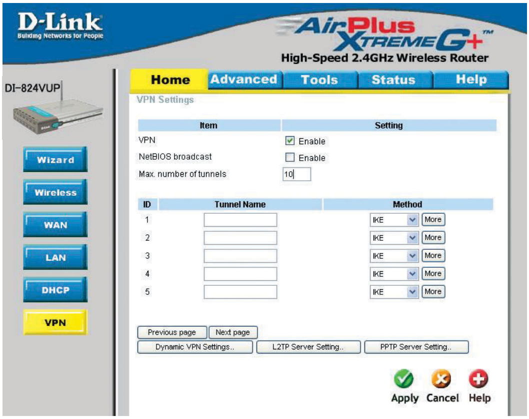
How can I set up my DI-824VUP to work with a DFL-300 Firewall? (continued)

Step 3 In the space provided, enter the Tunnel Name for ID number 1, select IKE, and then click More.

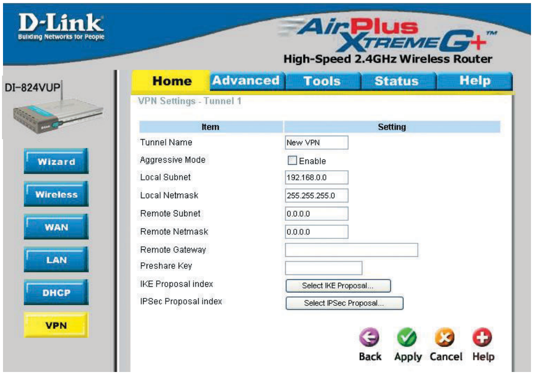


VPN Settings

Item	Setting
VPN	☑ Enable
NetBIOS broadcast	□ Enable
Max. number of tunnels	10

ID	Tunnel Name	Method
1		IKE More
2		IKE More
3		IKE More
4		IKE More
5		IKE More

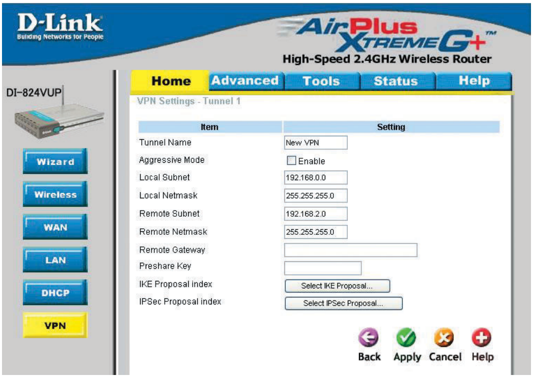
Step 4 In the **Local Subnet** and **Local Netmask** fields enter the network identifier for DI-824VUP´s LAN and the corresponding subnet mask.



VPN Settings - Tunnel 1

Item	Setting
Tunnel Name	New VPN
Aggressive Mode	□ Enable
Local Subnet	192.168.0.0
Local Netmask	255.255.255.0
Remote Subnet	0.0.0.0
Remote Netmask	0.0.0.0
Remote Gateway	
Preshare Key	
IKE Proposal index	Select IKE Proposal...
IPSec Proposal index	Select IPSec Proposal...

Step 5 In the **Remote Subnet** and **Remote Netmask** fields enter the network identifier for the DFL-300´s Internal interface and the corresponding subnet mask.



VPN Settings - Tunnel 1

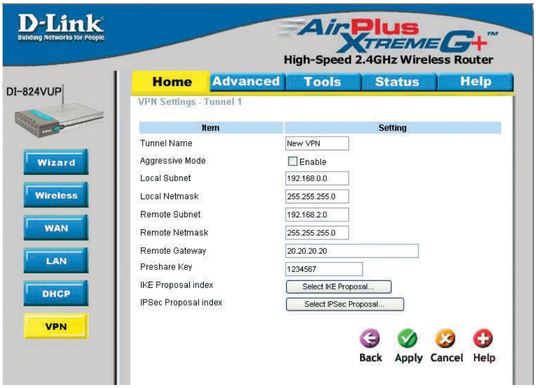
Item	Setting
Tunnel Name	New VPN
Aggressive Mode	□ Enable
Local Subnet	192.168.0.0
Local Netmask	255.255.255.0
Remote Subnet	192.168.2.0
Remote Netmask	255.255.255.0
Remote Gateway	
Preshare Key	
IKE Proposal index	Select IKE Proposal...
IPSec Proposal index	Select IPSec Proposal...

Frequently Asked Questions (continued)

How can I set up my DI-824VUP to work with a DFL-300 Firewall? (continued)

Step 6 In the Remote Gateway field enter the WAN IP address of the remote DFL-300 and in the Preshared Key field, enter a key which must be exactly the same as the Preshared Key that is configured on the DFL-300.

Step 7 Click Apply. The device will restart. Click on the Continue button and then click on Select IKE Proposal.



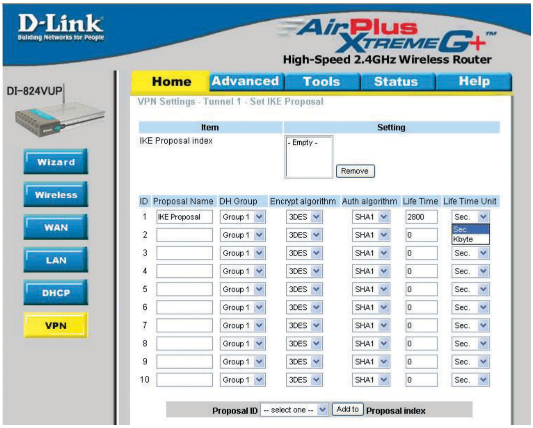
VPN Settings - Tunnel 1

Item	Setting
Tunnel Name	New VPN
Aggressive Mode	□ Enable
Local Subnet	192.168.0.0
Local Netmask	255.255.255.0
Remote Subnet	192.168.2.0
Remote Netmask	255.255.255.0
Remote Gateway	20.20.20.20
Preshare Key	1234567
IKE Proposal index	Select IKE Proposal...
IPSec Proposal index	Select IPSec Proposal...

Step 8 Enter a name for proposal ID number 1 and select Group 2 from the DH Group dropdown menu.

Step 9 Select 3DES as the Encryption Algorithm and SHA-1 as the Authentication Algorithm.

Step 10 Enter a Lifetime value of 28800 and then select Sec. as the unit for the lifetime value.



VPN Settings - Tunnel 1 - Set IKE Proposal

Item	Setting
IKE Proposal index	- Empty -

ID	Proposal Name	DH Group	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	IKE Proposal	Group 1	3DES	SHA1	2800	Sec.
2		Group 1	3DES	SHA1	0	
3		Group 1	3DES	SHA1	0	Sec.
4		Group 1	3DES	SHA1	0	Sec.
5		Group 1	3DES	SHA1	0	Sec.
6		Group 1	3DES	SHA1	0	Sec.
7		Group 1	3DES	SHA1	0	Sec.
8		Group 1	3DES	SHA1	0	Sec.
9		Group 1	3DES	SHA1	0	Sec.
10		Group 1	3DES	SHA1	0	Sec.

Proposal ID -- select one -- Add to Proposal index

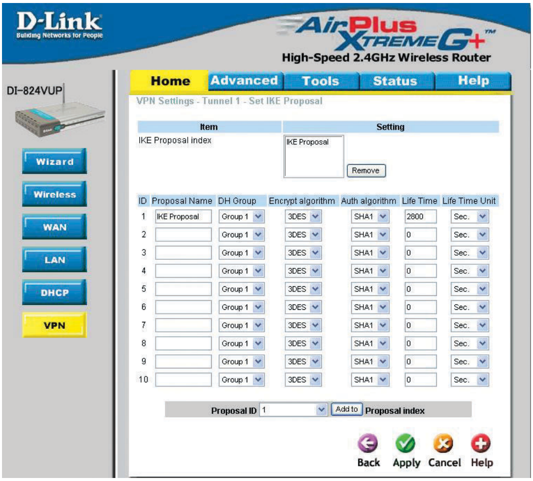
Frequently Asked Questions (continued)

How can I set up my DI-824VUP to work with a DFL-300 Firewall? (continued)

Step 11 Select 1 out of the Proposal ID dropdown menu and click Add To, which will add the proposal that was just configured to the IKE Proposal Index. Click Apply. The device will restart. Click on the Continue button and then click Back.

Step 12 Click on Select IPSec Proposal.

Step 13 Enter a name for proposal ID number 1 and select None from the DH Group dropdown menu.



VPN Settings - Tunnel 1 - Set IKE Proposal

Item	Setting
IKE Proposal index	IKE Proposal Remove

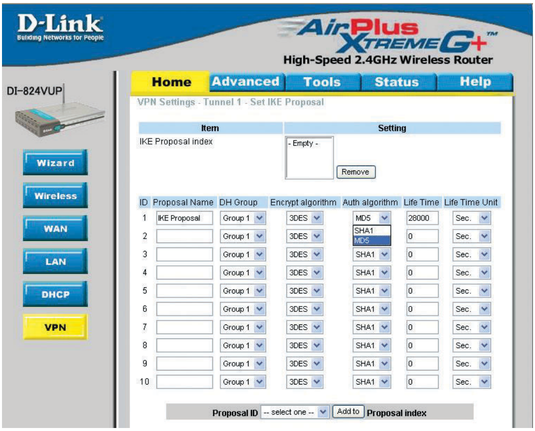
ID	Proposal Name	DH Group	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	IKE Proposal	Group 1	3DES	SHA1	2800	Sec.
2		Group 1	3DES	SHA1	0	Sec.
3		Group 1	3DES	SHA1	0	Sec.
4		Group 1	3DES	SHA1	0	Sec.
5		Group 1	3DES	SHA1	0	Sec.
6		Group 1	3DES	SHA1	0	Sec.
7		Group 1	3DES	SHA1	0	Sec.
8		Group 1	3DES	SHA1	0	Sec.
9		Group 1	3DES	SHA1	0	Sec.
10		Group 1	3DES	SHA1	0	Sec.

Proposal ID 1 Add to Proposal index

Step 14 Select ESP as the Encapsulation Protocol.

Step 15 Select 3DES as the Encryption Algorithm and MD5 as the Authentication Algorithm.

Step 16 Enter a Lifetime value of 28800 and then select Sec. as the unit for the lifetime value.



VPN Settings - Tunnel 1 - Set IKE Proposal

Item	Setting
IKE Proposal index	- Empty - Remove

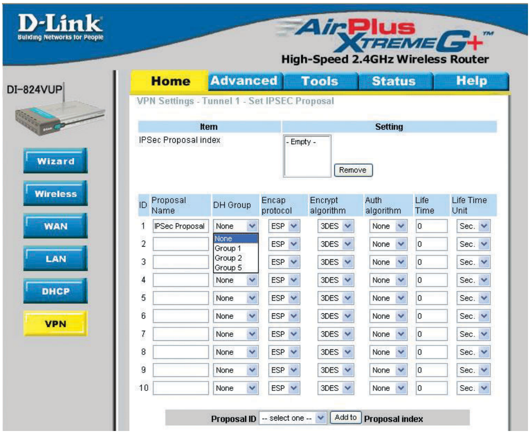
ID	Proposal Name	DH Group	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	IKE Proposal	Group 1	3DES	MD5	28000	Sec.
2		Group 1	3DES		0	Sec.
3		Group 1	3DES	SHA1	0	Sec.
4		Group 1	3DES	SHA1	0	Sec.
5		Group 1	3DES	SHA1	0	Sec.
6		Group 1	3DES	SHA1	0	Sec.
7		Group 1	3DES	SHA1	0	Sec.
8		Group 1	3DES	SHA1	0	Sec.
9		Group 1	3DES	SHA1	0	Sec.
10		Group 1	3DES	SHA1	0	Sec.

Proposal ID -- select one -- Add to Proposal index

Frequently Asked Questions (continued)

How can I set up my DI-824VUP to work with a DFL-300 Firewall? (continued)

Step 17 Select 1 out of the Proposal ID dropdown menu and click Add To, which will add the proposal that was just configured to the IPSec Proposal Index. Click Apply and then click Restart.



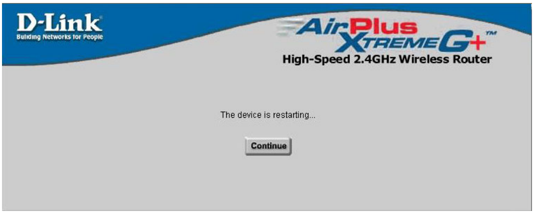
VPN Settings - Tunnel 1 - Set IPSEC Proposal

Item	Setting
IPSec Proposal index	- Empty - Remove

ID	Proposal Name	DH Group	Encap protocol	Encrypt algorithm	Auth algorithm	Life Time	Life Time Unit
1	IPSec Proposal	None None Group 1 Group 2 Group 5	ESP	3DES	None	0	Sec.
2			ESP	3DES	None	0	Sec.
3			ESP	3DES	None	0	Sec.
4		None	ESP	3DES	None	0	Sec.
5		None	ESP	3DES	None	0	Sec.
6		None	ESP	3DES	None	0	Sec.
7		None	ESP	3DES	None	0	Sec.
8		None	ESP	3DES	None	0	Sec.
9		None	ESP	3DES	None	0	Sec.
10		None	ESP	3DES	None	0	Sec.

Proposal ID -- select one -- Add to Proposal index

Step 18 The device will restart. Click on the Continue button.


D-Link
Building Networks for People
AirPlus XtremeG+™
High-Speed 2.4GHz Wireless Router
Continue

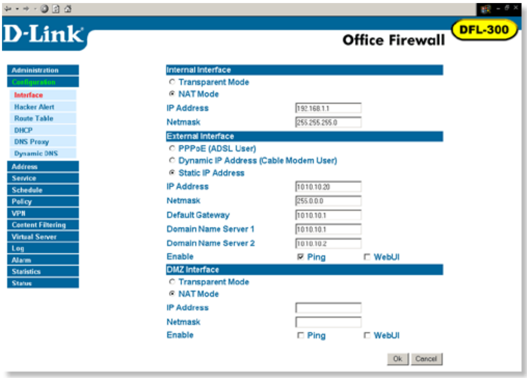
The device is restarting...

Next you need to configure the DFL-300 firewall.

Step 1 Access the configuration screen of the DFL-300 by opening a web browser such as Internet Explorer and type the IP address of the DFL-300 in the address bar (192.168.1.1).

Step 2 Enter the username (admin) and the password (admin). Click OK.

Step 3 Click on Configuration and take note of the IP address that your ISP has assigned you.



Internal Interface
○ Transparent Mode
● NAT Mode

IP Address 192.168.1.1
Netmask 255.255.255.0

External Interface
○ PPPoE (ADSL User)
○ Dynamic IP Address (Cable Modem User)
● Static IP Address

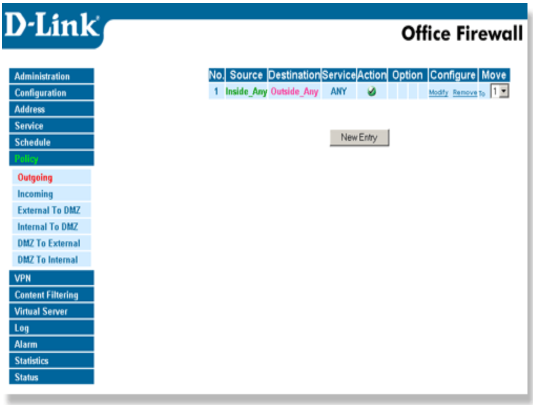
IP Address 10.10.10.20
Netmask 255.0.0.0
Default Gateway 10.10.10.1
Domain Name Server 1 10.10.10.1
Domain Name Server 2 10.10.10.2
Enable ☑ Ping ☐ WebUI

DMZ Interface
○ Transparent Mode
● NAT Mode

IP Address
Netmask
Enable ☐ Ping ☐ WebUI

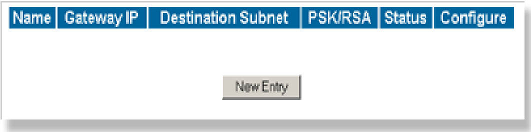
How can I set up my DI-824VUP to work with a DFL-300 Firewall? (continued)

Step 4 Click on Policy and verify that you have an Outgoing policy configured. If not, click on New Entry, accept the default values, and click OK.



No.	Source	Destination	Service	Action	Option	Configure	Move
1	Inside_Any	Outside_Any	ANY	✓		Modify Remove	To 1

Step 5 Click on VPN and then click New Entry.



Name	Gateway IP	Destination Subnet	PSK/RSA	Status	Configure

Step 6 Give the VPN connection a name with no spaces.

Step 7 Enter the network identifier and subnet mask of the Internal interface.

Step 8 In the To Destination section, select either Remote Gateway—Fixed IP or Remote Gateway—Dynamic IP. Enter the WAN IP address of the DI-824VUP if Remote Gateway—Fixed IP is selected.

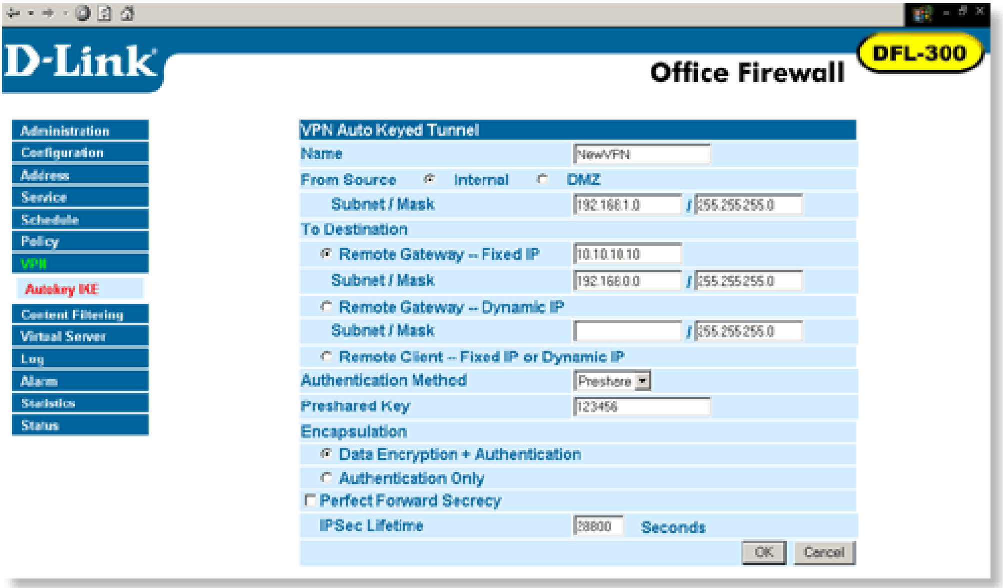
Step 9 Enter the network identifier corresponding subnet mask of the DI-824VUP´s LAN.

Step 10 Enter a Preshared Key. The Preshared Key needs to be identical to the one configured on the DI-824VUP.

Step 11 Select Data Encryption and Authentication as the Encapsulation and click OK.

Frequently Asked Questions (continued)

How can I set up my DI-824VUP to work with a DFL-300 Firewall? (continued)

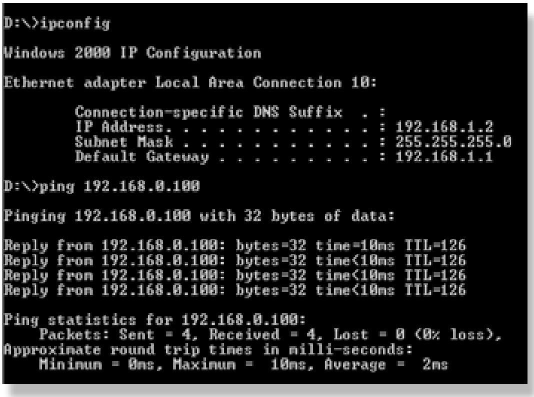


VPN Auto Keyed Tunnel

Name	NewVPN	
From Source ● Internal ○ DMZ		
Subnet / Mask	192.168.1.0	/ 255.255.255.0
To Destination		
● Remote Gateway -- Fixed IP	10.10.10.10	
Subnet / Mask	192.168.0.0	/ 255.255.255.0
○ Remote Gateway -- Dynamic IP		
Subnet / Mask		/ 255.255.255.0
○ Remote Client -- Fixed IP or Dynamic IP		
Authentication Method	Preshare	
Preshared Key	123456	
Encapsulation		
● Data Encryption + Authentication		
○ Authentication Only		
□ Perfect Forward Secrecy		
IPSec Lifetime	28800	Seconds

After you have configured both the router and firewall, you need to establish a connection.

Step 1 Open a command prompt and from a computer connected to the Internal interface of the DFL-300 and ping the IP address of a computer that is on the internal LAN of the DI-824VUP, or vice versa.



```
D:\>ipconfig

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection 10:

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . . : 192.168.1.2
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.1.1

D:\>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time=10ms TTL=126
Reply from 192.168.0.100: bytes=32 time<10ms TTL=126
Reply from 192.168.0.100: bytes=32 time<10ms TTL=126
Reply from 192.168.0.100: bytes=32 time<10ms TTL=126

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  10ms, Average =  2ms
```

Step 2 Once you begin to receive replies, the VPN connection has been established.

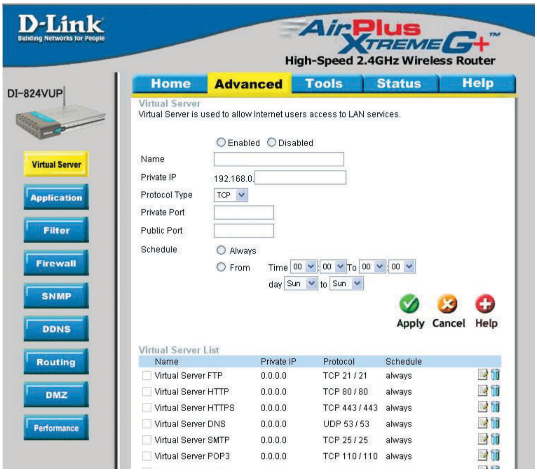
How do I open ports on my DI-824VUP?

To allow traffic from the internet to enter your local network, you will need to open up ports or the router will block the request.

Step 1 Open your Web browser and enter the IP Address of your D-Link router (192.168.0.1). Enter username (admin) and your password (blank by default).

Step 2 Click on **Advanced** on top and then click **Virtual Server** on the left side.

Step 3 Check **Enabled** to activate entry.



Virtual Server is used to allow Internet users access to LAN services.

Name	Private IP	Protocol	Schedule
□ Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□ Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□ Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□ Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□ Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□ Virtual Server POP3	0.0.0.0	TCP 110 / 110	always

Step 4 Enter a name for your virtual server entry.

Step 5 Next to **Private IP**, enter the IP Address of the computer on your local network that you want to allow the incoming service to.

Step 6 Choose **Protocol Type** - either TCP, UDP, or both. If you are not sure, select both.

Step 7 Enter the port information next to **Private Port** and **Public Port**. The private and public ports are usually the same. The public port is the port seen from the WAN side, and the private port is the port being used by the application on the computer within your local network.

Step 8 Enter the **Schedule** information.

Step 9 Click **Apply** and then click **Continue**.

Note: Make sure DMZ host is disabled. If DMZ is enabled, it will disable all Virtual Server entries.

Because our routers use NAT (Network Address Translation), you can only open a specific port to one computer at a time. For example: If you have 2 web servers on your network, you cannot open port 80 to both computers. You will need to configure 1 of the web servers to use port 81. Now you can open port 80 to the first computer and then open port 81 to the other computer.

What is DMZ?

Demilitarized Zone:
In computer networks, a DMZ (demilitarized zone) is a computer host or small network inserted as a neutral zone between a company´s private network and the outside public network. It prevents outside users from getting direct access to a server that has company data. (The term comes from the geographic buffer zone that was set up between North Korea and South Korea following the UN police action in the early 1950s.) A DMZ is an optional and more secure approach to a firewall and effectively acts as a proxy server as well.

In a typical DMZ configuration for a small company, a separate computer (or host in network terms) receives requests from users within the private network for access to Web sites or other companies accessible on the public network. The DMZ host then initiates sessions for these requests on the public network. However, the DMZ host is not able to initiate a session back into the private network. It can only forward packets that have already been requested.

Users of the public network outside the company can access only the DMZ host. The DMZ may typically also have the company´s Web pages so these could be served to the outside world. However, the DMZ provides access to no other company data. In the event that an outside user penetrated the DMZ hosts security, the Web pages might be corrupted but no other company information would be exposed. D-Link, a leading maker of routers, is one company that sells products designed for setting up a DMZ

How do I configure the DMZ Host?

The DMZ feature allows you to forward all incoming ports to one computer on the local network. The DMZ, or Demilitarized Zone, will allow the specified computer to be exposed to the Internet. DMZ is useful when a certain application or game does not work through the firewall. The computer that is configured for DMZ will be completely vulnerable on the Internet, so it is suggested that you try opening ports from the Virtual Server or Firewall settings before using DMZ.

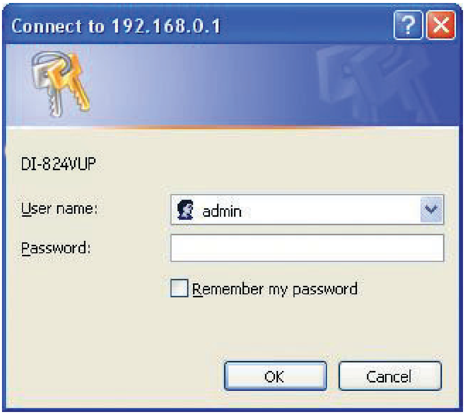
Step 1 Find the IP address of the computer you want to use as the DMZ host.

To find out how to locate the IP Address of the computer in Windows XP/2000/ME/9x or Macintosh operating systems please refer to Step 4 of the first question in this section (Frequently Asked Questions).

Frequently Asked Questions (continued)

How do I configure the DMZ Host? (continued)

Step 2 Log into the web based configuration of the router by typing in the IP Address of the router (default:192.168.0.1) in your web browser. The username is **admin** (all lowercase) and the password is blank (empty).



Connect to 192.168.0.1

DI-824VUP

User name: admin

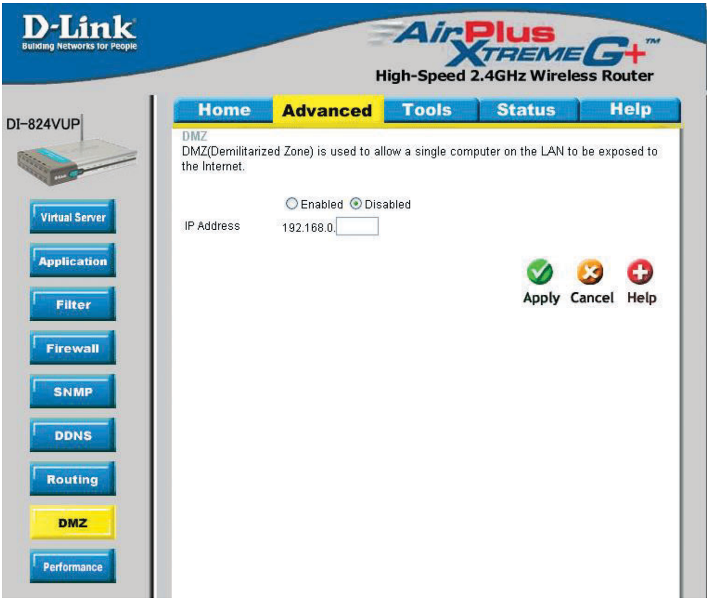
Password:

□ Remember my password

Step 3 Click the **Advanced** tab and then click on the **DMZ** button. Select **Enable** and type in the IP Address from step 1.

Step 4 Click **Apply** and then **Continue** to save the changes.

Note: When DMZ is enabled, Virtual Server settings will still be effective. Remember, you cannot forward the same port to multiple IP Addresses, so the Virtual Server settings will take priority over DMZ settings.



DMZ

DMZ(Demilitarized Zone) is used to allow a single computer on the LAN to be exposed to the Internet.

○ Enabled ● Disabled

IP Address 192.168.0.

How do I open a range of ports on my DI-824VUP using Firewall rules?

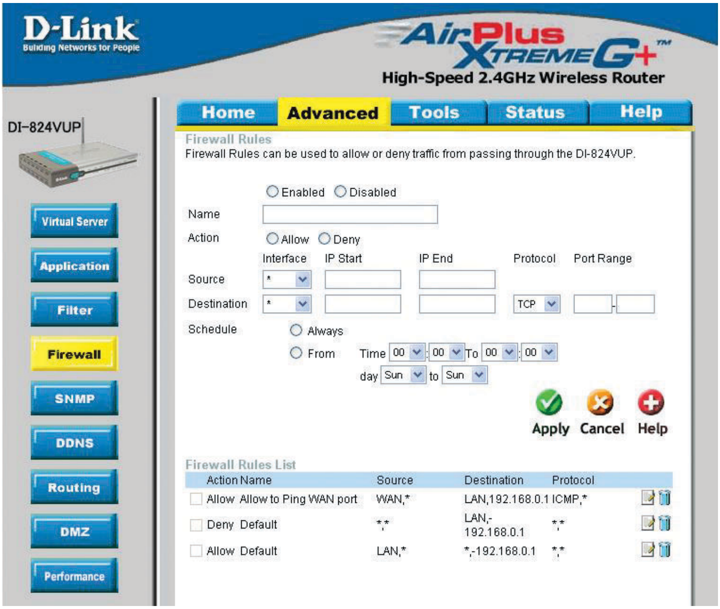
Step 1 Access the router's web configuration by entering the router's IP Address in your web browser. The default IP Address is **192.168.0.1**. Login using your password. The default username is **"admin"** and the password is blank.

If you are having difficulty accessing web management, please see the first question in this section.

Step 2 From the web management Home page, click the **Advanced** tab then click the **Firewall** button.

Step 3 Click on **Enabled** and type in a name for the new rule.

Step 4 Choose **WAN** as the **Source** and enter a range of IP Addresses out on the internet that you would like this rule applied to. If you would like this rule to allow all internet users to be able to access these ports, then put an **Asterisk** in the first box and leave the second box empty.



Firewall Rules

Firewall Rules can be used to allow or deny traffic from passing through the DI-824VUP.

○ Enabled ○ Disabled

Name					
Action	○ Allow ○ Deny				
	Interface	IP Start	IP End	Protocol	Port Range
Source	*				
Destination	*			TCP	-

Schedule ○ Always
○ From Time 00 : 00 To 00 : 00
day Sun to Sun

Firewall Rules List

	Action	Name	Source	Destination	Protocol
□	Allow	Allow to Ping WAN port	WAN,*	LAN,192.168.0.1	ICMP,*
□	Deny	Default	*,*	LAN,- 192.168.0.1	*,*
□	Allow	Default	LAN,*	*,-192.168.0.1	*,*

Step 5 Select **LAN** as the **Destination** and enter the IP Address of the computer on your local network that you want to allow the incoming service to. This will not work with a range of IP Addresses.

Step 6 Enter the port or range of ports that are required to be open for the incoming service.

Step 7 Click **Apply** and then click **Continue**.

Note: Make sure DMZ host is disabled.

Because our routers use NAT (Network Address Translation), you can only open a specific port to one computer at a time. For example: If you have 2 web servers on your network, you cannot open port 80 to both computers. You will need to configure 1 of the web servers to use port 81. Now you can open port 80 to the first computer and then open port 81 to the other computer.

What are virtual servers?

A Virtual Server is defined as a service port, and all requests to this port will be redirected to the computer specified by the server IP. For example, if you have an FTP Server (port 21) at 192.168.0.5, a Web server (port 80) at 192.168.0.6, and a VPN (port 1723) server at 192.168.0.7, then you need to specify the following virtual server mapping table:

Server Port	Server IP	Enable
21	192.168.0.5	X
80	192.168.0.6	X
1723	192.168.0.7	X

How do I use *PC Anywhere* with my DI-824VUP?

You will need to open 3 ports in the Virtual Server section of your D-Link router.

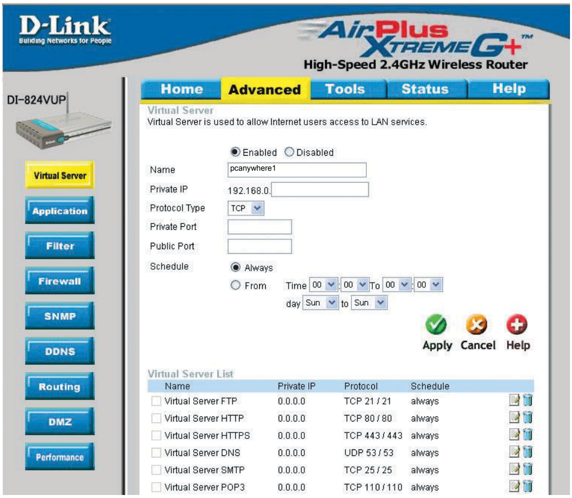
Step 1 Open your web browser and enter the IP Address of the router (192.168.0.1).

Step 2 Click on **Advanced** at the top and then click **Virtual Server** on the left side.

Step 3 Enter the information as seen below. The **Private IP** is the IP Address of the computer on your local network that you want to connect to.

Step 4 The first entry will read as shown here:

Step 5 Click **Apply** and then click **Continue**.



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: pcanywhere1

Private IP: 192.168.0.

Protocol Type: TCP

Private Port:

Public Port:

Schedule: ● Always

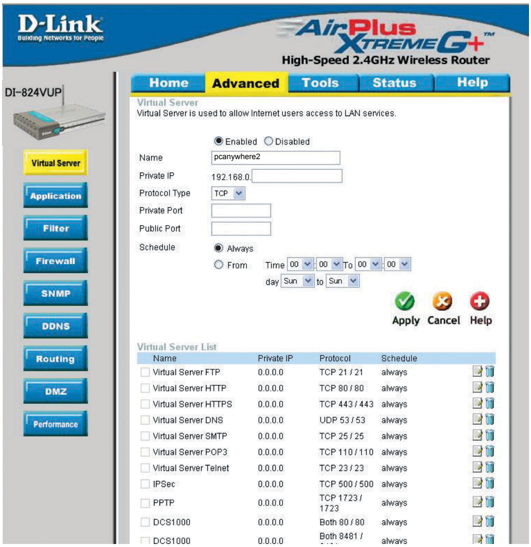
○ From Time 00 : 00 To 00 : 00 day Sun to Sun

Virtual Server List

	Name	Private IP	Protocol	Schedule
□	Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□	Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□	Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□	Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□	Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□	Virtual Server POP3	0.0.0.0	TCP 110 / 110	always

How do I use *PC Anywhere* with my DI-824VUP? (continued)

Step 6 Create a second entry as shown here:



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: pcanywhere2

Private IP: 192.168.0.

Protocol Type: TCP

Private Port:

Public Port:

Schedule: ● Always

○ From Time 00 : 00 To 00 : 00

day Sun to Sun

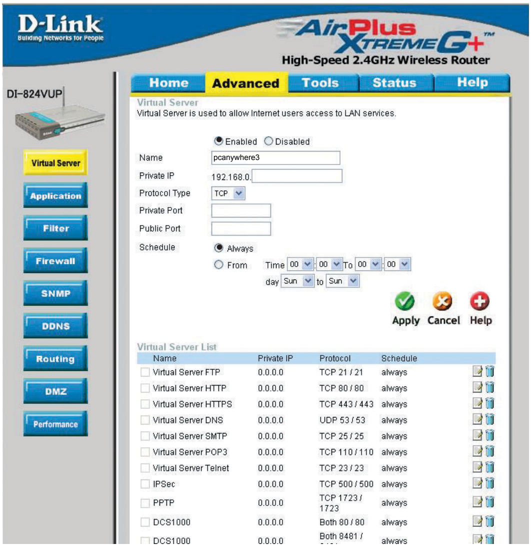
Apply Cancel Help

Virtual Server List

Name	Private IP	Protocol	Schedule
□ Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□ Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□ Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□ Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□ Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□ Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□ Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always
□ IPSec	0.0.0.0	TCP 500 / 500	always
□ PPTP	0.0.0.0	TCP 1723 / 1723	always
□ DCS1000	0.0.0.0	Both 80 / 80	always
□ DCS1000	0.0.0.0	Both 8481 /	always

Step 7 Click **Apply** and then click **Continue**.

Step 8 Create a third and final entry as shown here:



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: pcanywhere3

Private IP: 192.168.0.

Protocol Type: TCP

Private Port:

Public Port:

Schedule: ● Always

○ From Time 00 : 00 To 00 : 00

day Sun to Sun

Apply Cancel Help

Virtual Server List

Name	Private IP	Protocol	Schedule
□ Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□ Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□ Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□ Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□ Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□ Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□ Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always
□ IPSec	0.0.0.0	TCP 500 / 500	always
□ PPTP	0.0.0.0	TCP 1723 / 1723	always
□ DCS1000	0.0.0.0	Both 80 / 80	always
□ DCS1000	0.0.0.0	Both 8481 /	always

Step 9 Click **Apply** and then click **Continue**.

Step 10 Run *PCAnywhere* from the remote site and use the WAN IP Address of the router, not your computer´s IP Address.

How can I use *eDonkey* behind my DI-824VUP?

You must open ports on your router to allow incoming traffic while using *eDonkey.*

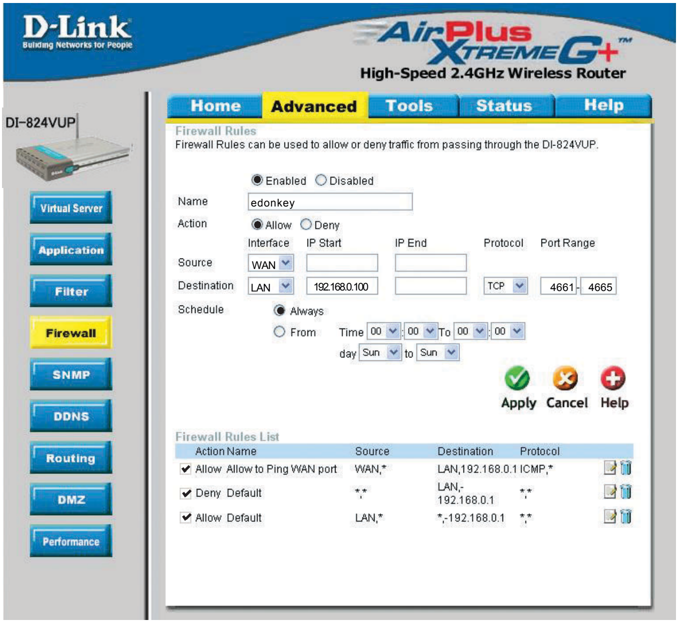
eDonkey uses three ports (4 if using CLI):

4661 (TCP) To connect with a server
4662 (TCP) To connect with other clients
4665 (UDP) To communicate with servers other than the one you are connected to.
4663 (TCP) *Used with the command line (CLI) client when it is configured to allow remote connections. This is the case when using a Graphical Interface (such as the Java Interface) with the client.

Step 1 Open your web browser and enter the IP Address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).

Step 2 Click on **Advanced** and then click **Firewall**.

Step 3 Create a new firewall rule:
Click **Enabled**.
Enter a name (edonkey).
Click **Allow**.
Next to Source, select **WAN** under interface. In the first box, enter an *. Leave the second box empty.
Next to Destination, select **LAN** under interface. Enter the IP Address of the computer you are running eDonkey from. Leave the second box empty. Under Protocol, select *. In the port range boxes, enter **4661** in the first box and then **4665** in the second box. Click **Always** or set a schedule.



Firewall Rules

Firewall Rules can be used to allow or deny traffic from passing through the DI-824VUP.

● Enabled ○ Disabled

Name: edonkey

Action: ● Allow ○ Deny

	Interface	IP Start	IP End	Protocol	Port Range
Source	WAN				
Destination	LAN	192.168.0.100		TCP	4661 - 4665

Schedule: ● Always
○ From Time 00 : 00 To 00 : 00
day Sun to Sun

Firewall Rules List

	Action	Name	Source	Destination	Protocol
✓	Allow	Allow to Ping WAN port	WAN,*	LAN,192.168.0.1	ICMP,*
✓	Deny	Default	*,*	LAN,- 192.168.0.1	*,*
✓	Allow	Default	LAN,*	*,-192.168.0.1	*,*

Step 4 Click **Apply** and then **Continue**.

How do I set up my DI-824VUP for SOCOM on my Playstation 2?

To allow you to play SOCOM and hear audio, you must download the latest firmware for the router (if needed), enable Game Mode, and open port 6869 to the IP Address of your Playstation.

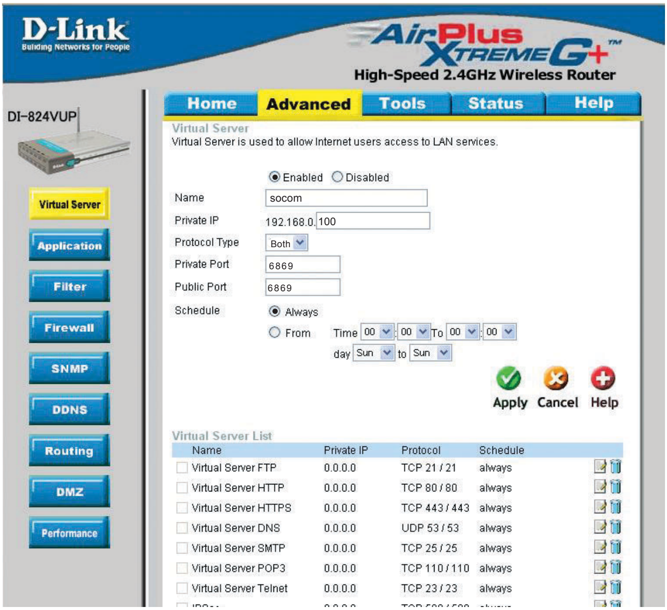
Step 1 Upgrade firmware (follow link above).

Step 2 Open your web browser and enter the IP Address of the router (192.168.0.1). Enter username (admin) and your password (blank by default).

Step 3 Click on the **Advanced** tab and then click on **Virtual Server** on the left side.

Step 4 You will now create a new Virtual Server entry. Click **Enabled** and enter a name (socom). Enter the IP Address of your Playstation for **Private IP**.

Step 5 For **Protocol Type** select Both. Enter **6869** for both the **Private Port** and **Public Port**. Click **Always**. Click **Apply** to save changes and then **Continue**



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: socom

Private IP: 192.168.0.100

Protocol Type: Both

Private Port: 6869

Public Port: 6869

Schedule: ● Always

○ From Time 00 : 00 To 00 : 00 day Sun to Sun

Virtual Server List

	Name	Private IP	Protocol	Schedule
□	Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□	Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□	Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□	Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□	Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□	Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□	Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always

Step 6 Click on the **Tools** tab and then **Misc** on the left side.

Step 7 Make sure **Gaming Mode** is Enabled. If not, click **Enabled**. Click **Apply** and then **Continue**.

Frequently Asked Questions (continued)

How can I use Gamespy behind my DI-824VUP?

Step 1 Open your web browser and enter the IP Address of the router (192.168.0.1). Enter admin for the username and your password (blank by default).

Step 2 Click on the Advanced tab and then click Virtual Server on the left side.

Step 3 You will create 2 entries.

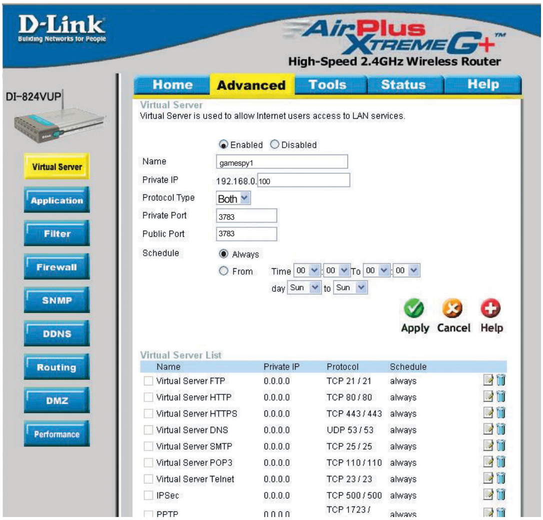
Step 4 Click Enabled and enter Settings:

NAME - Gamespy1

PRIVATE IP - The IP Address of your computer that you are running Gamespy from.

PROTOCOL TYPE - Both

PRIVATE PORT - 3783



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name	gamespy1
Private IP	192.168.0.100
Protocol Type	Both
Private Port	3783
Public Port	3783
Schedule	● Always ○ From Time 00 : 00 To 00 : 00 day Sun to Sun

Virtual Server List

Name	Private IP	Protocol	Schedule
□ Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□ Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□ Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□ Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□ Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□ Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□ Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always
□ IPSec	0.0.0.0	TCP 500 / 500	always
□ PPTP	0.0.0.0	TCP 1723 /	always

Click **Apply** and then **continue**

Step 5 Enter 2nd entry:
Click Enabled

NAME - Gamespy2

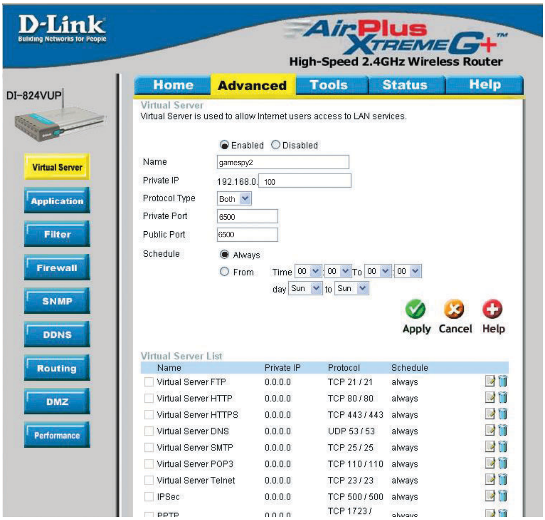
PRIVATE IP - The IP Address of your computer that you are running Gamespy from.

PROTOCOL TYPE - Both

PRIVATE PORT - 6500

PUBLIC PORT - 6500

SCHEDULE - Always.



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name	gamespy2
Private IP	192.168.0. 100
Protocol Type	Both
Private Port	6500
Public Port	6500
Schedule	● Always ○ From Time 00 : 00 To 00 : 00 day Sun to Sun

Virtual Server List

Name	Private IP	Protocol	Schedule
□ Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□ Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□ Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□ Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□ Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□ Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□ Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always
□ IPSec	0.0.0.0	TCP 500 / 500	always
□ PPTP	0.0.0.0	TCP 1723 /	always

Click **Apply** and then **continue**.

Frequently Asked Questions (continued)

How do I configure my DI-824VUP for KaZaA and Grokster?

The following is for KaZaA, Grokster, and others using the FastTrack P2P file sharing system.

In most cases, you do not have to configure anything on the router or on the Kazaa software. If you are having problems, please follow steps below:

Step 1 Enter the IP Address of your router in a web browser (192.168.0.1).

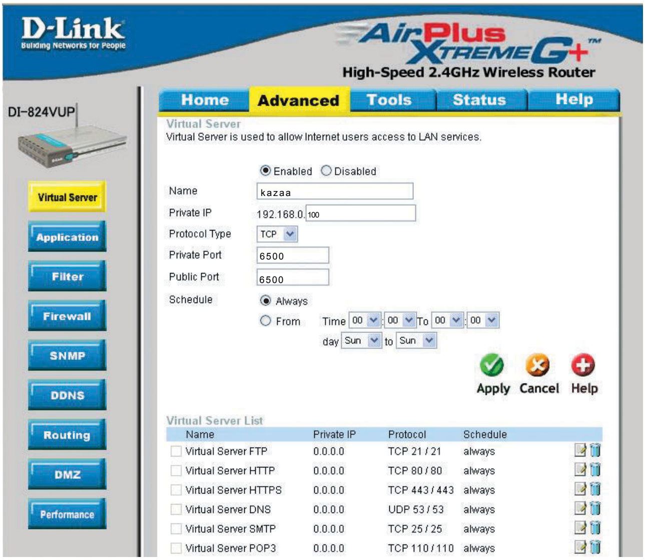
Step 2 Enter your username (admin) and your password (blank by default).

Step 3 Click on Advanced and then click Virtual Server.

Step 4 Click Enabled and then enter a Name (kazaa for example).

Step 5 Enter the IP Address of the computer you are running KaZaA from in the Private IP box. Select TCP for the Protocol Type.

Step 6 Enter 1214 in the Private and Public Port boxes. Click Always under schedule or set a time range. Click Apply.



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: kazaa

Private IP: 192.168.0.100

Protocol Type: TCP

Private Port: 6500

Public Port: 6500

Schedule: ● Always

○ From Time 00 : 00 To 00 : 00
day Sun to Sun

Virtual Server List

	Name	Private IP	Protocol	Schedule
□	Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□	Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□	Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□	Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□	Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□	Virtual Server POP3	0.0.0.0	TCP 110 / 110	always

Make sure that you did not enable proxy/firewall in the KaZaA software.

How do I configure my DI-824VUP to play Warcraft 3?

To hose a Warcraft 3 game, you must open ports on your router to allow incoming traffic. To play a game, you do not have to configure your router.

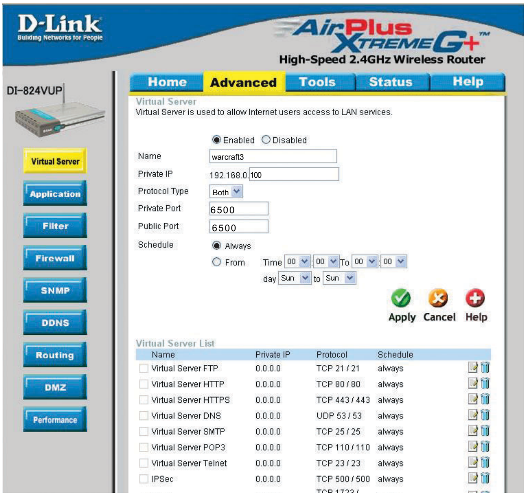
Warcraft 3 (Battlenet) uses port 6112.

For the DI-824VUP:

Step 1 Open your web browser and enter the IP Address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).

Step 2 Click on **Advanced** and then click **Virtual Server**.

Step 3 Create a new entry: Click **Enabled**. Enter a name (warcraft3). Private IP - Enter the IP Address of the computer you want to host the game. Select **Both** for Protocol Type Enter **6112** for both Private Port and Public Port Click **Always** or set a schedule.



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: warcraft3

Private IP: 192.168.0.100

Protocol Type: Both

Private Port: 6500

Public Port: 6500

Schedule: ● Always

○ From Time 00 : 00 To 00 : 00 day Sun to Sun

Virtual Server List

	Name	Private IP	Protocol	Schedule
□	Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□	Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□	Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□	Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□	Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□	Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□	Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always
□	IPSec	0.0.0.0	TCP 500 / 500	always

Step 4 Click **Apply** and then **Continue**.

Note: If you want multiple computers from you LAN to play in the same game that you are hosting, then repeat the steps above and enter the IP Addresses of the other computers. You will need to change ports. Computer #2 can use port 6113, computer #3 can use 6114, and so on.

You will need to change the port information within the Warcraft 3 software for computers #2 and up.

Configure the Game Port information on each computer:
Start Warcraft 3 on each computer, click **Options** > **Gameplay**. Scroll down and you should see **Game Port**. Enter the port number as you entered in the above steps.

How do I use NetMeeting with my DI-824VUP?

Unlike most TCP/IP applications, NetMeeting uses **DYNAMIC PORTS** instead of STATIC PORTS. That means that each NetMeeting connection is somewhat different than the last. For instance, the HTTP web site application uses port 80. NetMeeting can use any of over 60,000 different ports.

All broadband routers using (only) standard NAT and all internet sharing programs like Microsoft ICS that use (only) standard NAT will NOT work with NetMeeting or other h.323 software packages.

The solution is to put the router in DMZ.

Note: A few hardware manufacturers have taken it on themselves to actually provide H.323 compatibility. This is not an easy task since the router must search each incoming packet for signs that it might be a netmeeting packet. This is a whole lot more work than a router normally does and may actually be a **weak point in the firewall**. D-Link is not one of the manufacturers.

To read more on this visit http://www.HomenetHelp.com

How do I set up my DI-824VUP to use iChat? -for Macintosh users-

You must open ports on your router to allow incoming traffic while using iChat.

iChat uses the following ports: 5060 (UDP), 5190 (TCP), and File Sharing 16384-16403 (UDP) to video conference with other clients.

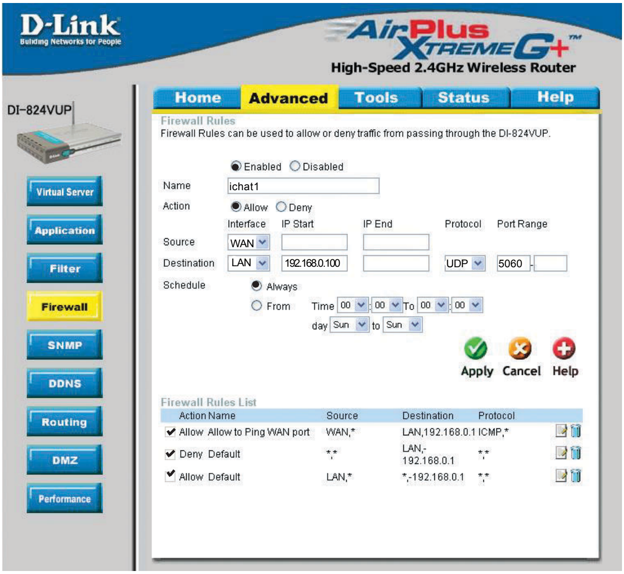
Step 1 Open your web browser and enter the IP Address of your router (192.168.0.1). Enter username (admin) and your password (leave blank).

Step 2 Click on **Advanced** and then click **Firewall**.

How do I set up my DI-824VUP to use iChat? -for Macintosh users- (continued)

Step 3 Create a new firewall rule:

Click **Enabled**.
Enter a name (ichat1).
Click **Allow**.
Next to Source, select **WAN** under interface.
In the first box, enter an *.
Leave the second box empty.
Next to Destination, select **LAN** under interface.
Enter the IP Address of the computer you are running iChat from.



Firewall Rules

Firewall Rules can be used to allow or deny traffic from passing through the DI-824VUP.

● Enabled ○ Disabled

	Interface	IP Start	IP End	Protocol	Port Range
Name	ichat1				
Action	● Allow ○ Deny				
Source	WAN				
Destination	LAN	192.168.0.100		UDP	5060 -

Schedule ● Always
○ From Time 00 : 00 To 00 : 00 day Sun to Sun

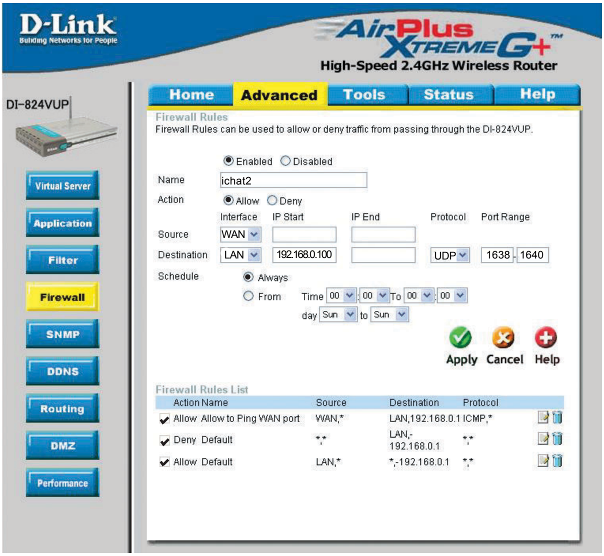
Firewall Rules List

	Action	Name	Source	Destination	Protocol
✓	Allow	Allow to Ping WAN port	WAN,*	LAN,192.168.0.1	ICMP,*
✓	Deny	Default	*,*	LAN,-192.168.0.1	*,*
✓	Allow	Default	LAN,*	*,-192.168.0.1	*,*

Leave the second box empty. Under Protocol, select **UDP**. In the port range boxes, enter **5060** in the first box and leave the second box empty. Click **Always** or set a schedule.

Step 4 Click **Apply** and then **Continue**.

Step 5
Repeat steps 3 and 4 enter **ichat2** and open ports **16384-16403** (UDP).



Firewall Rules

Firewall Rules can be used to allow or deny traffic from passing through the DI-824VUP.

● Enabled ○ Disabled

	Interface	IP Start	IP End	Protocol	Port Range
Name	ichat2				
Action	● Allow ○ Deny				
Source	WAN				
Destination	LAN	192.168.0.100		UDP	1638 - 1640

Schedule ● Always
○ From Time 00 : 00 To 00 : 00 day Sun to Sun

Firewall Rules List

	Action	Name	Source	Destination	Protocol
✓	Allow	Allow to Ping WAN port	WAN,*	LAN,192.168.0.1	ICMP,*
✓	Deny	Default	*,*	LAN,-192.168.0.1	*,*
✓	Allow	Default	LAN,*	*,-192.168.0.1	*,*

How do I set up my DI-824VUP to use iChat? -for Macintosh users- (continued)

For File Sharing:

Step 1 Click on **Advanced** and then **Virtual Server**.

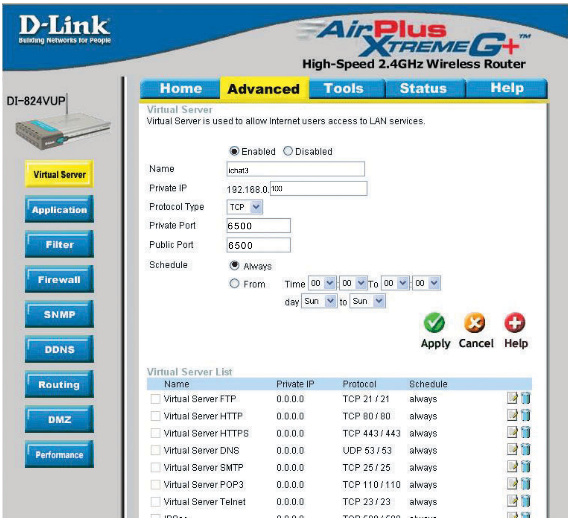
Step 2 Check **Enabled** to activate entry.

Step 3 Enter a name for your virtual server entry (ichat3).

Step 4 Next to Private IP, enter the IP Address of the computer on your local network that you want to allow the incoming service to.

Step 5 Select **TCP** for Protocol Type.

Step 6 Enter **5190** next to Private Port and Public Port.



Virtual Server

Virtual Server is used to allow Internet users access to LAN services.

● Enabled ○ Disabled

Name: ichat3

Private IP: 192.168.0.100

Protocol Type: TCP

Private Port: 6500

Public Port: 6500

Schedule: ● Always
○ From Time 00 : 00 To 00 : 00
day Sun to Sun

Virtual Server List

	Name	Private IP	Protocol	Schedule
□	Virtual Server FTP	0.0.0.0	TCP 21 / 21	always
□	Virtual Server HTTP	0.0.0.0	TCP 80 / 80	always
□	Virtual Server HTTPS	0.0.0.0	TCP 443 / 443	always
□	Virtual Server DNS	0.0.0.0	UDP 53 / 53	always
□	Virtual Server SMTP	0.0.0.0	TCP 25 / 25	always
□	Virtual Server POP3	0.0.0.0	TCP 110 / 110	always
□	Virtual Server Telnet	0.0.0.0	TCP 23 / 23	always

Stsp 7 Click **Always** or configure a schedule.

Step 8 Click **Apply** and then **Continue**.

If using Mac OS X Firewall, you may need to temporarily turn off the firewall in the Sharing preference pane on both computers.

To use the Mac OS X Firewall, you must open the same ports as in the router:

Step 1 Choose **Apple menu** > **System Preferences**.

Step 2 Choose **View** > **Sharing**.

Step 3 Click the **Firewall** tab.

Step 4 Click **New**.

Step 5 Choose **Other** from the Port Name pop-up menu.

Step 6 In the Port Number, Range or Series field, type in: **5060**, **16384-16403**.

Step 7 In the Description field type in: **iChat AV**

Step 8 Click **OK**.

How do I send or receive a file via iChat when the Mac OSX firewall is active? - for Macintosh users - Mac OS X 10.2 and later

The following information is from the online Macintosh AppleCare knowledge base:

“iChat cannot send or receive a file when the Mac OS X firewall is active in its default state. If you have opened the AIM port, you may be able to receive a file but not send them.

In its default state, the Mac OS X firewall blocks file transfers using iChat or America Online AIM software. If either the sender or receiver has turned on the Mac OS X firewall, the transfer may be blocked.

The simplest workaround is to temporarily turn off the firewall in the Sharing preference pane on both computers. This is required for the sender. However, the receiver may keep the firewall on if the AIM port is open. To open the AIM port:

Step 1 Choose Apple menu > System Preferences.

Step 2 Choose View > Sharing.

Step 3 Click the Firewall tab.

Step 4 Click New.

Step 5 Choose AOL IM from the Port Name pop-up menu. The number 5190 should already be filled in for you.

Step 6 Click OK.

If you do not want to turn off the firewall at the sending computer, a different file sharing service may be used instead of iChat. The types of file sharing available in Mac OS X are outlined in technical document 106461, "Mac OS X: File Sharing" in the *AppleCare Knowledge base* online.

Note: If you use a file sharing service when the firewall is turned on, be sure to click the Firewall tab and select the service you have chosen in the "Allow" list. If you do not do this, the firewall will also block the file sharing service. “

What is NAT?

NAT stands for **Network Address Translator**. It is proposed and described in RFC-1631 and is used for solving the IP Address depletion problem. Each NAT box has a table consisting of pairs of local IP Addresses and globally unique addresses, by which the box can “translate” the local IP Addresses to global address and vice versa. Simply put, it is a method of connecting multiple computers to the Internet (or any other IP network) using one IP Address.

D-Link´s broadband routers (ie: DI-824VUP) support NAT. With proper configuration, multiple users can access the Internet using a single account via the NAT device.

For more information on RFC-1631: The IP Network Address Translator (NAT), visit http://www.faqs.org/rfcs/rfc1631.html

Contacting Technical Support

You can find the most recent software and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States for the duration of the warranty period on this product.

U.S. customers can contact D-Link technical support through our web site,
or by phone.

D-Link Technical Support over the Telephone:
(877) 453-5465
24 hours a day, seven days a week.

D-Link Technical Support over the Internet:
http://support.dlink.com

When contacting technical support, you will need the information below. (Please look on the back side of the unit.)

- *Serial number of the unit*
- *Model number or product name*
- *Software type and version number*

Warranty and Registration

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited warranty for its product only to the person or entity that originally purchased the product from:

- D-Link or its authorized reseller or distributor and
- Products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, addresses with an APO or FPO.

Limited Warranty: D-Link warrants that the hardware portion of the D-Link products described below will be free from material defects in workmanship and materials from the date of original retail purchase of the product, for the period set forth below applicable to the product type ("Warranty Period"), except as otherwise stated herein.

3-Year Limited Warranty for the Product(s) is defined as follows:

- Hardware (excluding power supplies and fans) Three (3) Years
- Power Supplies and Fans One (1) Year
- Spare parts and spare kits Ninety (90) days

D-Link's sole obligation shall be to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund at D-Link's sole discretion. Such repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement Hardware need not be new or have an identical make, model or part. D-Link may in its sole discretion replace the defective Hardware (or any part thereof) with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement Hardware will be warranted for the remainder of the original Warranty Period from the date of original retail purchase. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware (or part thereof) that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty: D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. D-Link's sole obligation shall be to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund at D-Link's sole discretion. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Software will be warranted for the remainder of the original Warranty Period from the date or original retail purchase. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty: The Limited Warranty provided hereunder for hardware and software of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim: The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same.

- The original product owner must obtain a Return Material Authorization ("RMA") number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.

- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered: This limited warranty provided by D-Link does not cover: Products, if in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this Warranty.

Disclaimer of Other Warranties: EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability: TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY

Governing Law: This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This limited warranty provides specific legal rights and the product owner may also have other rights which vary from state to state.

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CE Mark Warning: This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures**:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
The Manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment; such modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:
FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this equipment must be installed to provide a separation distance of at least eight inches (20 cm) from all persons.

This transmitter must not be operated in conjunction with any other antenna.

Register online your D-Link product at http://support.dlink.com/register/

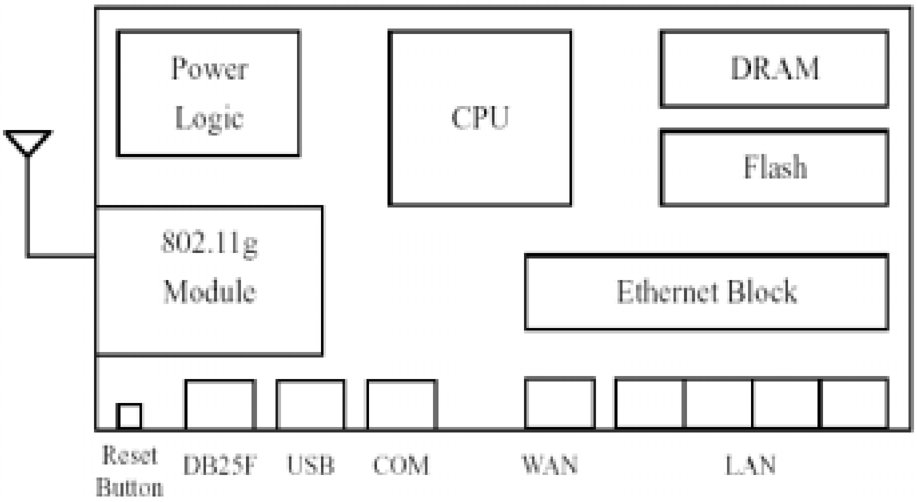
02/10/03

4-Port 802.11g Wireless VPN Router with DSUB & USB Print Server and COM Port

Features List:

1. Integrate with 4 ports Fast Ethernet switch: 10/100Mbps MDI/MDIX auto-sensing.
2. Provide 10/100Mbps WAN interface to connect with DSL or cable modem for broadband Internet access.
3. Built-in NAT function: allow multiple PCs and devices to share one Internet connection.
4. Browser-based interface configuration and management: OS independent, easy-to-use for consumer install.
5. Built-in firewall to protect your Intranet.
6. VPN support: The initiator and responder of IPSec and the pass through of PPTP, L2TP, and IPSec.
7. Easy to upgrade: using Web or Windows Application to upgrade new version of firmware.
8. Built-in parallel port to connect to printer for printer sharing.
9. Built-in USB host to connect to USB printer for printer sharing.
10. High speed for wireless LAN connection: support both IEEE 802.11b and Draft 802.11g. Up to 54 Mbps data rate when operates in 802.11g mode.
11. Provide seamless roaming within the IEEE 802.11b and Draft 802.11g WLAN infrastructure.
12. Data rate supported: 6/12/18/24/36/48/54 Mbps in 802.11g mode; 1/2/5.5/11Mbps in 802.11b mode.
13. WEP encryption and WPA supported.

Block Diagram:



Specification Tables:

Hardware and Port Characteristic	
CPU	Samsung S3C2510A (ARM9 based)
Memory	Flash 2MB, DRAM 8MB
LAN Port	4 x RJ45, 10/100 Mbps with Auto-MDI/MDIX
WAN Port	1 x RJ45, 10/100 Mbps with Auto-MDI/MDIX
USB Port	1 x USB Jack (type A), USB 1.1 Compliant
Printer Port	1 x DB25 (female)
COM Port	1 x DB9 (male), Up to 115200bps
Input Power	DC 5V2A
Operational & Functional Characteristic	
Firmware Platform	AMIT Proprietary Kernel
Management Method	Web-based
Supported WAN Type	Static IP Address
	Dynamic IP Address (DHCP Client)
	PPP over Ethernet
	PPTP
	Dial-Up Network
Connection Scheme	Connect on Demand / Auto-Disconnect
	Manually Connect/Disconnect
	Auto Reconnect
NAT Functionality	One-to-Many NAT
	One-to-One NAT
	Virtual Server
	Special Application
	DMZ Host
Access Control	MAC-level Access Control
	Inbound/Outbound IP Filter
	Domain Access Control
Firewall	NAT Firewall with SPI mode
	DoS Detection
Event Logging	On-web logging
	Syslog supported
	Email Alert

VPN Supporting	Initiator and responder of IPSec
	IPSec, PPTP, LT2P Pass-Through
Routing	Static Route
	Dynamic Route (RIP1/2)
Upgrade Method	Web-based
	Windows Application
Other Features	DDNS Supported
	UPnP Supported
	SNMP Supported
Wireless Support	
Solution	TI TNETW1130
Standard	IEEE 802.11b / 802.11g; TI 802.11b+
Data Rate	6/12/18/24/36/48/54Mbps in 802.11g mode 1/2/5.5/11Mbps in 802.11b mode 22Mbps in 802.11b+ mode
Operating Frequency	2.4GHz
Range Coverage	Per cell indoors approx. 35-100 meters Per cell outdoors up to 100-300 meters
Antenna	Integrated patch antenna with built-in diversity
Number of Channels	America/ FCC: 2.412~2.462GHz (11 Channels) Japan/ TELEC: 2.412~2.484GHz (14 Channels) Europe/ ETSI: 2.412~2.472GHz (13 Channels)
Security	WEP encryption and WPA supported
Print Server Support	
Type of Printers Supported	Centronics & USB
Printing Protocol	LPR (RFC 1179)
Supported Platform	Windows 95/98/ME
	Windows NT/2000/XP
	Unix LPR
	MacOS
Physical Dimension & Weight	
Chassis (mm; W x D x L)	
PCBA (mm; W x D x L)	
Environment, Certification and Reliability	
Operating Temperature	Temperature: 0~40^{o}C, Humidity 10%~90% non-condensing
Storage Temperature	Temperature: -20~70^{o}C, Humidity: 0~95% non-condensing
EMC/Safety	FCC, CE, VCCI, UL

Reliability	Stress Test; Vibration Test; Drop Test