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Section 1 - Product Overview

Package Contents

- DSL-2750U Wireless N 300 ADSL2+ Modem Router
- Power Adapter
- CD-ROM with User Manual
- One Micro Splitter
- One twisted-pair telephone cable used for ADSL connection
- One straight-through Ethernet cable
- One Quick Installation Guide

*Note:* Using a power supply with a different voltage rating than the one included with the DSL-2750U will cause damage and void the warranty for this product.

System Requirements

- ADSL Internet service
- Computer with:
  - 200MHz Processor
  - 64MB Memory
  - CD-ROM Drive
  - Ethernet Adapter with TCP/IP Protocol Installed
  - Internet Explorer v6 or later, Firefox v1.5
  - Computer with Windows 2000, Windows XP, or Windows Vista
Features

- **PPP (Point-to-Point Protocol) Security** – The DSL-2750U ADSL Router supports PAP (Password Authentication Protocol) and CHAP (Challenge Handshake Authentication Protocol) for PPP connections. The Router also supports MSCHAP.

- **DHCP Support** – Dynamic Host Configuration Protocol automatically and dynamically assigns all LAN IP settings to each host on your network. This eliminates the need to reconfigure every host whenever changes in network topology occur.

- **Network Address Translation (NAT)** – For small office environments, the DSL-2750U allows multiple users on the LAN to access the Internet concurrently through a single Internet account. This provides Internet access to everyone in the office for the price of a single user. NAT improves network security in effect by hiding the private network behind one global and visible IP address. NAT address mapping can also be used to link two IP domains via a LAN-to-LAN connection.

- **TCP/IP (Transfer Control Protocol/Internet Protocol)** – The DSL-2750U supports TCP/IP protocol, the language used for the Internet. It is compatible with access servers manufactured by major vendors.

- **RIP-1/RIP-2** – The DSL-2750U supports both RIP-1 and RIP-2 exchanges with other routers. Using both versions lets the Router to communicate with all RIP enabled devices.

- **Static Routing** – This allows you to select a data path to a particular network destination that will remain in the routing table and never “age out”. If you wish to define a specific route that will always be used for data traffic from your LAN to a specific destination within your LAN (for example to another router or a server) or outside your network (to an ISP defined default gateway for instance).

- **Default Routing** – This allows you to choose a default path for incoming data packets for which the destination address is unknown. This is particularly useful when/if the Router functions as the sole connection to the Internet.

- **ATM (Asynchronous Transfer Mode)** – The DSL-2750U supports Bridged Ethernet over ATM (RFC1483), IP over ATM (RFC1577), and PPP over ATM (RFC 2364).

- **Precise ATM Traffic Shaping** – Traffic shaping is a method of controlling the flow rate of ATM data cells. This function helps to establish the Quality of Service for ATM data transfer.
Section 1 - Product Overview

- **G.hs (Auto-handshake)** – This allows the Router to automatically choose either the G.lite or G.dmt ADSL connection standards.

- **High Performance** – Very high rates of data transfer are possible with the Router. Up to 8 Mbps downstream bit rate using the G.dmt standard.

- **Full Network Management** – The DSL-2750U incorporates SNMP (Simple Network Management Protocol) support for web-based management and text-based network management via an RS-232 or Telnet connection.

- **Telnet Connection** – The Telnet enables a network manager to access the Router’s management software remotely.

- **Easy Installation** – The DSL-2750U uses a web-based graphical user interface program for convenient management access and easy set up. Any common web browser software can be used to manage the Router.
Hardware Overview

Connections

- **Antenna**
- **ADSL Port**
  Use the ADSL cable to connect to your telephone line (RJ-11 port)
- **Ethernet Port**
  Use the Ethernet port to connect the Router to a computer or an Ethernet LAN
- **USB Port**
  Use the USB port to connect to the computer
- **WPS Button**
  Push the button to on/off WPS function
- **Power Button**
  Push in to power-on the Router. Push again to power-off the Router.
- **Power Insert**
  Use the adapter shipped with the Router to connect to power source.
- **Wireless ON/OFF Button**
  Push the button to on/off wireless function
- **Reset Button**
  On the bottom of the device, push it to reset to factory configuration
Hardware Overview

LEDs

- **Power**: A steady green light indicates the unit is powered on. When the device is powered off it remains dark. Lights steady green during power on self-test (POST) means the power connection works properly.

- **WLAN**: A steady green light indicates a wireless connection. A blinking green light indicates activity on the WLAN interface.

- **DSL**: A steady green light indicates a valid ADSL connection. This light will blink when there is activity currently passing through the Ethernet port.

- **WPS**: A blinking green light indicates the device has connected the wireless network card. A blinking green light indicates activity on WPS.

- **USB**: A steady green light indicates a valid link on startup. This light will blink when there is activity currently passing through the USB port.

- **Internet**: A steady green light indicates a valid internet connection.

- **LAN**: A solid green light indicates a valid link on startup. This light will blink when there is activity currently passing through the Ethernet port.

- **WPS**: A blinking green light indicates activity on WPS.

- **DSL**: A steady green light indicates a valid ADSL connection. This light will blink after the ADSL negotiation process has been settled. A blinking green light indicates that ADSL is attempting to sync.
Installation

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

Before You Begin

Please read and make sure you understand all the prerequisites for proper installation of your new Router. Have all the necessary information and equipment on hand before beginning the installation.
Section 2 – Installation

**Installation Notes**

In order to establish a connection to the Internet it will be necessary to provide information to the Router that will be stored in its memory. For some users, only their account information (Username and Password) is required. For others, various parameters that control and define the Internet connection will be required. You can print out the two pages below and use the tables to list this information. This way you have a hard copy of all the information needed to setup the Router. If it is necessary to reconfigure the device, all the necessary information can be easily accessed. Be sure to keep this information safe and private.

**Low Pass Filters**
Since ADSL and telephone services share the same copper wiring to carry their respective signals, a filtering mechanism may be necessary to avoid mutual interference. A low pass filter device can be installed for each telephone that shares the line with the ADSL line. These filters are easy to install passive devices that connect to the ADSL device and/or telephone using standard telephone cable. Ask your service provider for more information about the use of low pass filters with your installation.

**Operating Systems**
The DSL-2750U uses an HTML-based web interface for setup and management. The web configuration manager may be accessed using any operating system capable of running web browser software, including Windows 98 SE, Windows ME, Windows 2000, Windows XP, and Windows Vista.

**Web Browser**
Any common web browser can be used to configure the Router using the web configuration management software. The program is designed to work best with more recently released browsers such as Opera, Microsoft Internet Explorer® version 6.0, Netscape Navigator® version 6.2.3, or later versions. The web browser must have JavaScript enabled. JavaScript is enabled by default on many browsers. Make sure JavaScript has not been disabled by other software (such as virus protection or web user security packages) that may be running on your computer.

**Ethernet Port (NIC Adapter)**
Any computer that uses the Router must be able to connect to it through the Ethernet port on the Router. This connection is an Ethernet connection and therefore requires that your computer be equipped with an Ethernet port as well. Most notebook computers are now sold with an Ethernet port already installed. Likewise, most fully assembled desktop computers come with an Ethernet NIC adapter as standard equipment. If your computer does not have an Ethernet port, you must install an Ethernet NIC adapter before you can use the Router. If you must install an adapter, follow the installation instructions that come with the Ethernet NIC adapter.
Additional Software
It may be necessary to install software on your computer that enables the computer to access the Internet. Additional software must be installed if you are using the device a simple bridge. For a bridged connection, the information needed to make and maintain the Internet connection is stored on another computer or gateway device, not in the Router itself.

If your ADSL service is delivered through a PPPoE or PPPoA connection, the information needed to establish and maintain the Internet connection can be stored in the Router. In this case, it is not necessary to install software on your computer. It may however be necessary to change some settings in the device, including account information used to identify and verify the connection.

All connections to the Internet require a unique global IP address. For bridged connections, the global IP settings must reside in a TCP/IP enabled device on the LAN side of the bridge, such as a PC, a server, a gateway device such as a router or similar firewall hardware. The IP address can be assigned in a number of ways. Your network service provider will give you instructions about any additional connection software or NIC configuration that may be required.
Information you will need from your ADSL service provider

Username
This is the Username used to log on to your ADSL service provider’s network. Your ADSL service provider uses this to identify your account.

Password
This is the Password used, in conjunction with the Username above, to log on to your ADSL service provider’s network. This is used to verify the identity of your account.

WAN Setting / Connection Type
These settings describe the method your ADSL service provider uses to transport data between the Internet and your computer. Most users will use the default settings. You may need to specify one of the following WAN Setting and Connection Type configurations (Connection Type settings listed in parenthesis):

- PPPoE/PPPoA (PPPoE LLC, PPPoA LLC or PPPoA VC-Mux)
- Bridge Mode (1483 Bridged IP LLC or 1483 Bridged IP VC Mux)
- IPoA/MER (Static IP Address) (Bridged IP LLC, 1483 Bridged IP VC Mux, 1483 Routed IP LLC, 1483 Routed IP VC-Mux or IPoA)
- MER (Dynamic IP Address) (1483 Bridged IP LLC or 1483 Bridged IP VC-Mux)

Modulation Type
ADSL uses various standardized modulation techniques to transmit data over the allotted signal frequencies. Some users may need to change the type of modulation used for their service. The default DSL modulation (ADSL2+ Multi-Mode) used for the Router automatically detects all types of ADSL, ADSL2, and ADSL2+ modulation.

Security Protocol
This is the method your ADSL service provider will use to verify your Username and Password when you log on to their network. Your Router supports the PAP and CHAP protocols.
Section 2 – Installation

VPI
Most users will not be required to change this setting. The Virtual Path Identifier (VPI) is used in conjunction with the Virtual Channel Identifier (VCI) to identify the data path between your ADSL service provider’s network and your computer. If you are setting up the Router for multiple virtual connections, you will need to configure the VPI and VCI as instructed by your ADSL service provider for the additional connections. This setting can be changed in the WAN Settings window of the web management interface.

VCI
Most users will not be required to change this setting. The Virtual Channel Identifier (VCI) used in conjunction with the VPI to identify the data path between your ADSL service provider’s network and your computer. If you are setting up the Router for multiple virtual connections, you will need to configure the VPI and VCI as instructed by your ADSL service provider for the additional connections. This setting can be changed in the WAN Settings window of the web management interface.
Information you will need about DSL-2750U

Username
This is the Username needed to access the Router’s management interface. When you attempt to connect to the device through a web browser you will be prompted to enter this Username. The default Username for the Router is “admin.” The user cannot change this.

Password
This is the Password you will be prompted to enter when you access the Router’s management interface. The default Password is “admin.” The user may change this.

LAN IP addresses for the DSL-2750U
This is the IP address you will enter into the Address field of your web browser to access the Router’s configuration graphical user interface (GUI) using a web browser. The default IP address is 192.168.1.1. This may be changed to suit any IP address scheme the user desires. This address will be the base IP address used for DHCP service on the LAN when DHCP is enabled.

LAN Subnet Mask for the DSL-2750U
This is the subnet mask used by the DSL-2750U, and will be used throughout your LAN. The default subnet mask is 255.255.255.0. This can be changed later.
Information you will need about your LAN or computer:

**Ethernet NIC**
If your computer has an Ethernet NIC, you can connect the DSL-2750U to this Ethernet port using an Ethernet cable. You can also use the Ethernet ports on the DSL-2750U to connect to other computer or Ethernet devices.

**DHCP Client status**
Your DSL-2750U ADSL Router is configured, by default, to be a DHCP server. This means that it can assign an IP address, subnet mask, and a default gateway address to computers on your LAN. The default range of IP addresses the DSL-2750U will assign are from 192.168.1.2 to 192.168.1.254. Your computer (or computers) needs to be configured to obtain an IP address automatically (that is, they need to be configured as DHCP clients.)

It is recommended that you collect and record this information here, or in some other secure place, in case you have to re-configure your ADSL connection in the future.

Once you have the above information, you are ready to setup and configure your DSL-2750U ADSL Router.
Device Installation

The DSL-2750U connects two separate physical interfaces, an ADSL (WAN) and an Ethernet (LAN) interface. Place the Router in a location where it can be connected to the various devices as well as to a power source. The Router should not be located where it will be exposed to moisture or excessive heat. Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard. As with any electrical appliance, observe common sense safety procedures.

The Router can be placed on a shelf or desktop, ideally you should be able to see the LED indicators on the front if you need to view them for troubleshooting.

Power on Router

The Router must be used with the power adapter included with the device.

1. Insert the DC Power Adapter cord into the power receptacle located on the rear panel of the Router and plug the adapter into a suitable nearby power source.

2. Depress the Power button into the on position. You should see the Power LED indicator light up and remain lit. The Status LED should light solid green and begin to blink after a few seconds.

3. If the Ethernet port is connected to a working device, check the LAN LED indicators to make sure the connection is valid. The Router will attempt to establish the ADSL connection, if the ADSL line is connected and the Router is properly configured this should light up after several seconds. If this is the first time installing the device, some settings may need to be changed before the Router can establish a connection.
Section 2 – Installation

Factory Reset Button
The Router may be reset to the original factory default settings by using a ballpoint or paperclip to gently push down the reset button in the following sequence:
1. Press and hold the reset button while the device is powered off.
2. Turn on the power.
3. Wait for 10 seconds and then release the reset button.
Remember that this will wipe out any settings stored in flash memory including user account information and LAN IP settings. The device settings will be restored to the factory default IP address 192.168.1.1 and the subnet mask is 255.255.255.0, the default management Username is “admin” and the default Password is “admin.”

Network Connections

Connect ADSL Line
Use the ADSL cable included with the Router to connect it to a telephone wall socket or receptacle. Plug one end of the cable into the ADSL port (RJ-11 receptacle) on the rear panel of the Router and insert the other end into the RJ-11 wall socket. If you are using a low pass filter device, follow the instructions included with the device or given to you by your service provider. The ADSL connection represents the WAN interface, the connection to the Internet. It is the physical link to the service provider’s network backbone and ultimately to the Internet.

Connect Router to Ethernet
The Router may be connected to a single computer or Ethernet device through the 10BASE-TX Ethernet port on the rear panel. Any connection to an Ethernet concentrating device such as a switch or hub must operate at a speed of 10/100 Mbps only. When connecting the Router to any Ethernet device that is capable of operating at speeds higher than 10Mbps, be sure that the device has auto-negotiation (NWay) enabled for the connecting port. Use standard twisted-pair cable with RJ-45 connectors. The RJ-45 port on the Router is a crossed port (MDI-X). Follow standard Ethernet guidelines when deciding what type of cable to use to make this connection. When connecting the Router directly to a PC or server use a normal straight-through cable. You should use a crossed cable when connecting the Router to a normal (MDI-X) port on a switch or hub. Use a normal straight-through cable when connecting it to an uplink (MDI-II) port on a hub or switch. The rules governing Ethernet cable lengths apply to the LAN to Router connection. Be sure that the cable connecting the LAN to the Router does not exceed 100 meters.

Hub or Switch to Router Connection
Connect the Router to an uplink port (MDI-II) on an Ethernet hub or switch with a straight-through cable. If you wish to reserve the uplink port on the switch or hub for another device, connect to any on the other MDI-X ports (1x, 2x, etc.) with a crossed cable.

Computer to Router Connection
You can connect the Router directly to a 10/100BASE-TX Ethernet adapter card (NIC) installed on a PC using the Ethernet cable provided.
Configuration

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

**Web-based Configuration Utility**

**Connect to the Router**
The default IP address for ADSL MODEM is: 192.168.1.1; The Subnet Mask is: 255.255.255.0. Users can configure ADSL MODEM through an Internet browser. ADSL MODEM can be used as gateway and DNS server; users need to set the computer’s TCP/IP protocol as follow:

1. Set the computer IP address at same segment of ADSL MODEM, such as set the IP address of the network card to one of the “192.168.1.2” ~ “192.168.1.254”.
2. Set the computer’s gateway the same IP address as the ADSL Modem’s.
3. Set computer’s DNS server the same as ADSL Modem’s IP address or that of an effective DNS server.

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.1.1).
Type “admin” for the User Name and “admin” in the Password field. If you get a Page Cannot be Displayed error, please refer to the Troubleshooting section for assistance.
Device Info

To access the **Device Info** window, click either the **Device Info** or **Summary** button in the **Device Info** directory. The following page opens:

![Device Info Window]

<table>
<thead>
<tr>
<th>Device Info</th>
<th>Value</th>
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<tbody>
<tr>
<td>Board ID</td>
<td>DSL-2750U</td>
</tr>
<tr>
<td>Software Version</td>
<td>1.0.0.0</td>
</tr>
<tr>
<td>Bootloader (CFE) Version</td>
<td>1.0.37-0.00.5</td>
</tr>
<tr>
<td>DSL PHY and Driver Version</td>
<td>A2p0030g.d23h</td>
</tr>
<tr>
<td>Wireless Driver Version</td>
<td>5.60.120.3.zps4.406.0</td>
</tr>
</tbody>
</table>

This information reflects the current status of your WAN connection:

- **Line Rate - Upstream (Kbps)**: 0
- **Line Rate - Downstream (Kbps)**: 0
- **LAN IPv4 Address**: 192.168.1.1
- **MAC Address**: 00:16:55:31:2b:0b
- **Default Gateway**: 192.168.1.1
- **Primary DNS Server**: 192.168.1.1
- **Secondary DNS Server**: 192.168.1.1
- **LAN IPv6 Address**: 213.42.20.20
- **Default IPv6 Gateway**: 213.42.20.20
- **Date/Time**: Wed Jun 13 10:55:51 2012
Appendix A – Troubleshooting

Summary

To access the Router’s first Summary window, click the Summary button in the Device Info directory.

This window displays the current status of your DSL connection, including the software version, LAN IP address, and DNS server address.

<table>
<thead>
<tr>
<th>Device Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>BoardID:</td>
</tr>
<tr>
<td>DSL-2750U</td>
</tr>
<tr>
<td>Software Version:</td>
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<tr>
<td>NT_1.00</td>
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<tr>
<td>Bootloader (CFE) Version:</td>
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<tr>
<td>1.0.37-106.5</td>
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<tr>
<td>DSL PHY and Driver Version:</td>
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<tr>
<td>A2pD030g.d23h</td>
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<tr>
<td>Wireless Driver Version:</td>
</tr>
<tr>
<td>5.60.120.3.cpe4.406.0</td>
</tr>
</tbody>
</table>

This information reflects the current status of your WAN connection.

| Line Rate - Upstream (Kbps): | 0          |
| Line Rate - Downstream (Kbps): | 0          |
| LAN IPv4 Address:               | 192.168.1.1|
| MAC Address:                    | 02:10:18:01:00:01 |
| Default Gateway:                |
| Primary DNS Server:             | 0.0.0.0     |
| Secondary DNS Server:           | 0.0.0.0     |
| LAN IPv6 Address:               |
| Default IPv6 Gateway:           |

D-Link DSL-2750U User Manual
WAN

To access the **WAN Info** window, click the **WAN** button in the **Device Info** directory.

This window displays the current status of your WAN connection.

<table>
<thead>
<tr>
<th>Interface</th>
<th>Description</th>
<th>Type</th>
<th>Iqmp</th>
<th>NAT</th>
<th>Firewall</th>
<th>IPv6</th>
<th>Mld</th>
<th>Remove</th>
<th>Edit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppp0.1</td>
<td>pppoe_0_0_50</td>
<td>PPPoE</td>
<td>Disabled</td>
<td>Enabled</td>
<td>Enabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>☐</td>
<td>Edit</td>
</tr>
<tr>
<td>ppp1.1</td>
<td>pppoe_eth0</td>
<td>PPPoE</td>
<td>Disabled</td>
<td>Enabled</td>
<td>Enabled</td>
<td>Disabled</td>
<td>Disabled</td>
<td>☐</td>
<td>Edit</td>
</tr>
</tbody>
</table>
Statistics

To access the Router’s first Statistics window, click the Statistics button in the Device Info directory.

This window displays the Router’s LAN statistics. Click the Reset Statistics button to refresh these statistics.

This window displays the Router’s WAN statistics. Click the Reset Statistics button to refresh these statistics.

This window displays the Router’s XTM statistics. Click the Reset button to refresh these statistics.
This window displays the Router’s xDSL statistics. Click the **Reset Statistics** button to refresh these statistics.

Click the **xDSL BER Test** button to access the ADSL Bit Error Rate Test window displayed below:

**ADSL BER Test - Start**

The ADSL Bit Error Rate (BER) test determines the quality of the ADSL connection. The test is done by transferring idle cells containing a known pattern and comparing the received data with this known pattern to check for any errors.

Select the test duration below and click "Start".

Tested Time (sec): 20

```
Start Close
```

<table>
<thead>
<tr>
<th>Mode:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Type:</td>
<td>Disabled</td>
<td></td>
</tr>
<tr>
<td>Status:</td>
<td>L3</td>
<td></td>
</tr>
<tr>
<td>Link Power State:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Downstream Upstream**

<table>
<thead>
<tr>
<th>Line Coding(Trellis):</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SNR Margin (0.1 dB):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenuation (0.1 dB):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Power (0.1 dBm):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attainable Rate (Kbps):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rate (Kbps):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Frames:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Frame Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RS Words:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RS Correctable Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RS Uncorrectable Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEC Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCD Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCD Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cells:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Cells:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit Errors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total ES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total SES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total UAS:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Click the **xDSL BER Test** button to access the ADSL Bit Error Rate Test window displayed below:

```
Start Close
```
Appendix A – Troubleshooting

Route

To access the **Device Info – Route** window, click the **Route** button in the **Device Info** directory.

This read-only window displays routing info.

<table>
<thead>
<tr>
<th>Destination</th>
<th>Gateway</th>
<th>Subnet Mask</th>
<th>Flag</th>
<th>Metric</th>
<th>Service</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.1.0</td>
<td>0.0.0.0</td>
<td>255.255.255.0</td>
<td>U</td>
<td>0</td>
<td></td>
<td>br0</td>
</tr>
</tbody>
</table>

ARP

To access the **Device Info – ARP** window, click the **ARP** button in the **Device Info** directory.

This read-only window displays Address Resolution Protocol info.

<table>
<thead>
<tr>
<th>IP address</th>
<th>Flags</th>
<th>HW Address</th>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.1.2</td>
<td>Complete</td>
<td>00:27:19:92:fc:3d</td>
<td>br0</td>
</tr>
</tbody>
</table>

DHCP

To access the **Device Info – DHCP Leases** window, click the **DHCP** button in the **Device Info** directory.

This read-only window displays DHCP lease info.

<table>
<thead>
<tr>
<th>Hostname</th>
<th>MAC Address</th>
<th>IP Address</th>
<th>Expires In</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Advanced Setup

This chapter includes the more advanced features used for network management and security as well as administrative tools to manage the Router, view status and other information used to examine performance and for troubleshooting.

Layer2 Interface

To access the **DSL ATM Interface Configuration** window, click the **ATM Interface** button in the **Layer2 Interface** directory. This window is used to configure the ATM interface. You can add and delete ATM interface on this window.

If you are setting up the ATM interface for the first time, click the **Add** button.
The **ATM PVC** Configuration window allows you to set up ATM PVC configuration. Enter Virtual Path Identifier, and Virtual Channel Identifier. The VPI and VCI values should be provided by your ISP. This window also allows you to select DSL Link Type, PPPoA, IpoA, and EoA (EoA is for PPPoE, IPoE, and Bridge).

Use the drop-down menu to select the desired Encapsulation Mode.

Click the **Apply / Save** button to Save.
Appendix A – Troubleshooting

To access the **ETH WAN Interface Configuration** window, click the **ETH Interface** button in the **Layer2 Interface** directory. This window is used to configure the ETH interface. You can add and delete ETH interface on this window. If you are setting up the ETH interface for the first time, click the **Add** button.
The **ETH PVC** Configuration window allows you to set up ETH WAN configuration. This screen allows you to configure a ETH port. Select a ETH port. Select Connection Mode.

Click the **Apply / Save** button to Save.
WAN Service

To access the **Wide Area Network (WAN) Service Setup** window, click the **WAN Service** button in the **Advanced Setup** directory.

This window is used to configure the WAN interface. You can add and delete WAN interface on this window.

If you are setting up the WAN interface for the first time, click the **Add** button.
The **WAN Service Interface Configuration** Configuration window allows select a layer 2 interface for this service. Click the **Next** button to continue.

**WAN Service Interface Configuration**

Select a layer 2 interface for this service

Note: For ATM interface, the descriptor string is (portId_vpi_vci)
For PTM interface, the descriptor string is (portId_high_low)
Where portId=0 --> DSL Latency PATH0
portId=1 --> DSL Latency PATH1
portId=2 --> DSL Latency PATH0&1
low =0 --> Low PTM Priority not set
low =1 --> Low PTM Priority set
high =0 --> High PTM Priority not set
high =1 --> High PTM Priority set

```
 atm0/(0_0_35)
```

[Back] [Next]
Appendix A – Troubleshooting

Routing

To access the Routing windows, click the Routing button in the Advanced Setup directory.

Default Gateway

Default gateway interface list can have multiple WAN interfaces served as system default gateways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Apply / Save button when you are finished.
Static Route

Click the Add button on the Routing – Static Route window to access the following window displayed on the next page.

Enter the static routing information for an entry to the routing table. Click the Apply / Save button when you are finished.
Appendix A – Troubleshooting

Policy Routing

Click the Add button on the Policy Routing Setup window to access the following window displayed on the next page.

Policy Routing Setting -- A maximum 8 entries can be configured.

Enter the Policy Routing information. Click the Apply / Save button when you are finished.
RIP

To activate RIP for the device, select the **Enabled** radio button for Global RIP Mode. To configure an individual interface, select the desired RIP version and operation, followed by placing a check in the 'Enabled' checkbox for the interface. Click the **Save/Apply** button to save the configuration, and to start or stop RIP based on the Global RIP mode selected.
DNS

To access the DNS windows, click the DNS button in the Advanced Setup directory. The DNS button appears when configuring WAN interface in PPPoA, PPPoE, MER or IPoA.

DNS Server

Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered. DNS Server Interfaces can have multiple WAN interfaces served as system dns servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Apply / Save button when you are finished.
Dynamic DNS

The Router supports Dynamic DNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form hostname.dyndns.org. Many ISPs assign public IP addresses using DHCP, this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.

Click Add to see the Add DDNS Settings section.

Enter the required DDNS information, click the Apply / Save button to save the information.

Note: DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server.
Security

This page allows you to configure security features of the wireless LAN interface. You may setup configuration manually or through WiFi Protected Setup (WPS).

You can select to configure WEP encryption, Shared, 802.1x, WPA, and WPA2 authentication.

Wireless — Security

This page allows you to configure security features of the wireless LAN interface. You may setup configuration manually or through WiFi Protected Setup (WPS).

WPS Setup

Enable WPS

[Option: Disabled]

Manual Setup AP

You can set the network authentication method, select data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply/Save" when done.

Select SSID:

[Option: D-Link]

Network Authentication:

[Option: None]

[Apply/Save]
Appendix A – Troubleshooting

MAC Filter

This page can help you to allow or deny certain MAC addresses to pass through or block out. Click **Add** to see the following page.

Enter MAC Address and click **Apply / Save** to add the MAC address to MAC filter.

**Wireless -- MAC Filter**

Select SSID: [D-Link]

MAC Restrict Mode: 
- [ ] Disabled
- [ ] Allow
- [ ] Deny

MAC Address: [ ]

[ ] Add  [ ] Remove

[ ] Add  [ ] Remove

Enter the MAC address and click "Apply/Save" to add the MAC address to the wireless MAC address filters.
Appendix A – Troubleshooting

Wireless Bridge

This page allows you to configure bridge features of the wireless LAN.

Click **Refresh** to update the remote bridges. Click **Apply / Save** to save the settings.

<table>
<thead>
<tr>
<th>Wireless -- Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disable access point functionality. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click &quot;Refresh&quot; to update the remote bridges. Wait for few seconds to update. Click &quot;Apply/Save&quot; to configure the wireless bridge options.</td>
</tr>
</tbody>
</table>

| AP Mode:       | Access Point |  |
| Bridge Restrict: | Enabled |  |
| Remote Bridges MAC Address: |  |  |

[Refresh] [Apply/Save]
This page allows you to configure advanced wireless LAN interface. Configuring these settings may increase the performance of your router but if you are not familiar with networking devices and protocols, this section should be left at its default settings. Click Apply / Save to save the settings.
Station Info

This page shows the authenticated wireless stations and their status. Click **Refresh** to update the information.

Wireless -- Authenticated Stations

This page shows authenticated wireless stations and their status.

<table>
<thead>
<tr>
<th>MAC</th>
<th>Associated</th>
<th>SSID</th>
<th>Interface</th>
</tr>
</thead>
</table>

[Refresh]
Diagnostics

Your modem is capable of testing your DSL connection with access to **Diagnostics**.

This window is used to test connectivity of the Router.
Management

The Management directory features an array of options designed to help you get the most out of your Router.

Settings

To access the Settings - Backup window, click the Settings button in the Management directory.

This window allows you to backup your DSL Router configurations.

Click the Backup Settings button to save your Router configurations to a file on your computer.

This window allows Update DSL router settings. You may update your router settings using your saved files.

Click the Update Settings button to update your Router configurations with a file on your computer.

This window allows Restore DSL router settings to the factory defaults.

Click the Restore DSL Settings button to restore DSL router settings to the factory defaults.
These windows allow you to view the System Log and configure the System Log options. To access the System Log window, click the System Log button in the Management directory.

Click the View System Log button to view the System Log. Click the Configure System Log button to configure the System Log options.

Click on the Refresh button to refresh the system log settings.

System Log – Configuration
The system log displays chronological event log data. The event log can be read from local host or sent to a System Log server. The available event severity levels are: Emergency, Alert, Critical, Error, Warning, Notice, Informational, and Debugging.

This window allows you to log selected events. When you are finished, click the Apply / Save button.
WAN Service Configuration – BRIDGING
Click the Bridge radio button on this window. Click the Next button to continue.
Appendix A – Troubleshooting

WAN Service Configuration – BRIDGING
This summary window allows you to confirm the bridging settings you have just made. Click the **Apply /Save** button to save your new bridging settings and restart the Router.

To access the **Wide Area Network (WAN) Service Setup** window, click the **WAN Service** button in the **Advanced Setup** directory.

This window is used to configure the WAN interface. You can add and delete WAN interface on this window.

If you are setting up the WAN interface for the first time, click the **Add** button.
The **WAN Service Interface Configuration** Configuration window allows select a layer 2 interface for this service. Click the **Next** button to continue.

**WAN Service Interface Configuration**

Select a layer 2 interface for this service

Note: For ATM interface, the descriptor string is \((portId_vpl_vci)\)
For PTM interface, the descriptor string is \((portId_high_low)\)
Where
- \(portId=0\) -> DSL Latency PATH0
- \(portId=1\) -> DSL Latency PATH1
- \(portId=4\) -> DSL Latency PATH0&1
- \(low=0\) -> Low PTM Priority not set
- \(low=1\) -> Low PTM Priority set
- \(high=0\) -> High PTM Priority not set
- \(high=1\) -> High PTM Priority set

---

![Configuration Window](image)
This window allows you to select the appropriate connection type. **WAN Service Configuration – PPPoE**

Click the PPP over Ethernet (PPPoE) radio button on this window. This window also allows you to use the drop-down menu to enable IPv6 service. Click the **Next** button to continue.
WAN Service Configuration – PPPoE
This window allows you to set the username and the password for your PPP connection. This information is obtained from your ISP. Additional settings on this window will also depend on your ISP. And You can input 2nd ip on this page. Click the Next button to continue.
Appendix A – Troubleshooting

WAN Service Configuration – PPPoE
Default gateway interface list can have multiple WAN interfaces served as system default gateways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Next button to continue.

WAN Service Configuration – PPPoE
Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered. DNS Server Interfaces can have multiple WAN interfaces served as system dns servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Next button to continue.
Appendix A – Troubleshooting

WAN Service Configuration – PPPoE
This summary window allows you to confirm the settings you have just made. Click the **Apply / Save** button to save your new PPP over Ethernet settings and restart the Router.
WAN Service Configuration – PPPoA
This window allows you to enter service description. Click the **Next** button to continue.

WAN Service Configuration – PPPoA
This window allows you to set the username and the password for your PPP connection. This information is obtained from your ISP. Additional settings on this window will also depend on your ISP. And You can input 2nd ip on this page. Click the **Next** button to continue.
WAN Service Configuration – PPPoA
Default gateway interface list can have multiple WAN interfaces served as system default gateways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Next button to continue.

WAN Service Configuration – PPPoA
Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered. DNS Server Interfaces can have multiple WAN interfaces served as system dns servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Next button to continue.
WAN Service Configuration – PPPoA
This summary window allows you to confirm the settings you have just made. Click the **Apply / Save** button to save your new PPP over ATM settings and restart the Router.
Appendix A – Troubleshooting

WAN Service Configuration – IPoA
This window allows you to enter service description. Click the Next button to continue.

WAN Service Configuration – IPoA
This window allows you to configure the WAN IP settings. This information is obtained from your ISP. Click the Next button to continue.

WAN Service Configuration – IPoA
This window allows you to enable or disable Network Address Translation and a firewall for your Router. In addition, you can enable or disable IGMP multicasting. Click the Next button to continue.
Appendix A – Troubleshooting

WAN Service Configuration – IPoA
Default gateway interface list can have multiple WAN interfaces served as system default gateways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the **Next** button to continue.

WAN Service Configuration – IPoA
Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered. DNS Server Interfaces can have multiple WAN interfaces served as system dns servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the **Next** button to continue.
WAN Service Configuration – IPoA
This summary window allows you to confirm the settings you have just made. Click the **Save/Reboot** button to save your new IP over ATM settings and restart the Router.

![WAN Setup - Summary](image)

<table>
<thead>
<tr>
<th>Connection Type</th>
<th>IPoA</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAT</td>
<td>Disabled</td>
</tr>
<tr>
<td>Full Cone NAT</td>
<td>Disabled</td>
</tr>
<tr>
<td>Firewall</td>
<td>Disabled</td>
</tr>
<tr>
<td>IGMP Multicast</td>
<td>Disabled</td>
</tr>
<tr>
<td>Quality Of Service</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

Click “Apply/Save” to have this interface to be effective. Click “Back” to make any modifications.
LAN

You can configure the LAN IP address to suit your preference. Many users will find it convenient to use the default settings together with DHCP service to manage the IP settings for their private network. The IP address of the Router is the base address used for DHCP. In order to use the Router for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the Router. The IP addresses available in the DHCP IP address pool will change automatically if you change the IP address of the Router.

To access the **Local Area Network (LAN) Setup** window, click the **LAN** button in the **Advanced Setup** directory.
This window allows you to set up a LAN interface. When you are finished, click the **Apply / Save** button.
Appendix A – Troubleshooting

To access the **IPv6 LAN Auto Configuration** window, click the **IPv6 AutoConfig** button in the **LAN** directory.

This window allows you to set up IPv6 LAN Auto Configuration. When you are finished, click the **Apply / Save** button.
Appendix A – Troubleshooting

**NAT**

To access the **Network Address Translation (NAT) Setup** window, click the **NAT** button in the **Advanced Setup** directory. The **NAT** button appears when configuring WAN interface in PPPoA, PPPoE, IPoE or IPoA.

**Virtual Servers**

This window is used to configure virtual server. You can add, delete, and modify virtual server on this window.
If you are setting up the virtual server, click the **Add** button.

You can configure the service settings on this window by clicking the **Select a Service** radio button and then using the drop-down list to choose an existing service, or by clicking the **Custom Server** radio button and entering your own Application Rule in the field provided.

Click **Apply / Save** when you are finished with the virtual server configuration.
Port Triggering

Some applications such as games, video conferencing, remote access applications and others require that specific ports in the Router's firewall be opened for access by the applications. You can configure the port settings from this screen by selecting an existing application or creating your own (Custom application).

Click the **Add** button to configure port triggering.

You can configure the port settings on this window by clicking the **Select an application** radio button and then using the drop-down list to choose an existing application, or by clicking the **Custom application** radio button and entering your own Application Rule in the field provided.

Click **Save/Apply** when you are finished with the port setting configuration. The new Application Rule will appear in the Port Triggering table.
DMZ Host

Since some applications are not compatible with NAT, the Router supports use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and will therefore be visible to agents on the Internet with the right type of software. Keep in mind that any client PC in the DMZ will be exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through the DMZ.

To designate a DMZ IP address, type in the IP Address of the server or device on your LAN, and click the Save/Apply button.
Security

To access the Security window, click the Security button in the Advanced Setup directory. The Security button appears after configuring WAN interface in PPPoA, PPPoE, IPoE or IPoA.

IP Filtering

The IP Filtering button appears when configuring WAN interface in PPPoA, PPPoE, IPoE or IPoA.

IP Filtering - Outgoing

This window allows you to create a filter rule of Outgoing. Click change default policy to change the mode of policy.

Now default policy is BLOCK, it means all outgoing IP traffic from LAN is blocked, but some IP traffic can be accepted by setting up filters.

If you are setting up the outgoing IP filtering, click the Add button.

Now default policy is ACCEPT, it means all outgoing IP traffic from LAN is allowed, but some IP traffic can be Blocked by setting up filters.

If you are setting up the outgoing IP filtering, click the Add button.
Enter the information in the section. Explanations of parameters are described below. Click the Apply / Save button to add the entry in the Active Outbound IP Filtering table.

<table>
<thead>
<tr>
<th>Filters Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Name</td>
<td>Enter a name for the new filter.</td>
</tr>
<tr>
<td>IP Version</td>
<td>Ipv4/Ipv6</td>
</tr>
<tr>
<td>Protocol</td>
<td>Select the transport protocol (Any, TCP/UDP, TCP, UDP or ICMP) that will be used for the filter rule.</td>
</tr>
<tr>
<td>Source IP address[/prefix length]</td>
<td>Enter the start IP address which you are creating the filter rule.</td>
</tr>
<tr>
<td>Source Port (port or port:port)</td>
<td>The Source Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.</td>
</tr>
<tr>
<td>Destination IP address[/prefix length]</td>
<td>Enter the end IP address which you are creating the filter rule.</td>
</tr>
<tr>
<td>Destination Port (port or port:port)</td>
<td>The Destination Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.</td>
</tr>
</tbody>
</table>
Appendix A – Troubleshooting

IP Filtering – Incoming
This window allows you to create a filter rule of **Incoming**. Click **change default policy** to change the mode of policy.

Now default policy is **ACCEPT**, it means all incoming IP traffic from WAN is accepted, but some IP traffic can be blocked by setting up filters.

If you are setting up the incoming IP filtering, click the **Add** button.

Now default policy is **BLOCK**, it means all incoming IP traffic from WAN is blocked, but some IP traffic can be accepted by setting up filters.

If you are setting up the incoming IP filtering, click the **Add** button.

Enter the information in the section. Explanations of parameters are described below. Click the **Apply / Save** button to add the entry in the Active Inbound IP Filtering table.
## Filters Parameter Description

<table>
<thead>
<tr>
<th>Filters Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Name</td>
<td>Enter a name for the new filter.</td>
</tr>
<tr>
<td>IP Version</td>
<td>Ipv4/Ipv6</td>
</tr>
<tr>
<td>Protocol</td>
<td>Select the transport protocol (Any, TCP/UDP, TCP, UDP or ICMP) that will be used for the filter rule.</td>
</tr>
<tr>
<td>Source IP address[/prefix length]</td>
<td>Enter the start IP address which you are creating the filter rule.</td>
</tr>
<tr>
<td>Source Port (port or port:port)</td>
<td>The Source Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.</td>
</tr>
<tr>
<td>Destination IP address[/prefix length]</td>
<td>Enter the end IP address which you are creating the filter rule.</td>
</tr>
<tr>
<td>Destination Port (port or port:port)</td>
<td>The Destination Port is the TCP/UDP port on either the LAN or WAN depending on if you are configuring an Outbound or Inbound Filter rule.</td>
</tr>
</tbody>
</table>
Parental Control

Use this window to deny access to specified MAC address.
If you are setting up the MAC address blocking, click the Add button.

MAC address is a specially formatted text string (xx:xx:xx:xx:xx:xx) that uniquely identifies a device. This section will allow users to block devices with certain MAC addresses on the LAN.

To configure for MAC address blocking, enter the username into the Username field, click Browser’s MAC Address to have MAC address of the LAN device, or click Other MAC Address and enter a MAC address manually. Tick the checkboxes for the desired individual days of the week and enter desired Start Blocking Time and End Blocking Time.

Click the Save/Apply button to save the configuration.
Appendix A – Troubleshooting

**URL Filter**

This window allows you to set up **URL Filter** on the Router.

Choose URL List Type **Exclude** or **Include** first and click **Add** button.

Enter the URL address and port number then click **Apply / Save** to add the entry to the URL filter.

URL Filter – Please select the list type first then configure the list entries. Maximum 100 entries can be configured.

Exclude – Deny computers to access the following web sites in the list.

Include – Allow computers to access only the following sites in the list.

URL List Type:  ○ Exclude  ○ Include

Parental Control – URL Filter Add

Enter the URL address and port number then click “Apply/Save” to add the entry to the URL filter.

**URL Address:**

**Port Number:** (Default 80 will be applied if leave blank.)
click the 3G button in the **Advanced Setup** directory.

This window allows you to set up 3G on the Router. When you are finished, click on the **Save/Apply** button.
Quality of Service

QoS or Quality of Service allows your Router to help prioritize the data packet flow in your Router and network. This is very important for time sensitive applications such as VoIP where it may help prevent dropped calls. Large amounts of non-critical data can be scaled so as not to affect these prioritized sensitive real-time programs.

To access the **Quality of Service** button in the **Advanced Setup** directory.

This window allows you to set up QoS on the Router. When you are finished, click on the **Save/Apply** button.
Queue Config

Click the **Add** button to add a QoS Queue Configuration table entry.

This window allows you to configure a QoS queue entry and assign it a specific network interface.

Click the **Apply / Save** button to save and activate the filter.
QoS Classification

Choose **Add** or **Remove** to configure network traffic classes.

Use this window to create a traffic class rule to classify the upstream traffic, assign a queue that defines the precedence and the interface, and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition. Please remember that all of the specified conditions on this window must be met for the rule to take effect.

Click the **Apply / Save** button to save and activate this rule.
Routing

To access the Routing windows, click the Routing button in the Advanced Setup directory.

Default Gateway

Default gateway interface list can have multiple WAN interfaces served as system default gateways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Apply / Save button when you are finished.

Static Route

Click the Add button on the Routing – Static Route window to access the following window displayed on the next page.
Appendix A – Troubleshooting

Enter the static routing information for an entry to the routing table. Click the **Apply / Save** button when you are finished.

**Policy Routing**

Click the **Add** button on the **Policy Routing Setup** window to access the following window displayed on the next page.
Enter the Policy Routing information. Click the **Apply / Save** button when you are finished.

### RIP

To activate RIP for the device, select the **Enabled** radio button for Global RIP Mode. To configure an individual interface, select the desired RIP version and operation, followed by placing a check in the 'Enabled' checkbox for the interface. Click the **Save/Apply** button to save the configuration, and to start or stop RIP based on the Global RIP mode selected.
Appendix A – Troubleshooting

DNS

To access the DNS windows, click the DNS button in the Advanced Setup directory. The DNS button appears when configuring WAN interface in PPPoA, PPPoE, MER or IPoA.

DNS Server

Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered.

DNS Server Interfaces can have multiple WAN interfaces served as system dns servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the Apply / Save button when you are finished.
Dynamic DNS

The Router supports Dynamic DNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form hostname.dyndns.org. Many ISPs assign public IP addresses using DHCP, this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.

Click Add to see the Add DDNS Settings section.

Enter the required DDNS information, click the Apply / Save button to save the information.

Note

DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server.
**DSL**

To access the **DSL Settings** window, click the **DSL** button in the **Advanced Setup** directory.

This window allows you to select the desired modulation, phone line pair, and capability. Click the **Apply / Save** button when you are finished.

Click the **Advanced Settings** button to select a DSL test mode.

**Note:** Modulation ADSL2, ADSL2+ and AnnexL should be selected simultaneously.

<table>
<thead>
<tr>
<th>DSL Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the modulation below.</td>
</tr>
<tr>
<td>- G.Dmt Enabled</td>
</tr>
<tr>
<td>- T1.413 Enabled</td>
</tr>
<tr>
<td>- ADSL2 Enabled</td>
</tr>
<tr>
<td>- AnnexL Enabled</td>
</tr>
<tr>
<td>- ADSL2+ Enabled</td>
</tr>
<tr>
<td>- AnnexM Enabled</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>- BISQAP Enable</td>
</tr>
<tr>
<td>- SRA Enable</td>
</tr>
</tbody>
</table>

[Apply/Save] [Advanced Settings]
Select the desired DSL test mode and then click the **Apply** button.

Click the **Tone Selection** button to modify the upstream and downstream tones.

Select the appropriate upstream and downstream tones for your ADSL connection. Click the **Apply** button to let your settings take effect.
Appendix A – Troubleshooting

UPnP

To access the UPnP Configuration window, click the UPnP button in the Advanced Setup directory.

This window allows you to configure UPnP Proxy. Click the Apply / Save button when you are finished.

DNS Proxy

To access the DNS Proxy Configuration window, click the DNS Proxy button in the Advanced Setup directory.

This window allows you to configure DNS Proxy. Click the Apply / Save button when you are finished.

NOTE: UPnP is activated only when there is a live WAN service with NAT enabled.
Print Server

To access the Print Server settings window, click the Print Server button in the Advanced Setup directory.

This window allows you to enable/disable printer support. Click the Apply / Save button when you are finished.

---

Storage Service

To access the Storage Service window, click the Storage Service button in the Advanced Setup directory.

This window allows you to enable/disable USB sharing support. Click the Apply / Save button when you are finished.
Interface Grouping

Interface Group supports multiple ports to PVC and bridging groups. Each group will perform as an independent network.

To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.

Click **Add** to do advanced settings.
Appendix A – Troubleshooting

To create a new mapping group, enter **Group Name**, add interfaces to **Grouped Interfaces**.

Click **Apply / Save** to save the changes.

---

**Interface grouping configuration**

To create a new interface group:

1. Enter the Group name and the group name must be unique and select either 2. (Dynamic) or 3. (static) below.

2. If you wish to automatically add LAN clients to a WAN Interface in this new group add the DHCP Vendor ID string by configuring a DHCP vendor ID string any DHCP client request with the specified vendor ID (DHCP option 60) will be denied an IP address from the local DHCP server.

3. Select interfaces from the available interfaces list and add it to the group interface list using the arrow buttons to create the required mapping of the ports. Note that these clients may obtain public IP addresses.

4. Click **Apply / Save** button to make the changes effective immediately.

**IMPORTANT** If a vendor ID is configured for a specific client device, please **REBOOT** the client device attached to the modem to allow it to obtain an appropriate IP address.

**Group Name:**

**WAN Interface used in the grouping:**

**Grouped LAN Interfaces**

Available LAN Interfaces

- mib0
- mib1
- mib2
- mib3
- vlan0

**Automatically Add Clients With the Following DHCP Vendor IDs:**

Click **Apply / Save**.
Appendix A – Troubleshooting

IPSec

To access the **IPSec Tunnel Mode Connections** window, click the **IPSec** button in the **Advanced Setup** directory.

This window allows you to configure **IPSec**.

Click **Add New Connection** to edit IPSec tunnel mode connections from this page.
Appendix A – Troubleshooting

This window allows you to advanced settings.

IPSec Settings

IPSec Connection Name

Tunnel Mode

Remote IPSec Gateway Address (IPv4 address in dotted decimal)

Tunnel access from local IP addresses

IP Address for VPN

IP Subnetmask

Tunnel access from remote IP addresses

IP Address for VPN

IP Subnetmask

Key Exchange Method

Authentication Method

Pre-Shared Key

Perfect Forward Secrecy

Advanced IKE Settings

Apply/Save
Multicast

To access the **IGMP Configuration** window, click the **Multicast** button in the **Advanced Setup** directory.

Enter IGMP protocol configuration fields if you want modify default values shown below.

<table>
<thead>
<tr>
<th>IGMP Configuration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Version:</td>
<td>3</td>
</tr>
<tr>
<td>Query Interval:</td>
<td>125</td>
</tr>
<tr>
<td>Query Response Interval:</td>
<td>10</td>
</tr>
<tr>
<td>Last Member Query Interval:</td>
<td>10</td>
</tr>
<tr>
<td>Robustness Value:</td>
<td>2</td>
</tr>
<tr>
<td>Maximum Multicast Groups:</td>
<td>25</td>
</tr>
<tr>
<td>Maximum Multicast Data Sources (for IGMPV3 : (1 - 24):</td>
<td>10</td>
</tr>
<tr>
<td>Maximum Multicast Group Members:</td>
<td>25</td>
</tr>
<tr>
<td>Fast Leave Enable:</td>
<td></td>
</tr>
<tr>
<td>LAN to LAN (Intro LAN) Multicast Enable:</td>
<td></td>
</tr>
</tbody>
</table>

[Apply/Save]
Wireless

Press **Wireless** in the left menu to enter wireless section. You can select to configure wireless setup, security and management.

**Basic**

This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. Click "Apply/Save" to configure the basic wireless options.
Appendix A – Troubleshooting

Security

This page allows you to configure security features of the wireless LAN interface. You may setup configuration manually or through WiFi Protected Setup (WPS).

You can select to configure WEP encryption, Shared, 802.1x, WPA, and WPA2 authentication.

WPS Setup

Enable WPS: [Disabled]

Manual Setup AP

You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength.

Click “Apply/Save” when done.

Select SSID: [D-Link]

Network Authentication: [None]
Appendix A – Troubleshooting

MAC Filter

This page can help you to allow or deny certain MAC addresses to pass through or block out. Click Add to see the following page.

Enter MAC Address and click Apply / Save to add the MAC address to MAC filter.
Appendix A – Troubleshooting

This page allows you to configure bridge features of the wireless LAN.

Click **Refresh** to update the remote bridges.

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

---

**Wireless Bridge**

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disable access point functionality. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP.

- **Select** Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled(Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access.

- Click **Refresh** to update the remote bridge. Wait for few seconds to update.

- Click **Apply/Save** to configure the wireless bridge options.

<table>
<thead>
<tr>
<th>AP Mode:</th>
<th>Access Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Restrict:</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

Remote Bridges MAC Address:

```
[ ]
```

---

---

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Appendix A – Troubleshooting

**Advanced**

This page allows you to configure advanced wireless LAN interface. Configuring these settings may increase the performance of your router but if you are not familiar with networking devices and protocols, this section should be left at its default settings. Click **Apply / Save** to save the settings.
Station Info

This page shows the authenticated wireless stations and their status. Click **Refresh** to update the information.

<table>
<thead>
<tr>
<th>MAC</th>
<th>Associated</th>
<th>SSID</th>
<th>Interface</th>
</tr>
</thead>
</table>

Refresh
Your modem is capable of testing your DSL connection with access to Diagnostics. This window is used to test connectivity of the Router.

### Diagnostics

Your modem is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click “Run Diagnostic Tests” at the bottom of this page to make sure the fail status is correct. If the test continues to fail, click “Help” and follow the troubleshooting procedures.

**Test the connection to your local network:**
- Test your dial-up connection: FAIL
  - Test your dial-up connection: PASS
- Test your Ethernet connection: FAIL
  - Test your Ethernet connection: PASS
- Test your wireless connection: PASS

**Test the connection to your DSL service provider:**
- Test DSL synchronization: FAIL
  - Test DSL synchronization: PASS
- Test ATM D4 segment ping: DISABLED
  - Test ATM D4 segment ping: PASS
- Test ATM D4 end-to-end ping: DISABLED
  - Test ATM D4 end-to-end ping: PASS

**Test the connection to your Internet service provider:**
- Test PPP server connection: DISABLED
  - Test PPP server connection: PASS
- Test authentication with ISP: DISABLED
  - Test authentication with ISP: PASS
- Test the assigned IP address: DISABLED
  - Test the assigned IP address: PASS
- Ping default gateway: FAIL
  - Ping default gateway: PASS
- Ping primary Domain Name Server: FAIL
  - Ping primary Domain Name Server: PASS
Management

The Management directory features an array of options designed to help you get the most out of your Router.

Settings

To access the Settings - Backup window, click the Settings button in the Management directory.

This window allows you to backup your DSL Router configurations.

Click the Backup Settings button to save your Router configurations to a file on your computer.

This window allows Update DSL router settings. You may update your router settings using your saved files.

Click the Update Settings button to update your Router configurations with a file on your computer.

This window allows Restore DSL router settings to the factory defaults.

Click the Restore DSL Settings button to restore DSL router settings to the factory defaults.
System Log

These windows allow you to view the System Log and configure the System Log options. To access the System Log window, click the **System Log** button in the **Management** directory.

Click the **View System Log** button to view the System Log.
Click the **Configure System Log** button to configure the System Log options.

Click on the **Refresh** button to refresh the system log settings.

System Log – Configuration
Appendix A – Troubleshooting

The system log displays chronological event log data. The event log can be read from local host or sent to a System Log server. The available event severity levels are: **Emergency, Alert, Critical, Error, Warning, Notice, Informational**, and **Debugging**.

This window allows you to log selected events. When you are finished, click the **Apply / Save** button.

**System Log – Configuration**

If the log mode is enabled, the system will begin to log all the selected events. For the Log Level, all events above or equal to the selected level will be logged. For the Display Level, all logged events above or equal to the selected level will be displayed. If the selected mode is “Remote” or “Both,” events will be sent to the specified IP address and UDP port of the remote syslog server. If the selected mode is “Local” or “Both,” events will be recorded in the local memory.

Select the desired values and click ‘Apply/Save’ to configure the system log options.

<table>
<thead>
<tr>
<th>Log</th>
<th>Disable</th>
<th>Enable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Level:</td>
<td>Debugging</td>
<td>✔</td>
</tr>
<tr>
<td>Display Level:</td>
<td>Error</td>
<td>✔</td>
</tr>
<tr>
<td>Mode:</td>
<td>Local</td>
<td>✔</td>
</tr>
</tbody>
</table>

Apply/Save
SNMP Agent

To access the **SNMP – Configuration** window, click the **SNMP Agent** button in the **Management** directory.

Simple Network Management Protocol allows a management application to retrieve statistics and status from the SNMP agent in the Router. When you are finished, click the **Save/Apply** button.

```
SNMP - Configuration

Simple Network Management Protocol (SNMP) allows a management application to retrieve statistics and status from the SNMP agent in this device.

Select the desired values and click "Apply" to configure the SNMP options.

SNMP Agent  Disable Enable

Read Community:  public
Set Community:  private
System Name:  D-Link
System Location:  unknown
System Contact:  unknown
Trap Manager IP:  0.0.0.0
```

Save/Apply
To access the **TR-069 Client – Configuration** window, click the **TR-069 Client** button in the **Management** directory.

Simple Network Management Protocol allows a management application to retrieve statistics and status from the TR-069 client in the Router. When you are finished, click the **Save/Apply** button.

**TR-069 Client – Configuration**

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Select the desired values and click "Apply/Save" to configure the TR-069 client options.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inform</td>
<td>Enable</td>
</tr>
<tr>
<td><strong>Inform Interval:</strong></td>
<td>300</td>
</tr>
<tr>
<td><strong>ACS URL:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ACS User Name:</strong></td>
<td>admin</td>
</tr>
<tr>
<td><strong>ACS Password:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>WAN Interface used by TR-069 client:</strong></td>
<td>Any_WAN</td>
</tr>
<tr>
<td><strong>Display SOAP messages on serial console</strong></td>
<td>Enable</td>
</tr>
<tr>
<td><strong>Connection Request Authentication</strong></td>
<td>Enable</td>
</tr>
<tr>
<td><strong>Connection Request User Name:</strong></td>
<td>admin</td>
</tr>
<tr>
<td><strong>Connection Request Password:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Connection Request URL:</strong></td>
<td></td>
</tr>
</tbody>
</table>

Click the **Apply/Save** button.
Internet Time

To access the Time settings window, click the Internet Time button in the Management directory. This window allows you to set the Router’s time configuration. When you are finished, click the Save/Apply button.

- Time settings
  - This page allows you to the modem’s time configuration.
  - Automatically synchronize with Internet time servers
Access Control

To access the Access Control windows, click the Access Control button in the Management directory.

Passwords

This window allows you to change the password on the Router. When you are finished, click the Save/Apply button.
Update Software

To access the Tools - Update Software window, click the Update Software button in the Management directory. This window allows you to update the Router’s software.

To access this window, click the Reboot button in the Management directory.

To save your settings and reboot the system, click the Reboot button.

Step 1: Obtain an updated software image file from your ISP.

Step 2: Enter the path to the image file location in the box below or click the “Browse” button to locate the image file.

Step 3: Click the “Update Software” button once to upload the new image file.

NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot.

Software File Name: 

Click the button below to reboot the router.

Reboot:
Troubleshooting

This chapter provides solutions to problems that might occur during the installation and operation of the DSL-2750U. 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. How do I configure my DSL-2750U Router without the CD-ROM?
   - Connect your PC to the Router using an Ethernet cable.
   - Open a web browser and enter the address http://192.168.1.1
   - The default username is ‘admin’ and the default password is ‘admin’.
   - If you have changed the password and cannot remember it, you will need to reset the Router to the factory default setting (see question 2), which will set the password back to ‘admin’.

   **Note:** Please refer to the next section “Networking Basics” to check your PC’s IP configuration if you can’t see the login windows.

2. How do I reset my Router to the factory default settings?
   - Ensure the Router is powered on.
   - Press and hold the reset button on the back of the device for approximately 10 seconds.
   - This process should take around 30~60 seconds.

3. What can I do if my Router is not working correctly?

   There are a few quick steps you can take to try and resolve any issues:
   - Follow the directions in Question 2 to reset the Router.
   - Check that all the cables are firmly connected at both ends.
   - Check the LEDs on the front of the Router. The Power indicator should be on, the Status indicator should flash, and the DSL and LAN indicators should be on as well.
   - Please ensure that the settings in the Web-based configuration manager, e.g. ISP username and password, are the same as the settings that have been provided by your ISP.
Appendix A – Troubleshooting

4. Why can’t I get an Internet connection?

For ADSL ISP users, please contact your ISP to make sure the service has been enabled/connected by your ISP and that your ISP username and password are correct.

5. What can I do if my router can’t be detected by running installation CD?

- Ensure the Router is powered on.
- Check that all the cables are firmly connected at both ends and all LEDs work correctly.
- Ensure only one network interface card on your PC is activated.
- Click on Start > Control Panel > Security Center to disable the setting of Firewall.

Note: There might be a potential security issue if you disable the setting of Firewall on your PC. Please remember to turn it back on once you have finished the whole installation procedure and can surf on Internet without any problem.
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 on the OK.

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.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.
Statically Assign an IP Address

If your DHCP is disabled, or you need to assign a static IP address, please follow the steps below:

**Step 1**
Windows® XP - Click on Start > Control Panel > Network Connections.
Windows® 2000 - From the desktop, right-click on the My Network Places > Properties.

**Step 2**
Right-click on the Local Area Connection which represents your D-Link network adapter and select Properties.

**Step 3**
Highlight Internet Protocol (TCP/IP) and click on the Properties.

**Step 4**
Click on the 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 Default Gateway the same as the LAN IP address of your router (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 on the OK twice to save your settings.
Usage of USB Interface

The Combo DSL Gateway is a device with both Ethernet Interface and USB Interface, which is independent, you may use either of them to connect to the different computers, in this way the two computers can connect to the network at one time. The Gateway can be seen as a simple two-port HUB. So, do not connect both the Ethernet Interface and USB Interface to a same computer.

When using USB Interface, you must install the drivers. After installation, a virtual network card, "USB Remote NDIS Network Device", will be added into the computer. It has all the functions of a real network card, and it makes installation more easily.

NOTES:
The following shows the steps for Windows®2000, the installation, configuration and uninstallation of Windows®98 or Windows®XP are similar to this.

Driver Automatic Installation

There are two files in the DRIVER-CD.
1. Run “setup.exe” in DRIVER-CD and click “Next” button.

2. Click “Install” button to install the driver and wait few seconds.

3. Click “finish” to complete the install.

4. Plug in the power cord, and turn on the power.
5. Connect USB port of the Gateway to USB port on your PC with the USB cable that comes with the Gateway.

6. System install the drivers automatically.

Notice: If pop up a windows like blow picture, please click “Yes” to allow it.
Driver Automatic Uninstallation

1. Run “setup.exe” in DRIVER-CD and click “Next” button.

2. Click “Yes” button to start uninstall the driver.

3. Click “OK” button completed uninstall the driver.
Driver Manual Installation

1. Plug in the power cord, and turn on the power.
2. Connect USB port of the Gateway to USB port on your PC with the USB cable that comes with the Gateway.
3. Once the new hardware is detected as shown in the dialog box below, choose "Search for a suitable driver for my device". Then click "Next" button.
4. Dialog box is. Choice "Specify a location", and Click "Next" button.

5. A new box will pop up for selection of the location of the driver. If the location is incorrect please click "Browse" and select the right location, then click "Next" button. The default location is in the "USB_DRV" folder of the CD.
6. Click "Next" or "Continue" for any dialog box pops up.

7. A message box will show the installation of "USB Remote NDIS Network Device" is complete. Click "Finish" button.
8. After the steps above, you will find there is a new item called "USB Remote NDIS Network Device" in "Control Panel"-"System"-"Device Manager"-"Network adapters".

![Device Manager screenshot](image)
And a new "Local Area Connection X" is added in "Network Connections".
Driver Manual Uninstallation

1. Right click the icon of "My Computer" on the desktop, choice "Properties" item on menu pop up.
2. Click "Device Manager" button in "Hardware" page.
3. Double Click the "USB Remote NDIS Network Device" in "Device Manager" dialog box.
Appendix C – Technical Specification

4. Click "Uninstall" button in "Driver" page.

5. Click "OK" when the dialog box shown as below to finish the uninstallation.
Technical Specifications

ADSL Standards
- ANSI T1.413 Issue 2
- ITU G.992.1 (G.dmt) AnnexA
- ITU G.992.2 (G.lite) Annex A
- ITU G.994.1 (G.hs)

ADSL2 Standards
- ITU G.992.3 (G.dmt.bis) Annex A
- ITU G.992.4 (G.lite.bis) Annex A

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

Protocols
- IEEE 802.1d Spanning Tree
- TCP/UDP
- ARP
- RARP
- ICMP
- RFC1058 RIP v1
- RFC1213 SNMP v1 & v2c
- RFC1334 PAP
- RFC1389 RIP v2
- RFC1577 Classical IP over ATM
- RFC1483/2684 Multiprotocol Encapsulation over ATM Adaptation Layer 5 (AAL5)
- RFC1661 Point to Point Protocol
- RFC1994 CHAP
- RFC2131 DHCP Client / DHCP Server
- RFC2364 PPP over ATM
- RFC2516 PPP over Ethernet

Data Transfer Rate
- G.dmt full rate downstream: up to 8 Mbps / upstream: up to 1 Mbps
- G.lite: ADSL downstream up to 1.5 Mbps / upstream up to 512 Kbps
- G.dmt.bis full rate downstream: up to 12 Mbps / upstream: up to 1 Mbps
- ADSL full rate downstream: up to 24 Mbps / upstream: up to 1 Mbps

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

Media Interface
- ADSL interface: RJ-11 connector for connection to 24/26 AWG twisted pair telephone line
- LAN interface: RJ-45 port for 10/100BASE-T Ethernet connection

Certification:
- This device complies with Part15 of the FCC Rules. Operation is subject to the following conditions:
  1. This device may not cause harmful interference.
  2. This device must accept any interference received, including interference that may cause undesired operation.