this page advanced users can configure the router to use the Routing Internet Protocol (RIP). RIP is an Internet protocol you can set up to share routing table information with other routing devices on your LAN, at your ISP's location, or on remote networks connected to your network via the ADSL line.



Schedules

SCHEDULES RULES

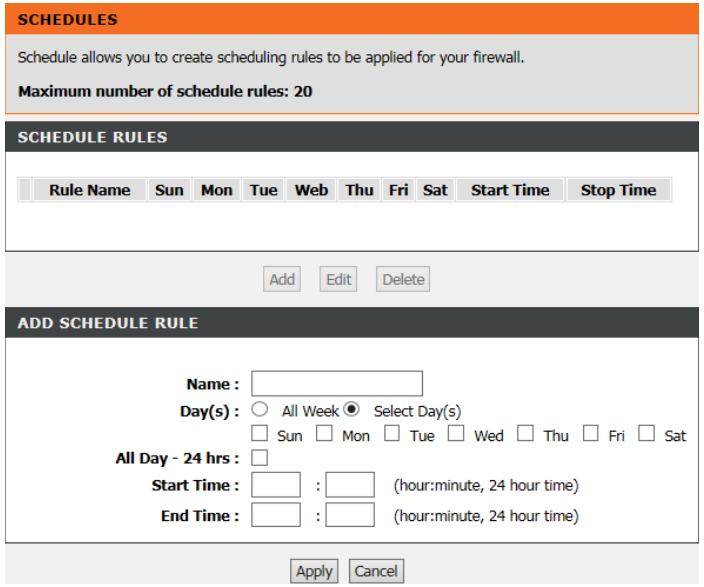
This page allows you to define schedules that can be used by certain functions (such as port forwarding, port triggering, etc.). You will see a list of all the currently configured schedules.

To add a new schedule, click **Add** to make the Add Schedule Rule panel appear.

ADD SCHEDULES RULE

Enter the schedule **Name**, the **Day(s)**, the **Start Time** and the **End Time.**

Click **Apply** to save your settings or **Cancel** to discard them.



Print Server

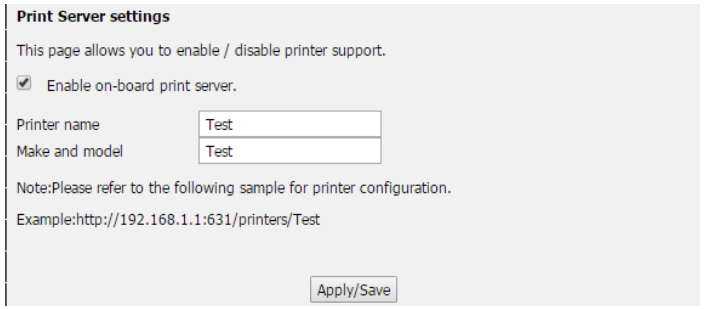
PRINT SERVER SETTINGS

Enable onboard print server: This page allows you to enable an on-board print server.

Printer name: Enter a custom name for the printer.

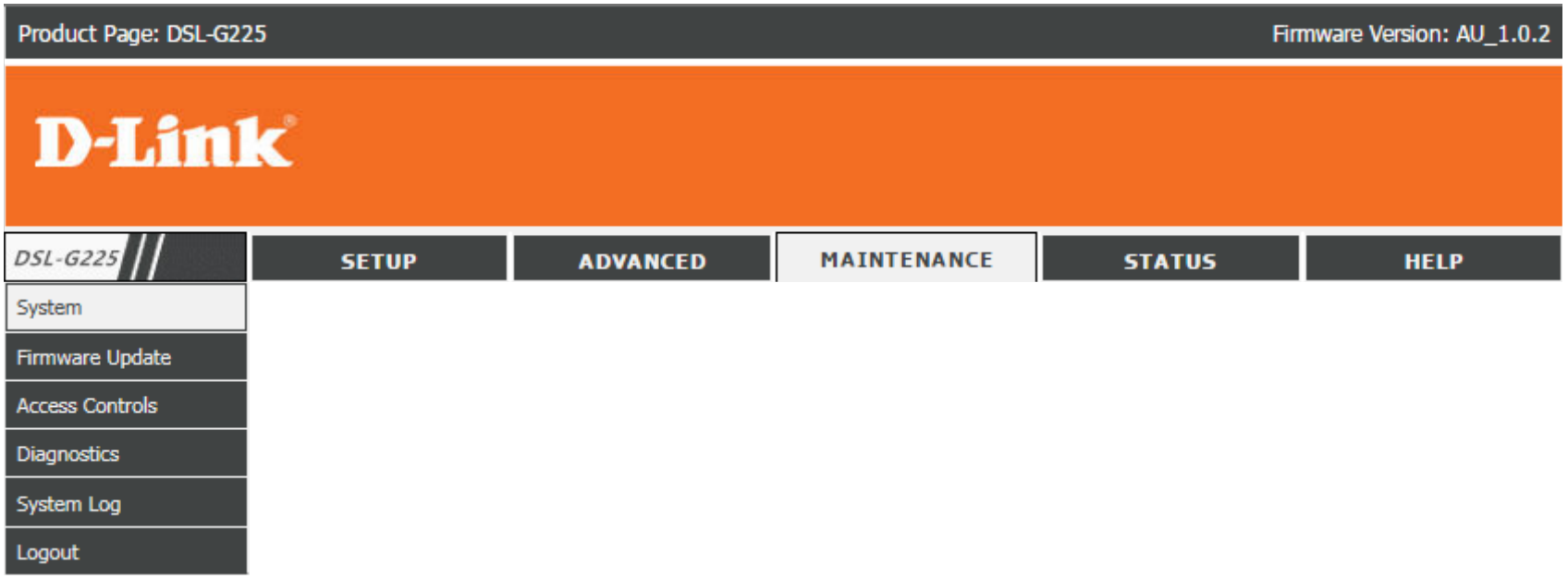
Make and model: Enter the make and model number of the printer.

Click **Apply/Save** when you are done.



Maintenance

The Maintenance tab provides access to administration related settings of the DSL-G225.



System

This page allows you to reboot the device, backup your settings, or restore settings either from a file or to their default values.

SYSTEM - REBOOT

Reboot: Click this button to reboot the device.

SYSTEM - BACKUP SETTINGS

Backup Settings: Click this button to save the current router configuration settings to a file on the hard disk of the computer you are using. You will see a file dialog, where you can select a location and file name for the settings.

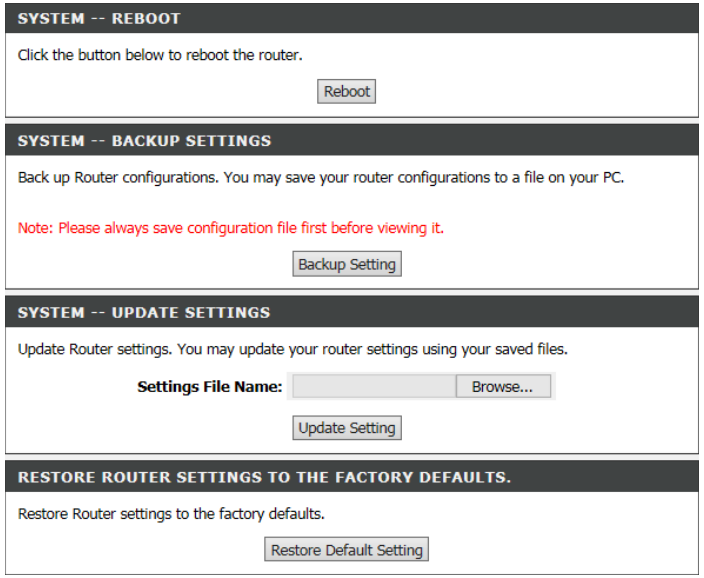
SYSTEM - UPDATE SETTINGS

Update Settings: To restore a saved configuration, use the **Browse**... button to find the previously saved configuration file. Then, click the **Update Settings** button to transfer those settings to the device.

RESTORE ROUTER SETTINGS TO THE FACTORY DEFAULTS.

Restore Default Settings: Click this button to restore all configuration settings back to the settings that were in effect at the time the device was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created.

Warning: Do not turn off your device or press the Reset button while an operation in this page is in progress.



Firmware Update

This page allows you to upgrade the firmware of your router. Make sure the firmware you want to use is on the local hard drive of the computer and then click Browse to upload the file.

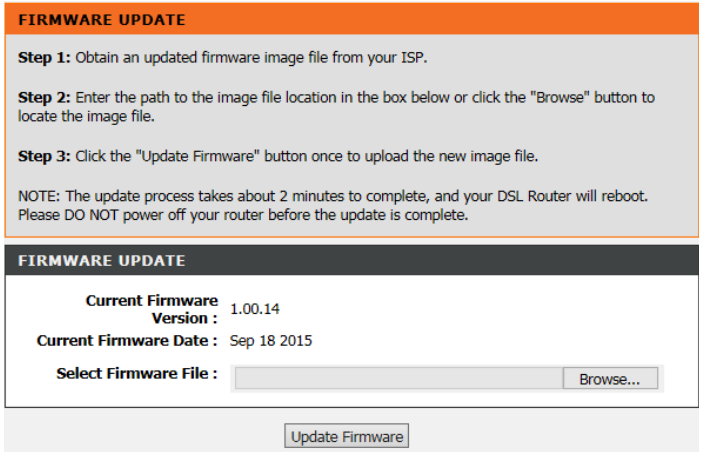
FIRMWARE UPDATE

Current Firmware Version: Displays your current firmware's version.

Current Firmware Date: Displays your current firmware's release date.

Firmware File Name: After you have downloaded a new firmware, click **Browse**... and locate the firmware on your computer. To begin the firmware update process, click **Update Firmware**. The update process takes about two minutes to complete.

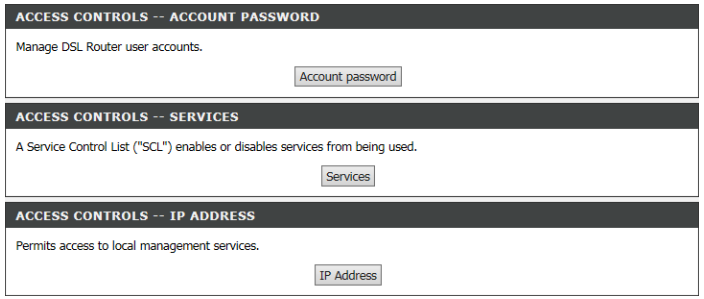
Warning: You must use a computer with a wired connection to the device to upload the firmware file; do not use a wireless client. During the upgrade process, do not power off your computer or router, and do not refresh the browser window until the upgrade is complete.



Access Controls

This page allows you to manage access to your router.

Click the **Account Password**, **Services**, or **IP Address** buttons to reveal the associated configuration options.



Account Password

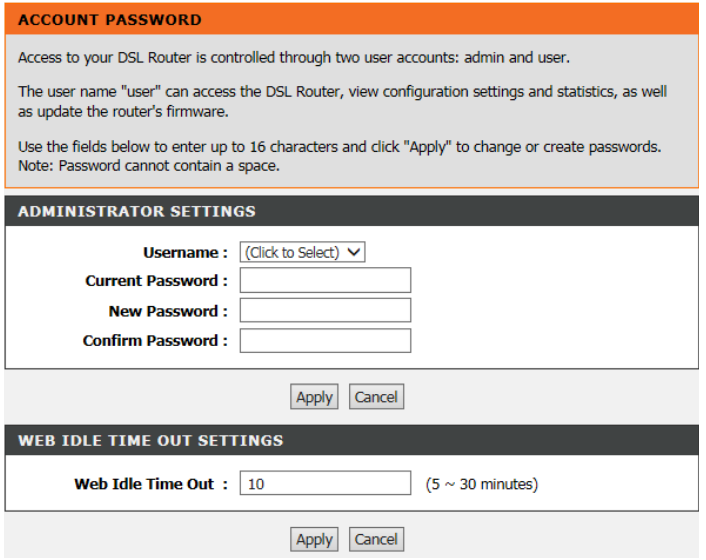
ADMINISTRATOR SETTINGS

To change an account's password, click **Account Password**. Select the username (**admin** or **user**), and enter the password details below.

WEB IDLE TIME OUT SETTINGS

You can also set the **Web Idle Time Out** in minutes. This will automatically log the user or administrator out if they are idle for the specified amount of time.

Click **Apply** when you are done.

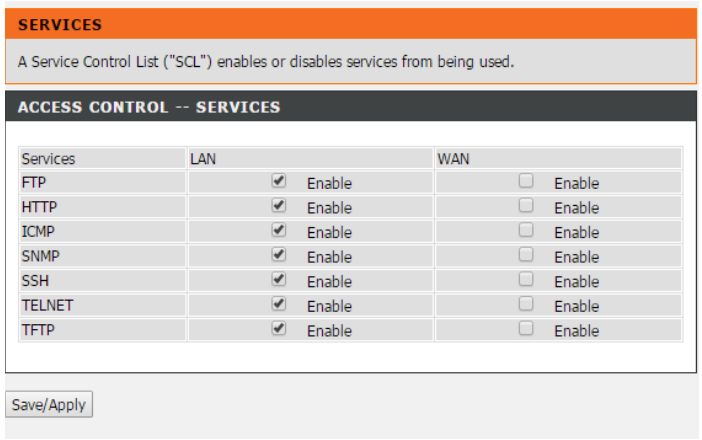


Services

To configure the Service Control List (SCL) to control access to specific services, click **Services**.

On this page, for both **LAN** and **WAN** access, you can enable or disable the services that can. These can usually be left at their default values.

Click **Apply/Save** when you are done.



IP Address

From this page you can limit access to the router management services to the following list of IP addresses.

ACCESS CONTROL -- IP ADDRESSES

Enable Access Control Mode: Check to enable access to local management services.

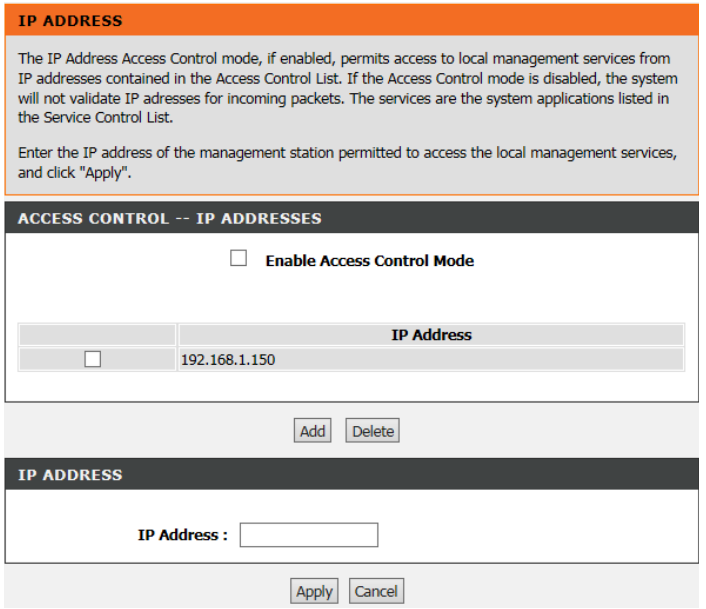
Add: Pressing this button will make the IP Address dialog box appear.

Delete: Check the check box next to an IP address and press the delete button to remove an IP from the **Access Control List**.

Warning: If the last IP Address is **Deleted** from the Access Control List and still have Access Control enabled, you will be unable to access the web configuration utility and will need to reset the router.

IP ADDRESSES

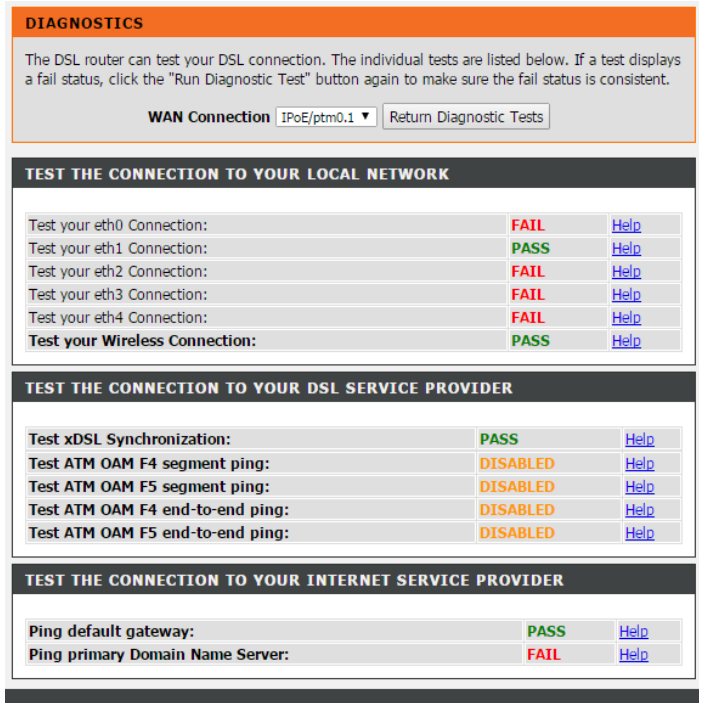
IP Address: Enter a desired IP Address to add to the Access Control List.



Click **Apply** to add the IP Address to the **Access Control List**.

Diagnostics

This page is used to test the connection to your local network, the connection to your DSL service provider, and the connection to your Internet service provider. Select your **WAN Connection**. Next, click **Rerun Diagnostics Tests** to run the diagnostics tests.



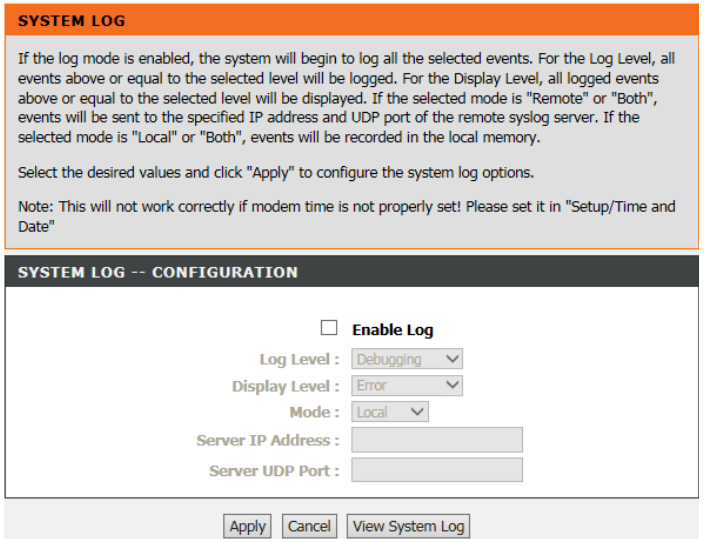
System Log

This table shows the system log for the device. Select **Enable Log** to switch on the router's logging function.

You can set the levels to log and display by choosing a **Log Level** and **Display Level** from the respective drop-down menus. All events above or equal to the selected level will be logged/displayed.

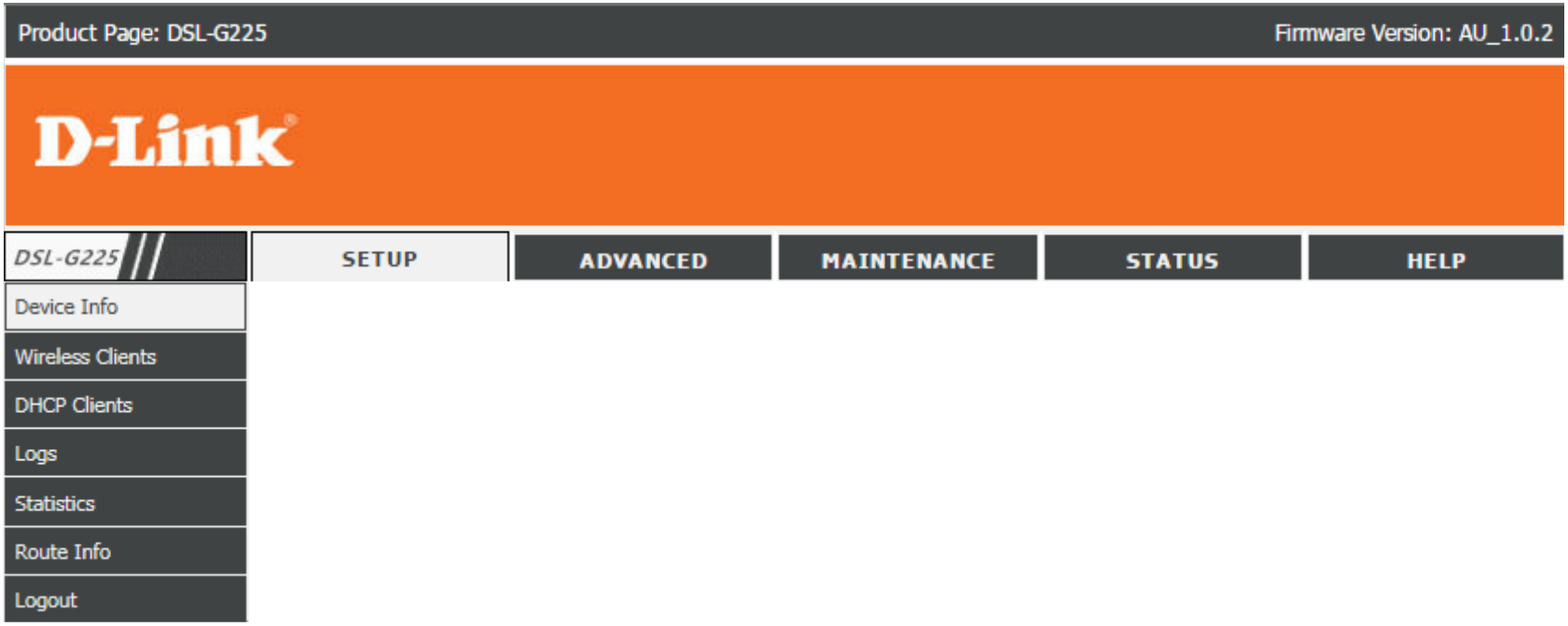
By default, the router saves the logs locally. If you want to send the logs to a remote server, under **Mode** select **Remote** and enter the **Server IP Address** and **Server UDP Port** below.

Click **Apply** when you are done, or **Cancel** to discard your changes. Click **View System Log** to view the log.



Status

The Status tab provides information about the DSL-G225's current status.



Device Info

This page displays the current information for the DSL-G225, such as LAN and wireless LAN information and statistics.

SYSTEM INFO

This section displays a summary of the system settings

INTERNET INFO

This section displays of the Internet connection settings.

WIRELESS INFO

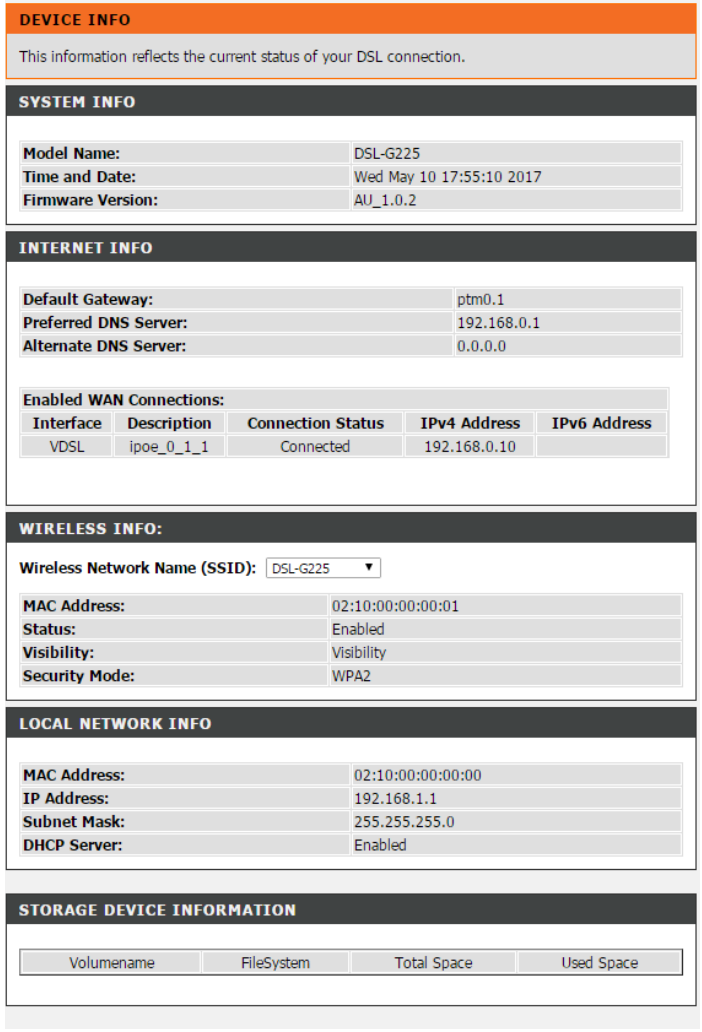
This section displays a summary of the wireless network settings.

LOCAL NETWORK INFO

This section displays a summary of the local network settings.

STORAGE DEVICE INFORMATION

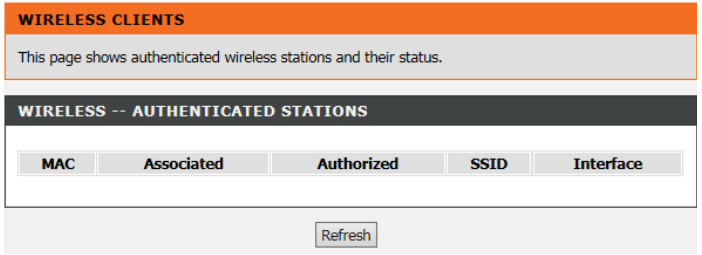
This section displays a summary of the storage device and its settings.



Wireless Clients

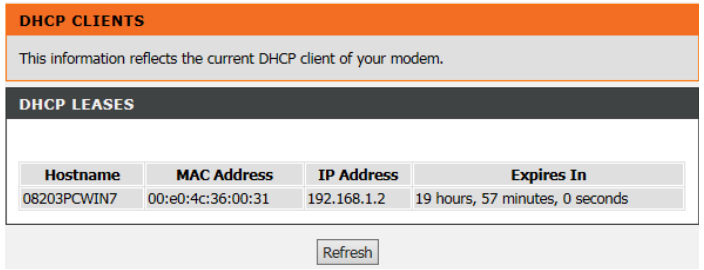
This table displays a list of wireless clients that are connected to your wireless router. It also displays the connection time and MAC address of the connected wireless clients.

Click **Refresh** to refresh the list.



DHCP Clients

This table lists each DHCP client, including its hostname, MAC address, IP address, and expiration time.

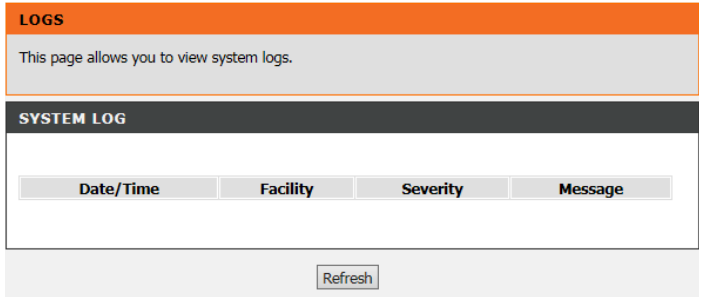


Click **Refresh** to refresh the list.

Logs

This table shows the system log for the device.

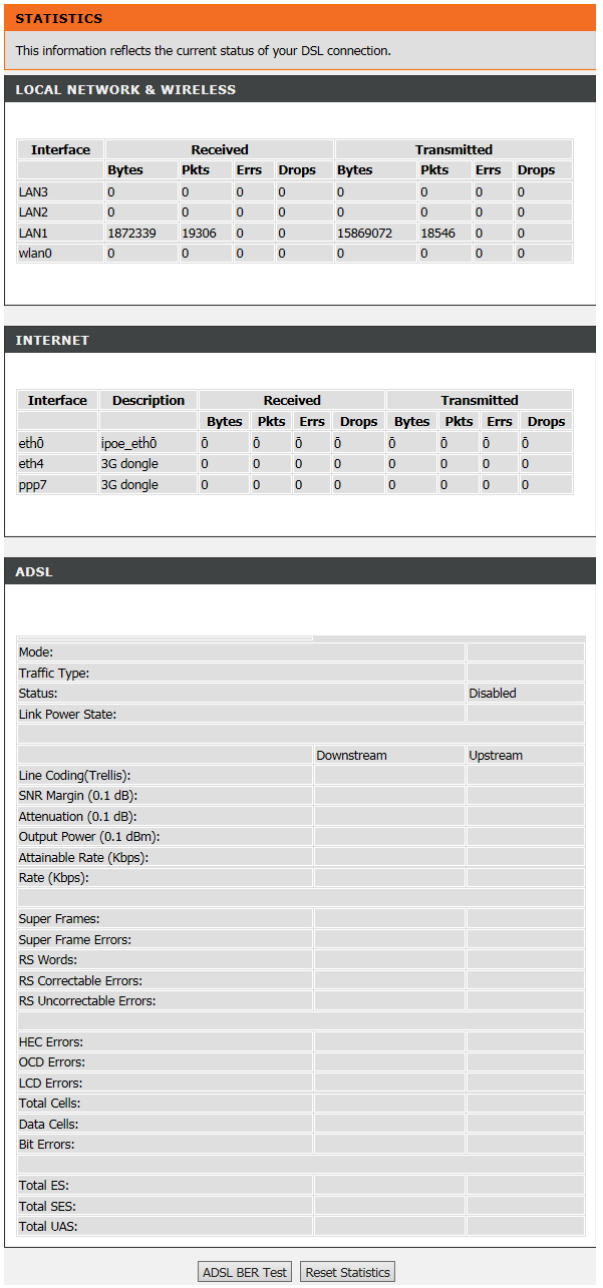
Click **Refresh** to refresh the list.



Statistics

Here you can view the packets transmitted and received passing through your router on both WAN and LAN ports, as well as the DSL information. The traffic counter will reset if the device is rebooted.

Click **Reset Statistics** to reset the list.



STATISTICS

This information reflects the current status of your DSL connection.

LOCAL NETWORK & WIRELESS

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
LAN3	0	0	0	0	0	0	0	0
LAN2	0	0	0	0	0	0	0	0
LAN1	1872339	19306	0	0	15869072	18546	0	0
wlan0	0	0	0	0	0	0	0	0

INTERNET

Interface	Description	Received				Transmitted			
		Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
eth0	ipoe_eth0	0	0	0	0	0	0	0	0
eth4	3G dongle	0	0	0	0	0	0	0	0
ppp7	3G dongle	0	0	0	0	0	0	0	0

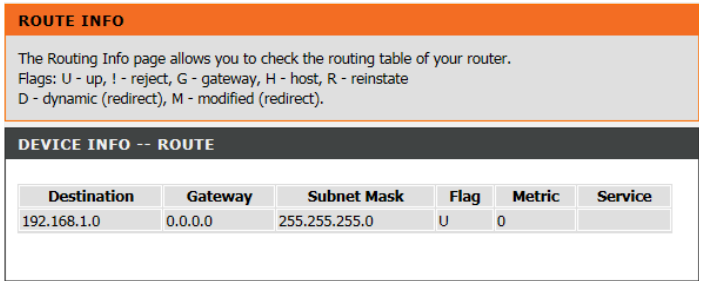
ADSL

Mode:		
Traffic Type:		
Status:		Disabled
Link Power State:		
	Downstream	Upstream
Line Coding(Trellis):		
SNR Margin (0.1 dB):		
Attenuation (0.1 dB):		
Output Power (0.1 dBm):		
Attainable Rate (Kbps):		
Rate (Kbps):		
Super Frames:		
Super Frame Errors:		
RS Words:		
RS Correctable Errors:		
RS Uncorrectable Errors:		
HEC Errors:		
OCD Errors:		
LCD Errors:		
Total Cells:		
Data Cells:		
Bit Errors:		
Total ES:		
Total SES:		
Total UAS:		

ADSL BER Test | Reset Statistics

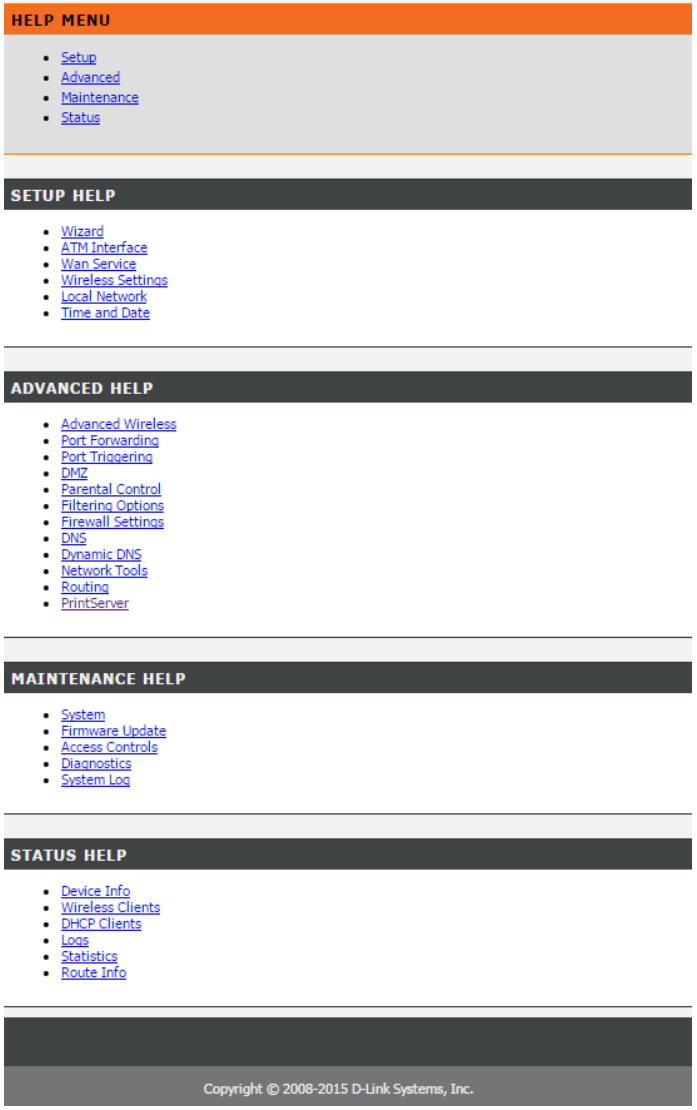
Route Info

The Route Info page displays a summary of the current route configuration between the router and the WAN.



Help

The Help section provides documentation for each section of the web configuration.



Connect and Share a USB Device

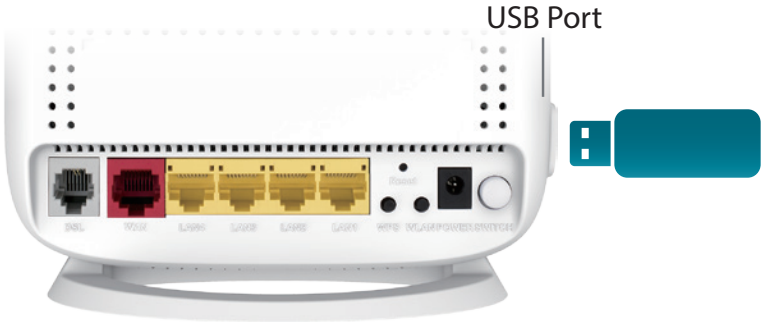
After you have successfully installed and configured your D-Link Modem Router, you are ready to enjoy the benefits of D-Link's USB sharing technology. D-Link's USB sharing technology allows you to quickly and easily share a USB printer or USB storage device with multiple computers on your network.

Note: USB printing supported in future firmware update. Refer to manual version 2.00 for installation instructions.

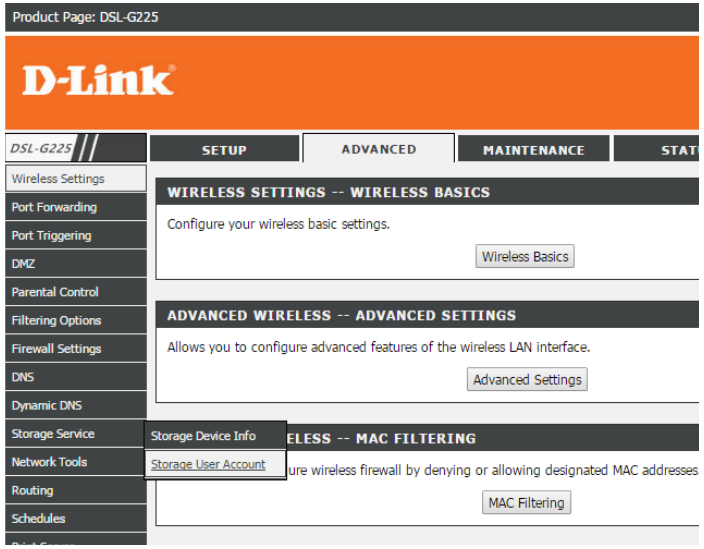
Connect and Share a USB Storage Device

The DSL-G225 will share a FAT32 or NTFS formatted USB storage device using the Samba file sharing protocol. Once connected, you can copy, move, delete, and edit files like you would with any ordinary drive attached to your computer. You must first create a Storage User Account in order to share a USB storage device. This username and password will be used to securely access your files. This will section will guide you through the Storage User Account creation process.

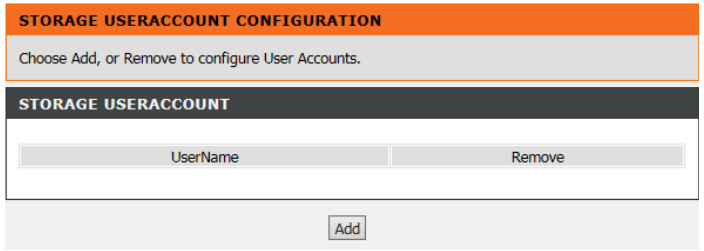
Step 1 - Connect a USB storage device to the USB Port on the DSL-G225. Confirm the USB light on the display panel is lit solid green.



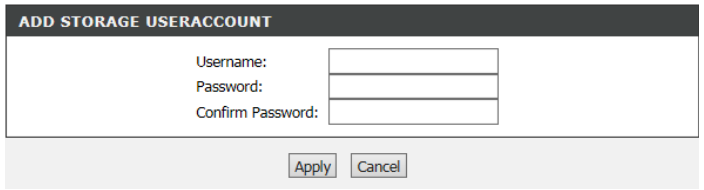
Step 2 - Connect to the Web Configuration Utility. Navigate to **Advanced > Storage Service > Storage User Account**.



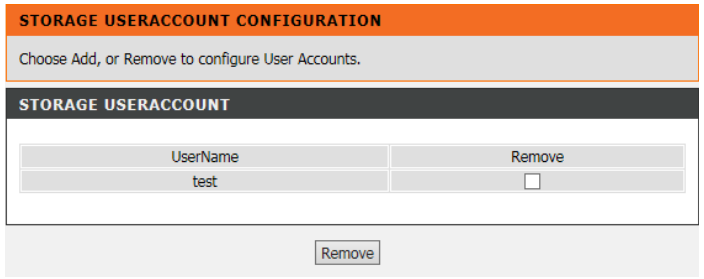
Step 3 - Once you have arrived at **Storage User Account Configuration** click **Add** to add a Storage User Account. Only one storage user account may be configured.



Step 4 - The **Add Storage User Account** dialog will appear. Create a username and password for your Storage User Account and click **Apply**.

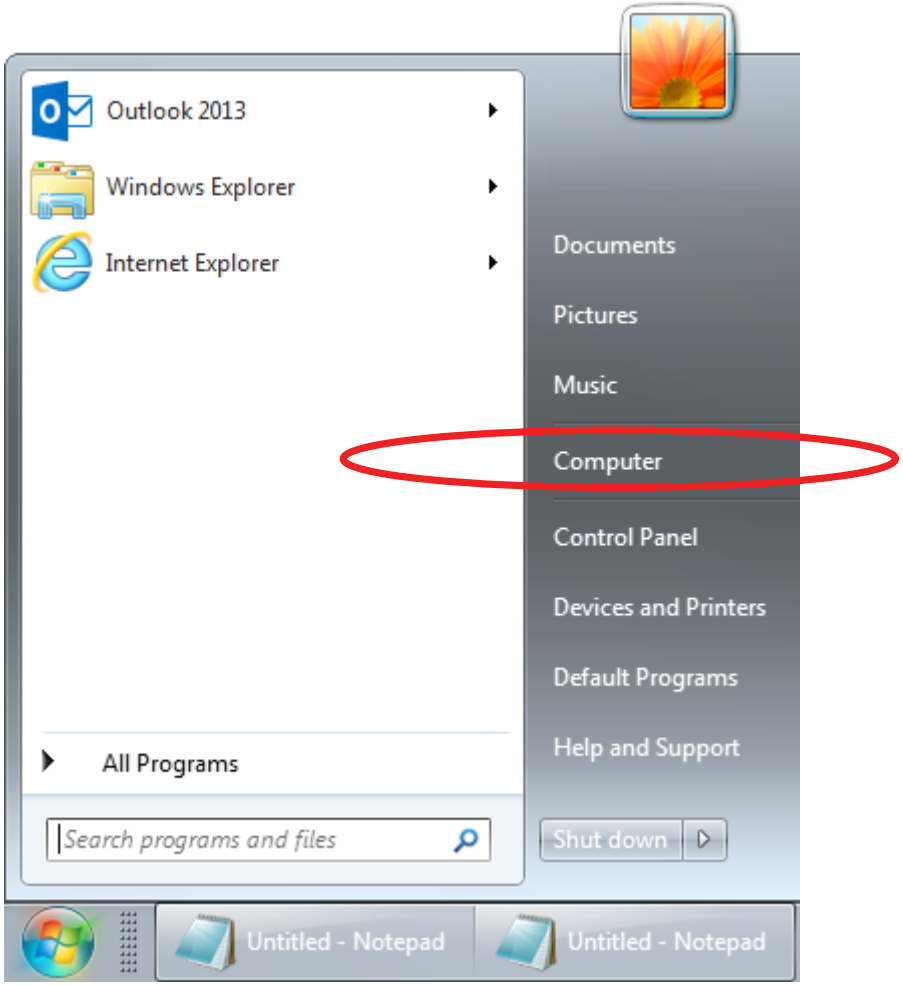


Now that a Storage User Account has been created, you may connect to from devices on your network.

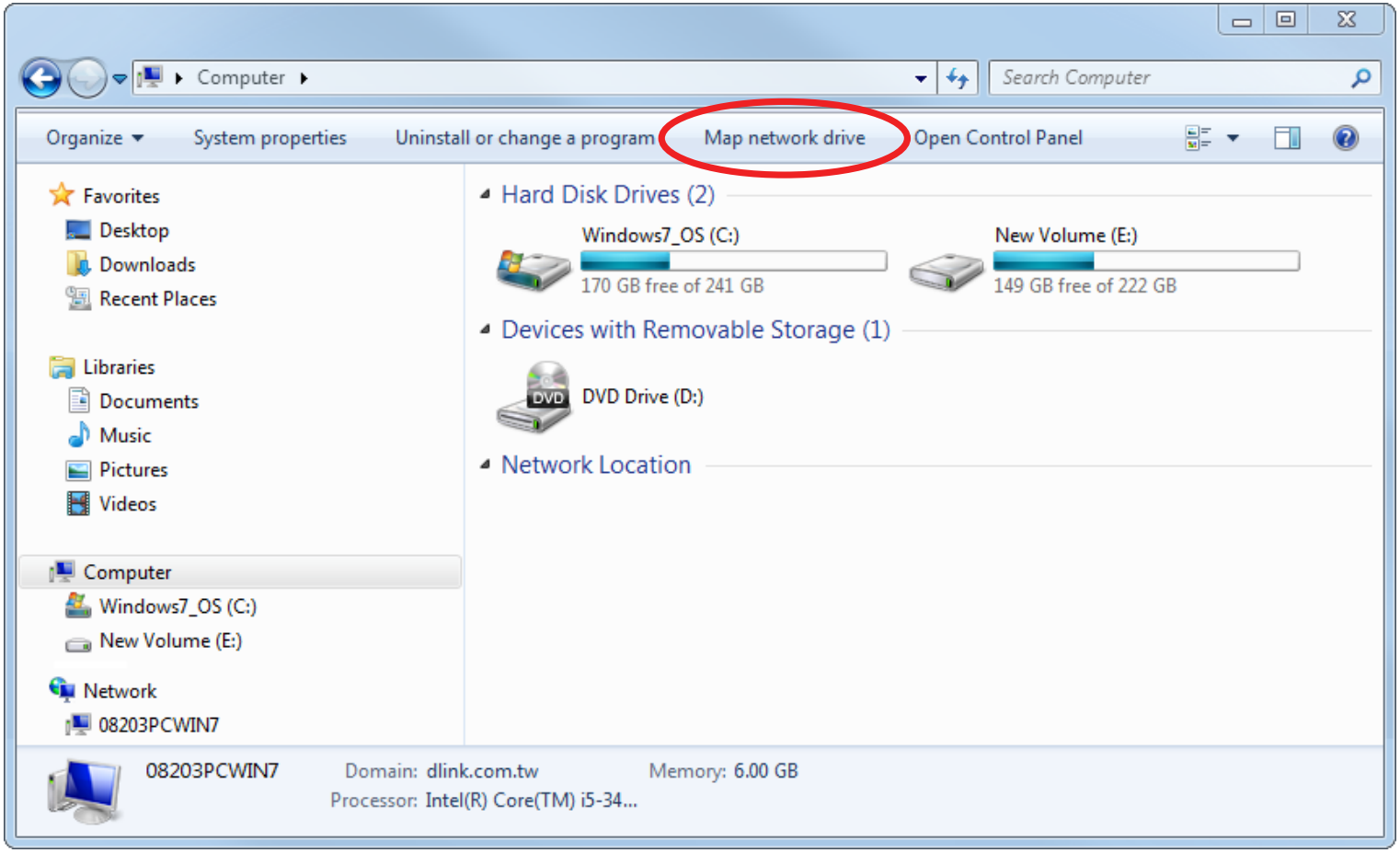


Connecting from a Windows Based PC

Step 1 - Click the start menu and select **Computer**.



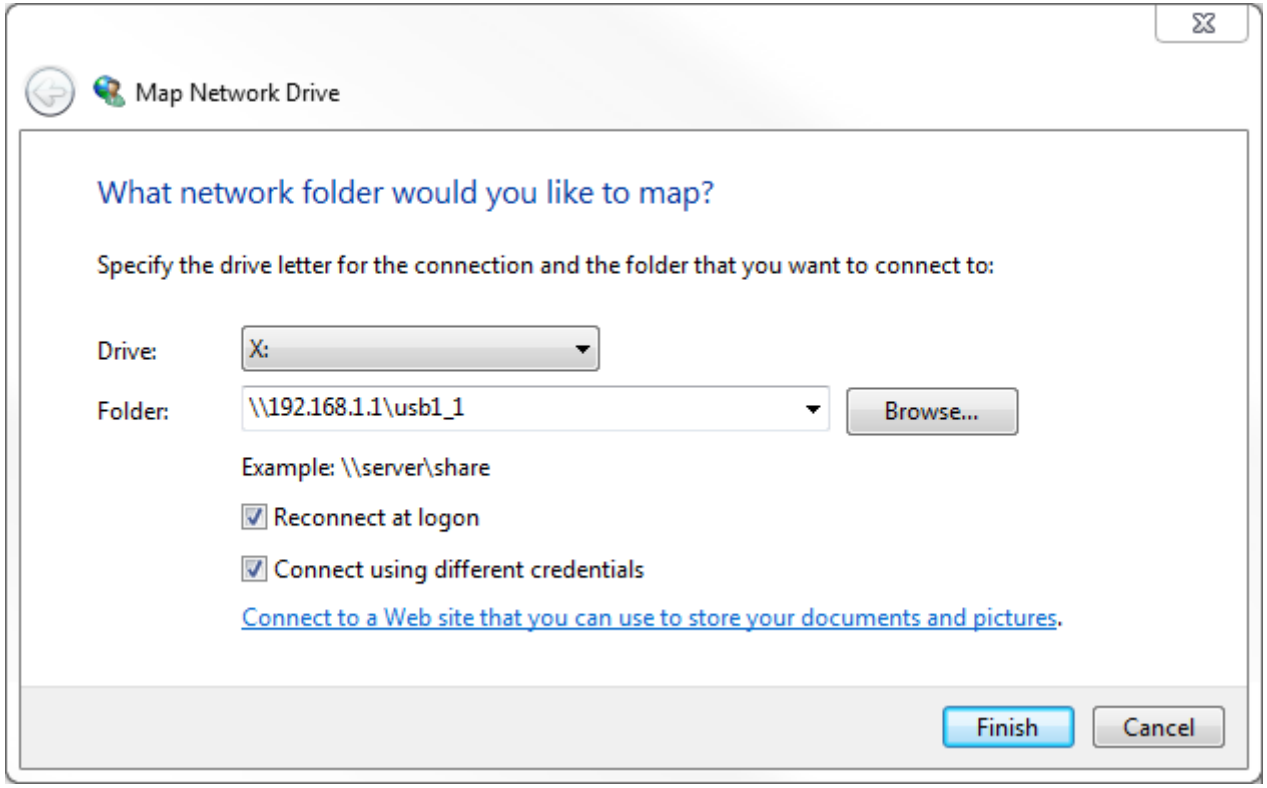
Step 2 - Click **Map network drive**.



Step 3 - Select the drive letter you wish to map your network drive to. Enter the DSL-G225's IP address and the name of the USB volume you wish to share. For example **\\192.168.1.1\usb1_1**.

Check the boxes **Reconnect at logon** and **Connect using different credentials.**

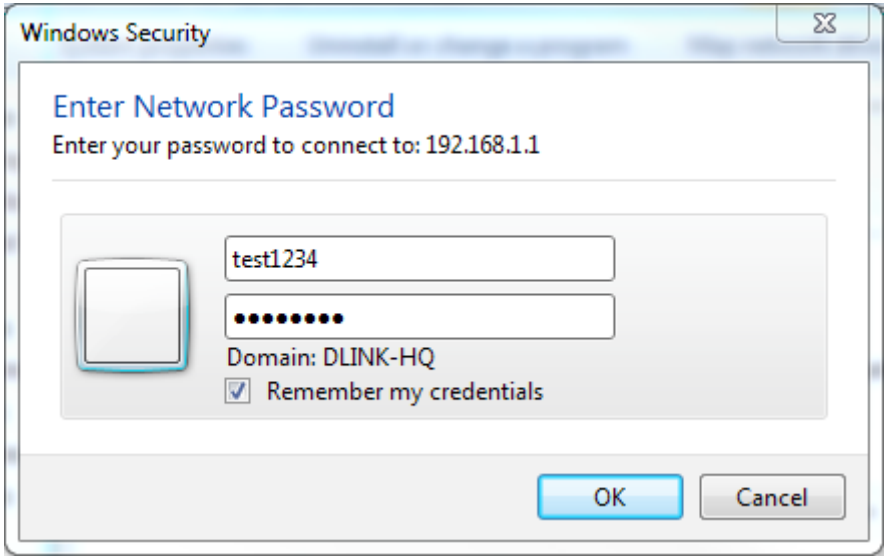
Click **Finish**.



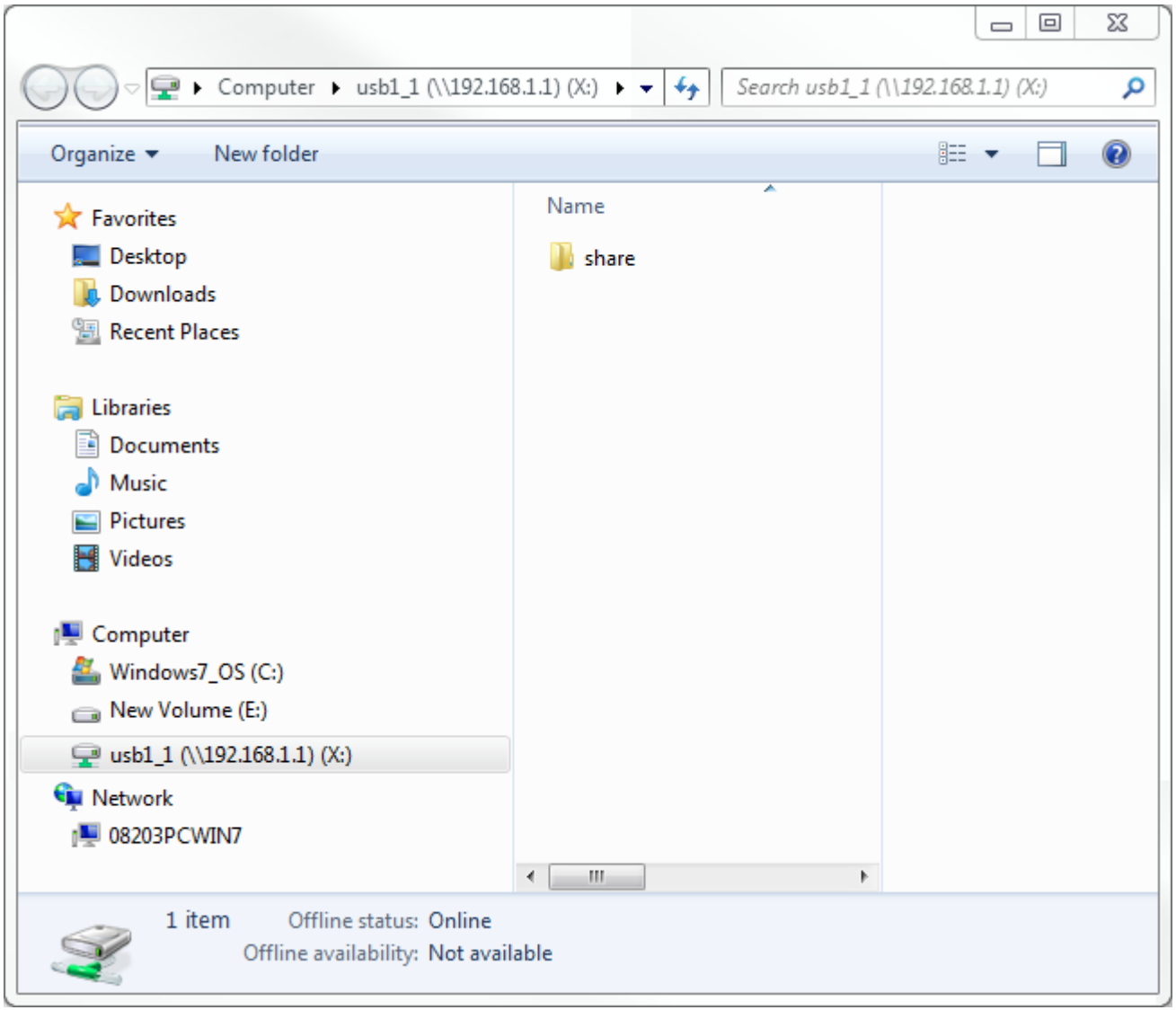
If you have multiple USB storage devices attached via a USB Hub, consult the **Advanced > Storage Service > Storage Device Information** section of the DSL-G225's Web Configuration utility for a list of available volume names. Refer to **Storage Device Information** on page 112 for more information.

Step 4 - Enter your Storage User Account Username and Password.

Click **OK**.



Step 5 - A folder of the shared USB storage device will appear.

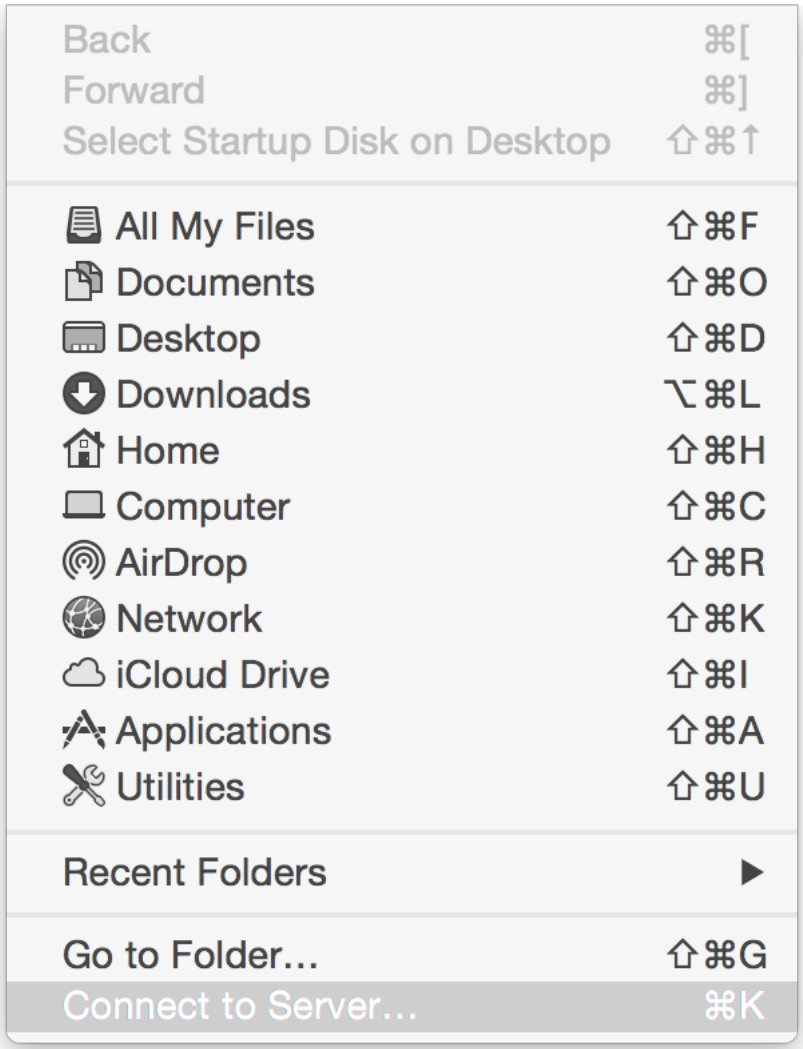


Congratulations

Your files are now shared. Repeat this process from each Windows PC you wish to share your USB drive with.

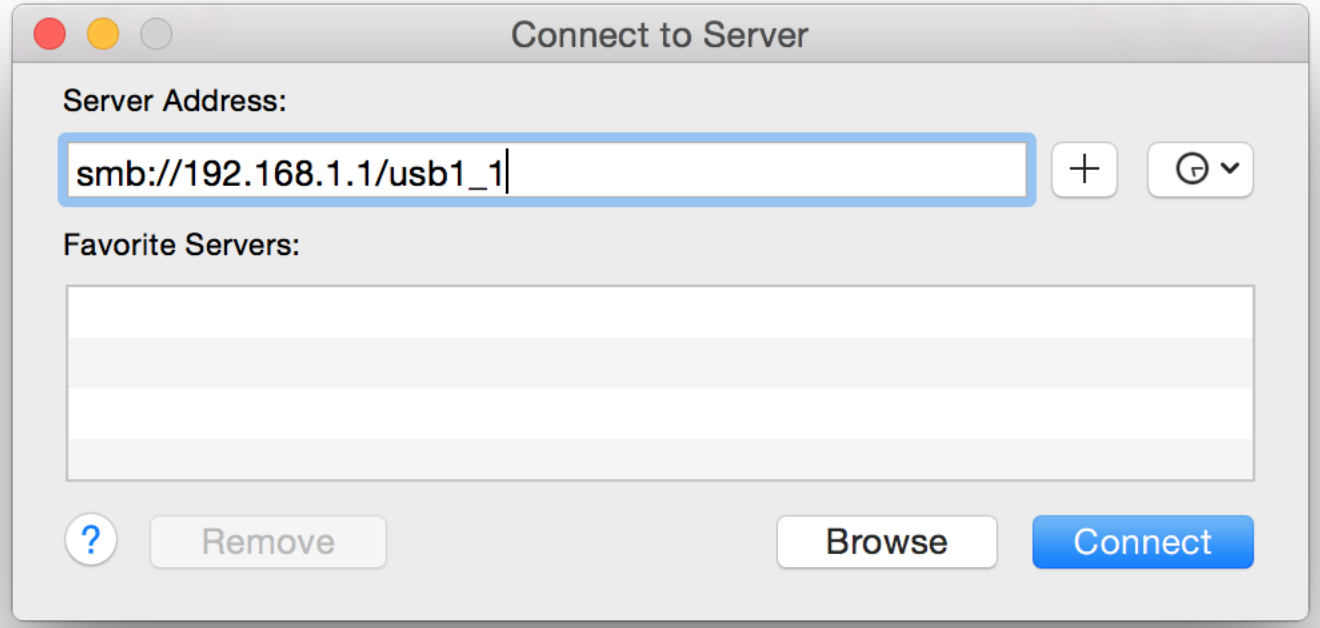
Connecting from a Mac

Step 1 - While in Finder, click **Go** menu and select **Connect to Server...**



Step 2 - Enter the DSL-G225's IP address and the name of the USB volume you wish to share. For example **smb//192.168.1.1/usb1_1**.

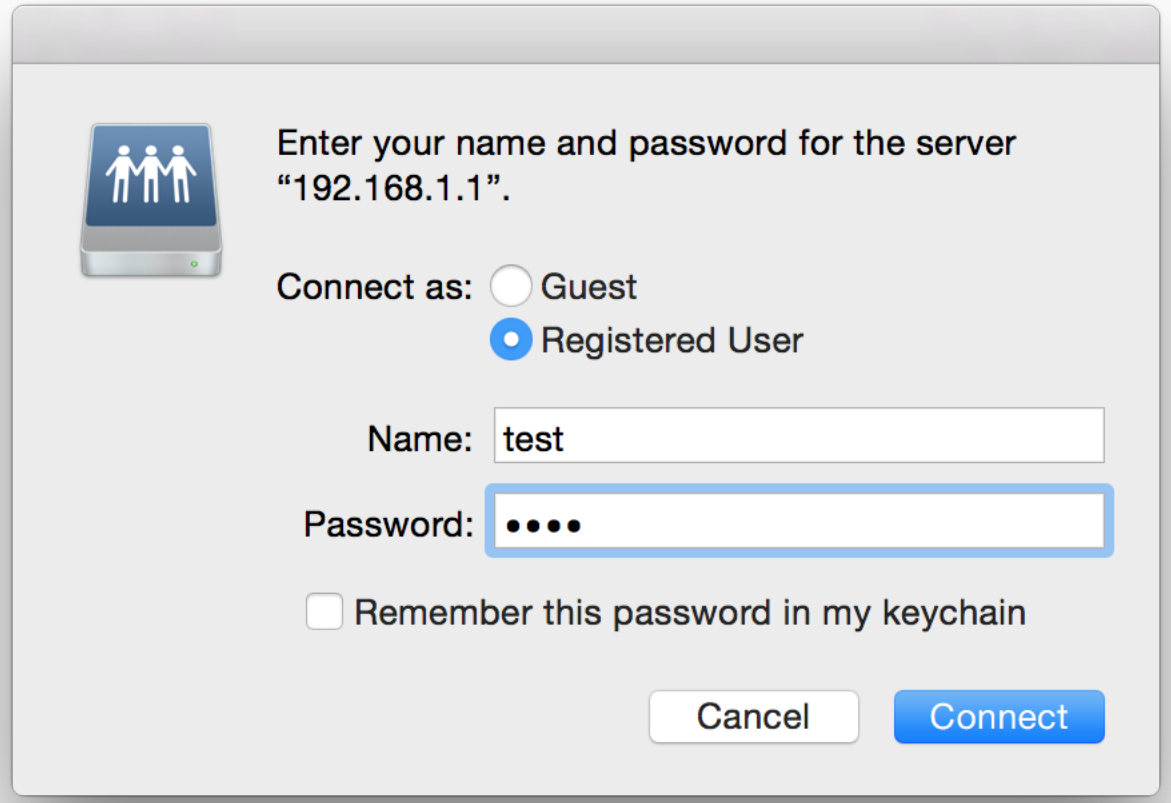
Click **Connect**.



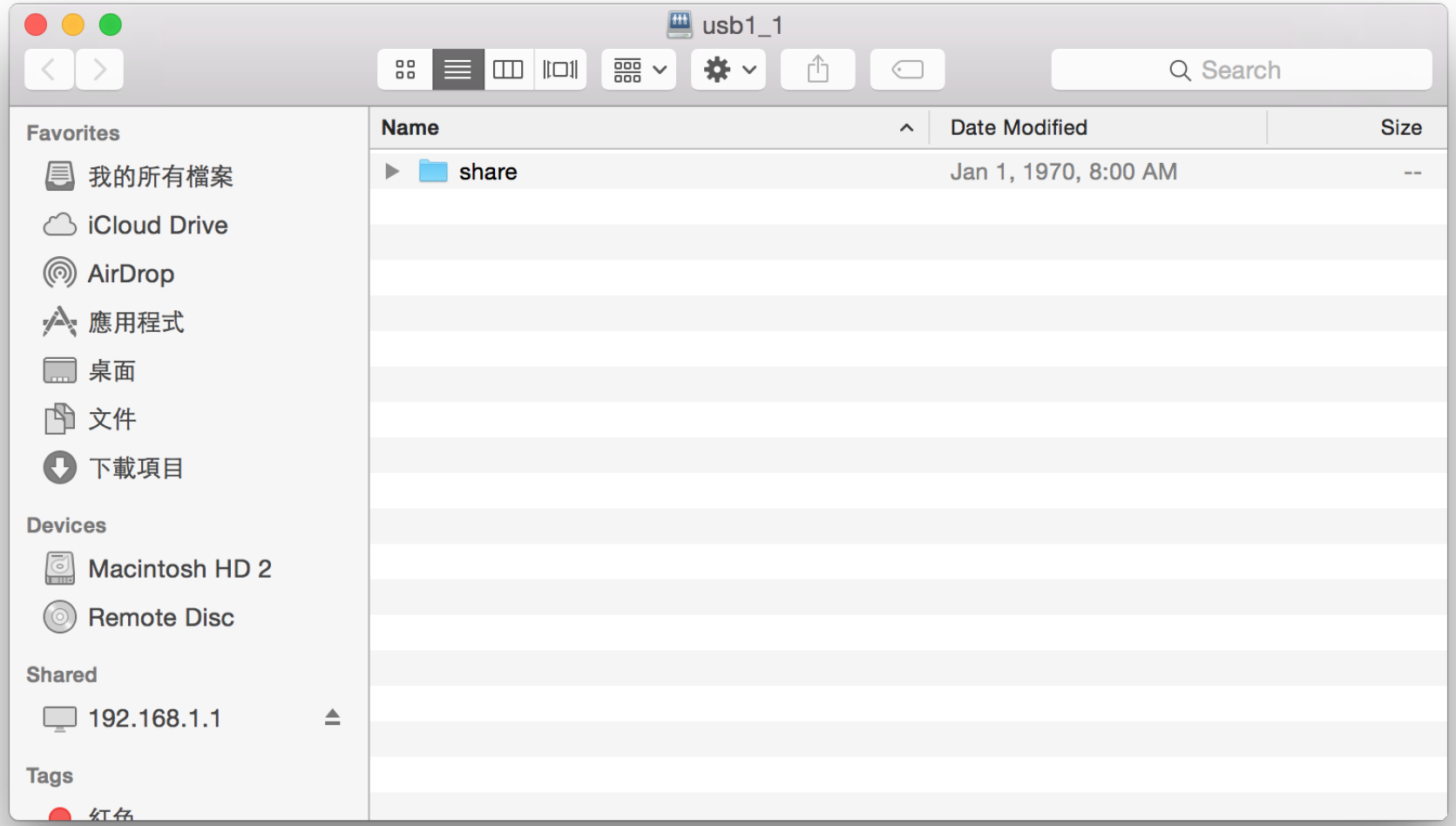
If you have multiple USB storage devices attached via a USB Hub, consult the **Advanced > Storage Service > Storage Device Information** section of the DSL-G225's Web Configuration utility for a list of available volume names. Refer to **Storage Device Information** on page 116 for more information.

Step 4 - Enter your Storage User Account Username and Password.

Click **Connect**.



Step 5 - A folder of the shared USB storage device will appear.

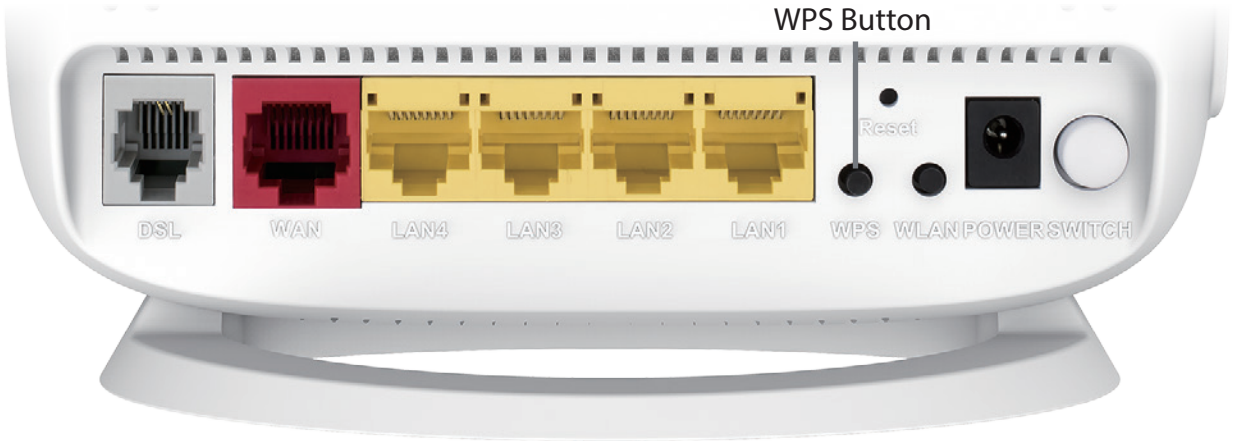


Connect a Wireless Client to your Router

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 DSL-G225 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 back of DSL-G225 for about 1 second. The Internet LED on the front will start to blink.



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® 10

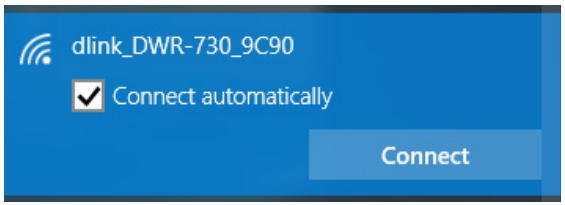
When connecting to the DSL-G225 wirelessly for the first time, you will need to input the wireless network name (SSID) and Wi-Fi password (security key) of the device you are connecting to. If your product has a Wi-Fi configuration card, you can find the default network name and Wi-Fi password here. Otherwise refer to the product label for the default Wi-Fi network SSID and password, or enter the Wi-Fi credentials set during the product configuration.

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

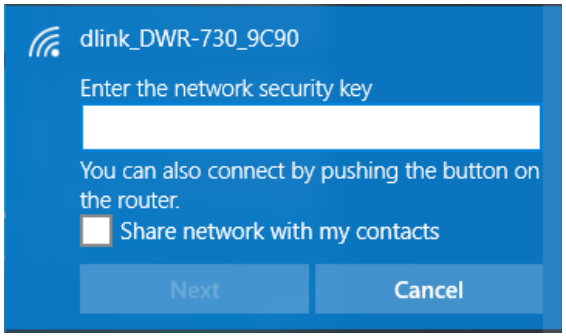
Clicking on this icon will display a list of wireless networks which are within range of your computer. Select the desired network by clicking on the SSID.

To connect to the SSID, click **Connect.**

To automatically connect with the router when your device next detects the SSID, click the **Connect Automatically** check box**.**



You will then be prompted to enter the Wi-Fi password (network security key) for the wireless network. Enter the password into the box and click **Next** to connect to the network. Your computer will now automatically connect to this wireless network when it is detected.

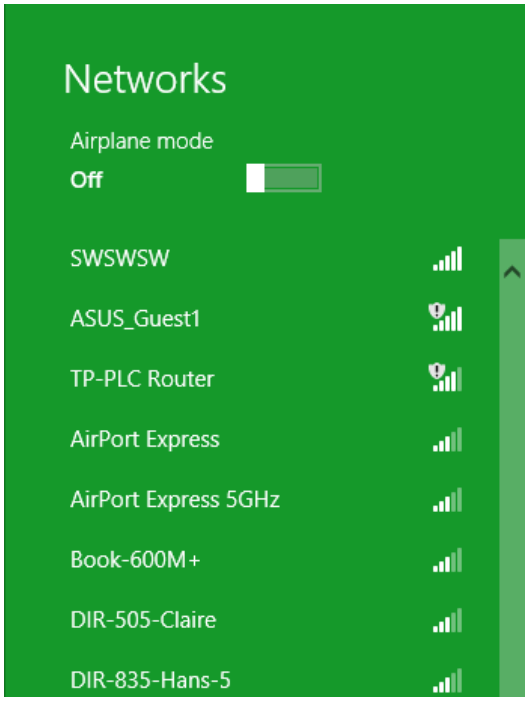


Windows® 8
WPA/WPA2

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.

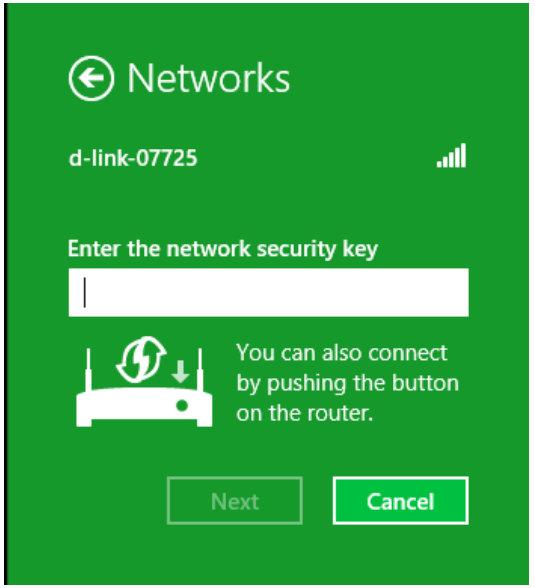
To join an existing network, locate the wireless network icon in the taskbar, next to the time display.

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.

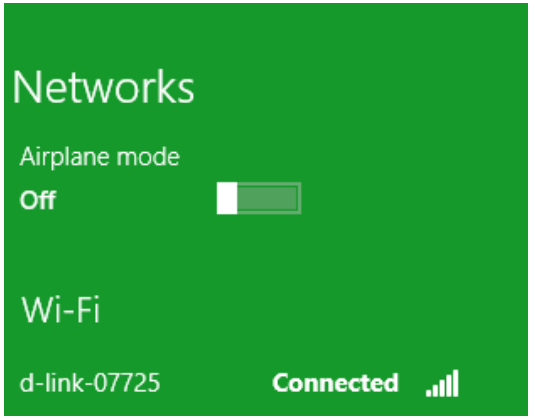


You will then be prompted to enter the network security key (Wi-Fi password) for the wireless network. Enter the password into the box and click **Next**.

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).

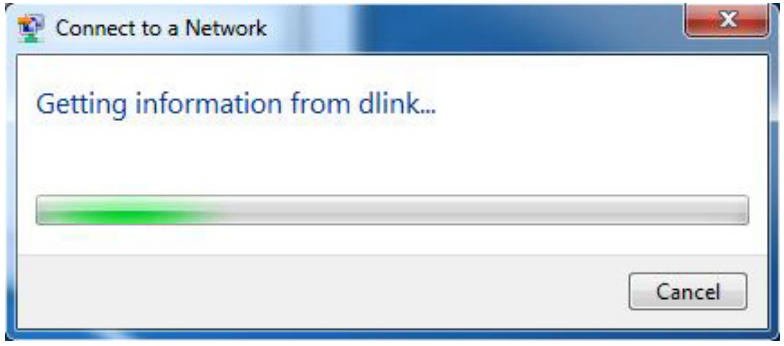
Wireless Icon

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

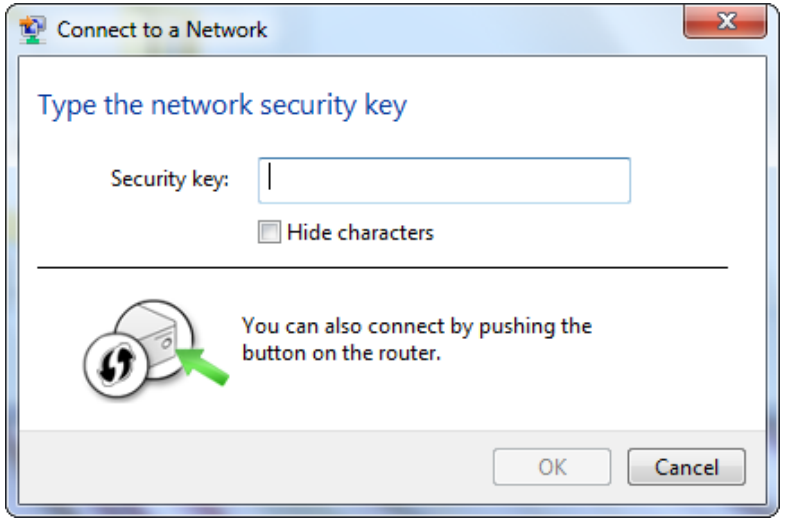
3. Highlight the wireless connection with Wi-Fi name (SSID) you would like to connect to and click the **Connect** button.

   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.

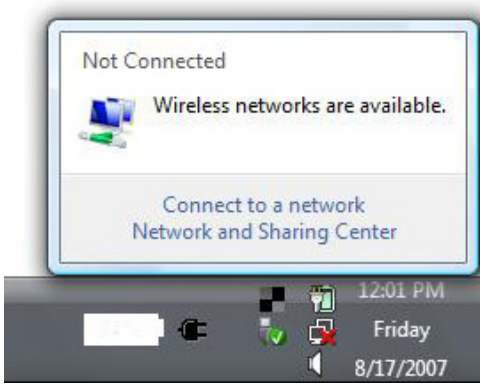
Windows Vista®

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.

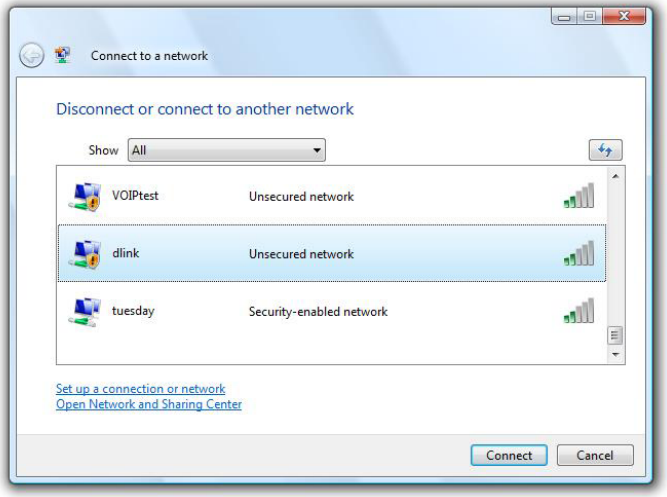
or

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.

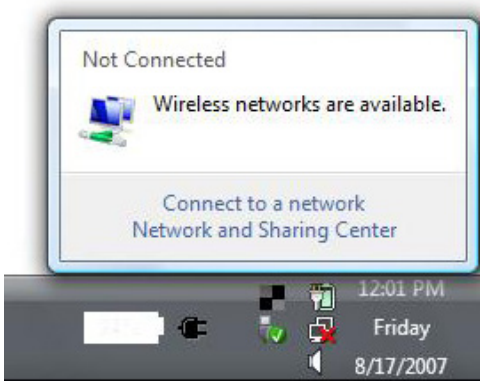
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



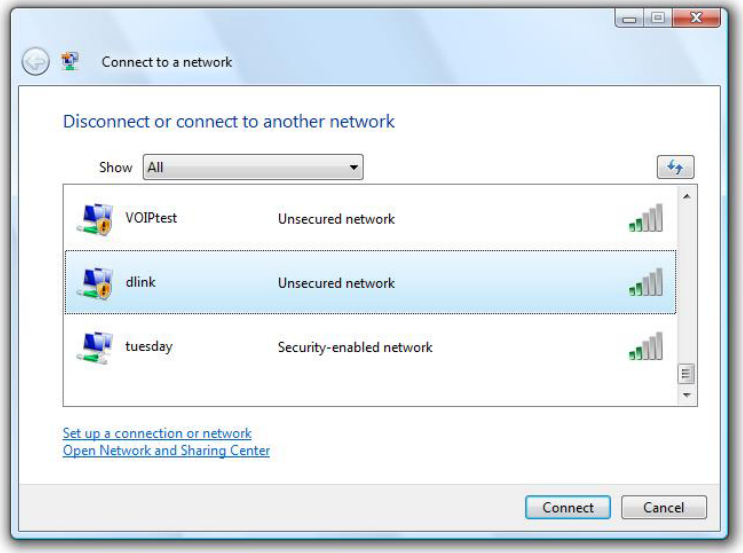
WPA/WPA2

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**.



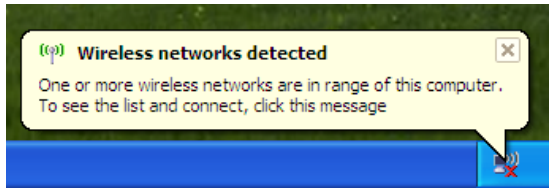
3. Enter the same security key or passphrase (Wi-Fi password) that is on your router and click **Connect**.

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

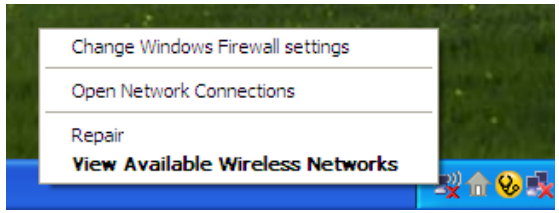
Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities 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.



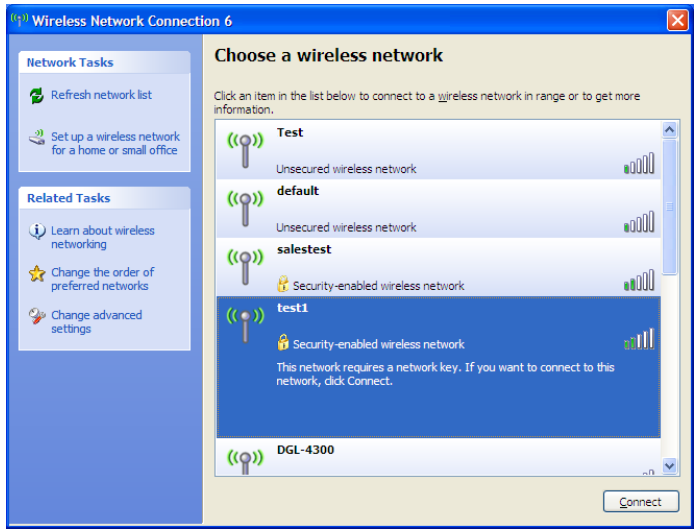
or

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.

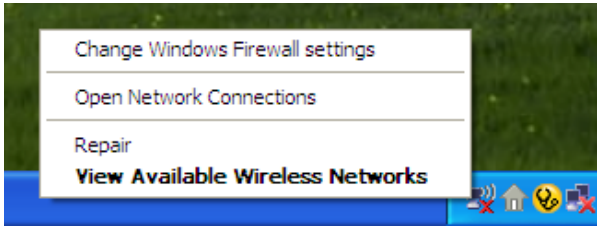
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



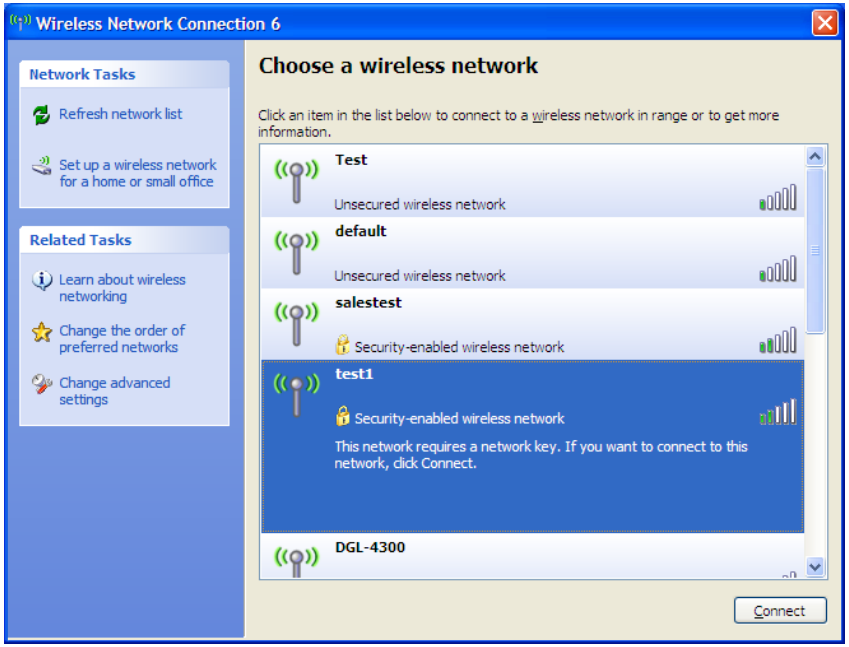
WPA/WPA2

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**.

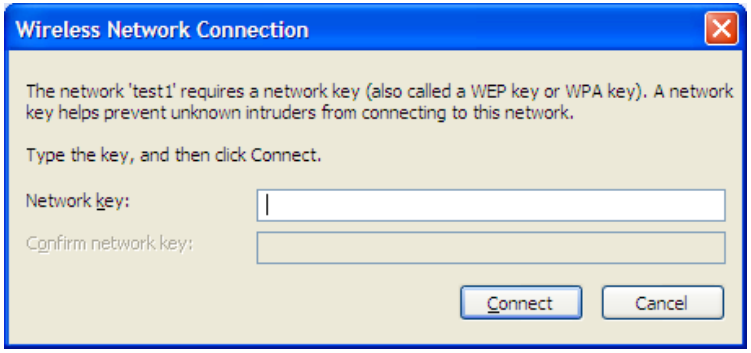


2. Highlight the Wi-Fi network (SSID) you would like to connect to and click **Connect**.



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 DSL-G225. 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 (**192.168.1.1** for example), you are not connecting to a website nor do you have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:

  - Microsoft Internet Explorer® 7 and higher
  - Mozilla Firefox 3.5 and higher
  - Google™ Chrome 8 and higher
  - Apple Safari 4 and higher

- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.

- Disable any Internet security software running on the computer. Software firewalls such as 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 192.168.1.1. 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?

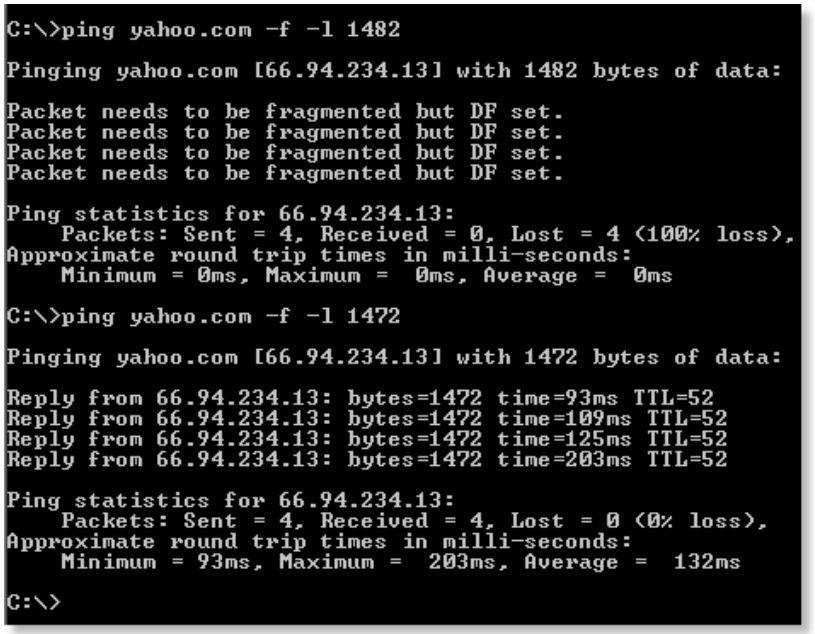
If you are having a problem sending or receiving email, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

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**



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 (192.168.1.1) 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 DIR-850L 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

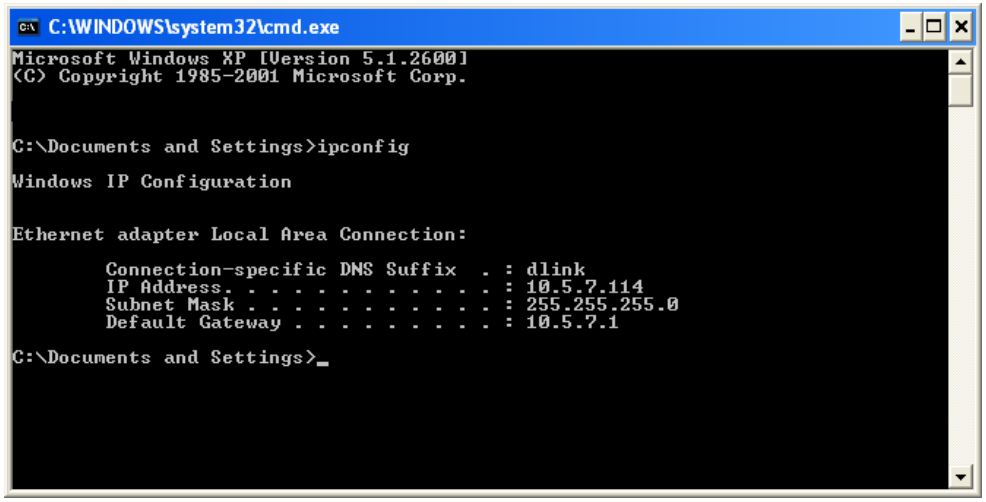
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

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

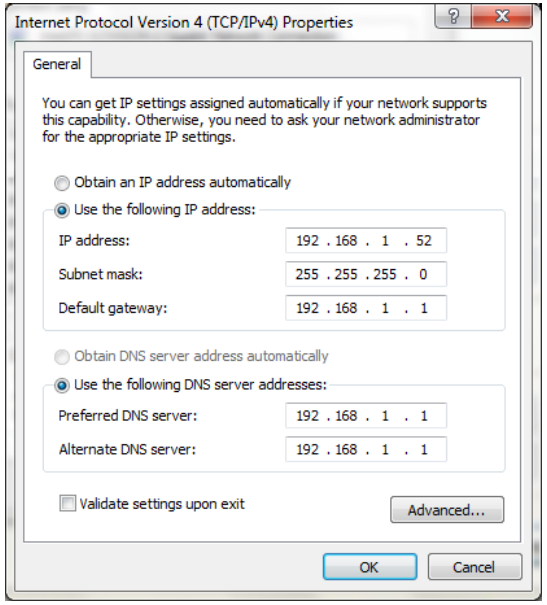
Right-click on the **Local Area Connection** which represents your network adapter and select **Properties**.

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 192.168.1.1, make your IP address 192.168.1.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. 192.168.1.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.1.1). 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
- RJ-11 ADSL port
- 4 RJ-45 10/100/1000BASE-TX Ethernet ports with auto MDI/MDIX
- 1 RJ-45 10/100/1000BASE-TX WAN Ethernet port
- Wireless Interface (2.4 GHz): IEEE 802.11n/g/b
- USB 2.0 port

Operating Voltage
- Input: 100~240 V (±20%), 50~60 Hz
- Output: DC 12 V, 0.5 A

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

Humidity
- Operating: 0% - 90% non-condensing
- Non-Operating: 5% - 95% non-condensing

ADSL Standards
- Multi-mode
- Full-rate ANSI T1.413 Issue 2
- ITU-T G.992.1 (G.dmt) Annex A/C/I
- ITU-T G.992.2 (G.lite) Annex A/C
- ITU-T G.994.1 (G.hs)

ADSL2 Standards
- ITU-T G.992.3 (G.dmt.bis) Annex A/J/K/L/M
- ITU-T G.992.4 (G.lite.bis) Annex A

ADSL2+ Standards
- ITU-T G.992.5 Annex A/L/M

VDSL Standards
- G.993.2(VDSL2) (8a/b/c/d , 12a/b, 17a)
- G.993.5(G.vector)
- G.998.4(G.inp)

Wireless Bandwidth Rate
- 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 150 Mbps
  20 MHz: 150, 130, 117, 104, 78, 52, 39, 26, 13 Mbps
  40 MHz: 300, 270, 243, 216, 162, 108, 81, 54, 27 Mbps

Antenna Type
- Dual 2x2 built-in MIMO antennas

Wireless Security
- 64/128-bit WEP, WPA/WPA2-Personal
- WPA/WPA2-Enterprise
- WPS (PIN & PBC)

Certifications
- CE
- RoHS

Dimensions & Weight
- 131.5 x 74.3 x 185.4 mm (5.2 x 2.9 x 7.3 inches)
- 285 grams (10.1 ounces)