4-Port Wireless Ethernet Router AAM6020VI-B6

User Manual Version 1.0

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General Information

The 4-Port Wireless Ethernet Router features 4 LAN ports and a wireless ability.

Package Contents

Included in the package is one of each of the following-

- 4-Port wireless Ethernet router
- 15 VAC AC power adapter
- RJ-11 telephone cable
- RJ-45 Ethernet cable
- Splitter
- User Manual



Safety Instructions-Please read.

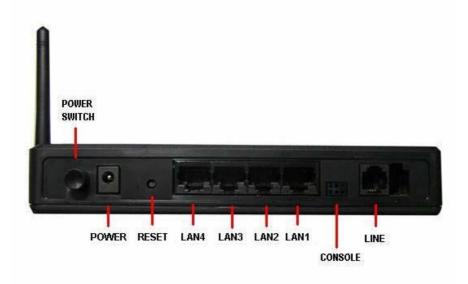
- Place your router on a flat surface close to the cables in a location with sufficient ventilation.
- To prevent overheating, do not obstruct the ventilation openings of this equipment.
- Plug this equipment into a surge protector to reduce the risk of damage from power surges and lightning strikes.
- Operate this equipment only from an electrical outlet with the correct power source as indicated on the adapter.
- Do not open the cover of this equipment. Opening the cover will void any warranties on the equipment.
- Unplug equipment first before cleaning. A damp cloth can be used to clean the equipment. Do not use liquid / aerosol cleaners or magnetic / static cleaning devices.

Front Panel View



LED	Mode	Indication
AP	Solid No light Blinking	Wireless is enabled. Wireless is disabled. There is wireless traffic.
	Solid	ADSL is connected.
XDSL Link	No light	ADSL is not connected. The ALARM led will be red.
	Blinking	The router is connected to ADSL.
XDSL ACT	Solid No light Quick blinking	ADSL is connected, and there is no ADSL traffic. ADSL is not connected. There is ADSL traffic.
LAN1- LAN4	Solid No light Blinking	Router is connected to the LAN. No connection to the LAN. Check if the LAN cable is connected to the router. LAN traffic
ALARM	Solid (red) No light	ADSL is not connected. ADSL is connected.
	Solid	Router is powered on.
POWER	No light	Router is not powered. Check if the router is plugged in and if the power switch is turned on.

Back Panel View

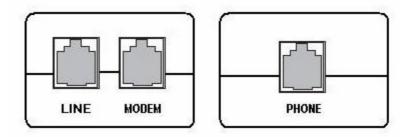


Port	Description
Power Switch	Press to turn the router on and off.
Power	Connects to a 15 VAC AC power adapter.
Reset	<i>Restart</i> –press the button for less than 4 seconds. <i>Default settings</i> –press the button for 4 seconds or longer.
LAN1-LAN4	RJ-45 connects the unit to an Ethernet device such as a PC or a switch.
Console	<i>NOTE:</i> To be used by maintenance professionals only. If the router needs repair, bring it to a service professional.
Line	RJ-11 cable connects to the splitter provided.

Installing the Router

Connect the ADSL Line and Telephone

An RJ-11 cable will be connected to the wall phone jack and the line-end of the splitter. Connect another RJ-11 phone wire from the modem-end of the splitter to the port labeled "line" on the router. A third RJ-11 phone wire will be needed to connect the telephone to the phone-end of the splitter.



NOTE: See connections on the installation diagram.

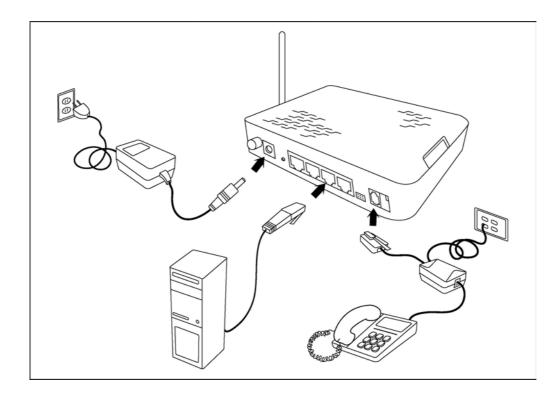
Connect the PC to the Router

Use the Ethernet cable to connect your computer directly to the router. Connect one end of the Ethernet cable to one of the ports labeled LAN on the rear panel of the router and connect the other end to the Ethernet port of your computer. Attach any additional PCs to the router using RJ-45 cables to the port labeled LAN on the rear panel of the router.

Connect the Power Adapter

Complete the process by connecting the AC power adapter to the POWER connector on the back of the device and plug the adapter into a wall outlet or power strip. Then turn on and boot up your PC and any LAN devices, such as hubs or switches, and any computers connected to them.

Installation Diagram



Configuring Your Computer

Prior to accessing the router through the LAN port, note the following necessary configurations –

- Your PC's TCP/IP address: **192.168.1**.__(the last number is any number between 3 and 254)
- The router's default IP address: **192.168.1.1**
- Subnet mask: 255.255.255.0

Below are the procedures for configuring your computer. Follow the instructions for the operating system that you are using.

Windows 2000

- In the Windows taskbar, click on the Start button and point to Settings, Control Panel, and Network and Dial-up Connections (in that order).
- 2. Click on Local Area Connection. When you have the Local Area Connection Status window open, click on **Properties**.
- 3. Listed in the window are the installed network components. If the list includes Internet Protocol (TCP/IP), then the protocol has already been enabled, and you can skip to Step 10.
- 4. If Internet Protocol (TCP/IP) does not appear as an installed component, then click on **Install**.
- 5. In the Select Network Component Type window, click on protocol and then the **Add** button.
- 6. Select Internet Protocol (TCP/IP) from the list and then click on **OK**.
- 7. If prompted to restart your computer with the new settings, click **OK**.
- 8. After your computer restarts, click on the Network and Dialup Connections icon again, and right click on the Local Area Connection icon and then select Properties.

- 9. In the Local Area Connection Properties dialog box, select Internet Protocol (TCP/IP) and then click on **Properties**.
- In the Internet Protocol (TCP/IP) Properties dialog box, click in the radio button labeled Use the following IP address and type 192.168.1.x (where x is any number between 2 and 254) and 255.255.255.0 in the IP address field and Subnet Mask field.
- 11. Click on **OK** twice to save your changes and then close the **Control Panel**.

Windows XP

- 1. In the Windows taskbar, click on the Start button and point to Settings and then click Network Connections.
- 2. In the Network Connections window, right click on the Local Area Connection icon and click on properties.
- Listed in the Local Area Connection window are the installed network components. Make sure the box for Internet Protocol (TCP/IP) is checked and then click on Properties.
- In the Internet Protocol (TCP/IP) Properties dialog box, click in the radio button labeled Use the following IP address and type 192.168.1.x (where x is any number between 2 and 254) and 255.255.255.0 in the IP address field and Subnet Mask field.
- 5. Click on **OK** twice to save your changes and then close the **Control Panel**.

Logging into the Router

This section explains how to log in to your router using the following steps –

- 1. Launch your web browser.
- 2. Enter the URL <u>http://192.168.1.1</u> in the address bar and click on Enter.

A login screen like the one below will be displayed after you connect to the user interface.

<u>a</u>	. Please tune u	our user name a	od password	
Y	Site:	192.168.1.1	ia passitora.	
	Realm	ADSL Router		
	User Name			_
	Password			_
	🗖 Save this	password in you	r password list	
			OK	Cancel

3. Enter your user name and password, and then click on **OK** to display the user interface.

NOTE: There are two default user name and password combinations. The user / user name and password combination can display device status, but cannot change or save configurations. The admin / admin combination can perform all functions. Passwords can be changed at any time.

Device Info

This section describes the system information that can be accessed using the menu items under Device Info.

Summary

Access the general status report from the router by clicking on "Summary" under "Device Info". It shows information about the router such as the version of the software, bootloader, etc. It also displays the current status of your DSL connection as shown below—

₩elcome □	Device Info	
	Board ID:	WLAN
Catistics	Software Version:	3-00-03-0200.A2pB018b2.d15h
ARP	Bootloader (CFE) Version:	1.0.37-0.7
Quick Setup Advanced Setup	Wireless Driver Version:	3.91.41.0
⊕-	This information reflects the cu	urrent status of your DSL conne
⊞ <mark>CI</mark> Management	Line Rate - Upstream (Kbp	·
⊞- <mark>``</mark> Management		is):
⊞- <mark>``</mark> Management	Line Rate - Upstream (Kbp	is):
⊞- <mark>⊡</mark> Management	Line Rate - Upstream (Kbp Line Rate - Downstream (I	s): Kbps):
⊞- 🛄 Management	Line Rate - Upstream (Kbp Line Rate - Downstream (I LAN IP Address:	s): Kbps):

WAN

Access the WAN status report from the router by clicking on "WAN" under "Device Info".

University of the second secon	WAN Info										
Bummary	VPI/VCI	Con. ID	Category	Service Name	Interface Name	Protocol	IGMP	QoS	State	Status	IP Address
ATM											
Quick Setup Advanced Setup Wireless Diagnostics											
im ⊟ Diagnostics ⊕											

STATISTICS

LAN Statistics

Access the LAN statistics from the router by clicking on the " LAN" item under " Statistics" .

📑 Summary 🗎 WAN	Interface		Rece	ace Received			Transmitted			
E Statistics		Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops	
	Ethernet	83107	661	0	0	156219	669	0	0	
ATM	Wireless	7863	69	0	0	18306	122	0	0	
ADSL ARP Quick Setup Advanced Setup Wireless Diagnostics Management	Reset S	tatistics								

WAN Statistics

Access the WAN statistics from the router by clicking on the "WAN" item under "Statistics".

⊡ 🔄 Device Info — 🗎 Summary	Service/VPI/VCI/Protocol/Interface Received Transmitted
WAN Statistics	BytesPktsErrsDropsBytesPktsErrsDrops
🛅 ATM	Reset Statistics
ARP	
📑 Quick Setup E- 🦳 Advanced Setup	
🗉 🧰 Wireless	
📑 Diagnostics E- 🧰 Management	

ATM Statistics

Access ATM statistics from the router by clicking on the "ATM" item under "Statistics".

₩elcome Ə-Ə Device Info 		cs ATI cerface 9		cs								
	In Octets	Out Octets	In Errors	In Unknown	In Hec Errors	In Invalid Vpi Vci Errors	In Port Not Enable Errors	In PTI Errors	In Idle Cells	In Circuit Type Errors	In OAM RM CRC Errors	In GFC Errors
ADSL	0 AAL5 Ir	0 Iterface	0 Statist	0 tics	0	0	0	0	0	0	0	0
Quick Setup					ts Out Va		ErrorsOut					
B-C Advanced Setup B-C Wireless H-C Diagnostics B-C Management	VPI/VC	CC Statis ICRC Err	stics fors SA	0 R Timeout:	sOversia	o zed SDUs <mark>SI</mark>	0	0 Errors	0 .ength)	

ADSL Statistics

You can view ADSL statistics by clicking on the "ADSL" item under "Statistics". Information contained in this screen is useful for troubleshooting and diagnostics of connection problems.

🖻 🔁 Device Info								
- 📑 Summary 	Mode:							
	Туре:	Туре:						
	Line Coding:	Line Coding:						
- WAN	Status:	Link Down						
ATM	Link Power State:							
- Boute		Deventer	eamUpstream					
ARP Quick Setup	CMD Margin (dD):	N/A	N/A					
Guick Setup Advanced Setup	SNR Margin (dB): Attenuation (dB):	N/A N/A	N/A					
🗉 🧰 Wireless	Output Power (dBm):	N/A N/A	N/A					
Diagnostics	Attainable Rate (Kbps):	N/A N/A	N/A					
🗄 💼 Management	Rate (Kbps):	N/A	N/A					
	K (number of bytes in DMT frame):	N/A	N/A					
	R (number of check bytes in RS code word)		N/A					
	S (RS code word size in DMT frame):	N/A	N/A					
	D (interleaver depth):	N/A	N/A					
	Delay (msec):	N/A	N/A					
		140	100					
	Super Frames:	N/A	N/A					
	Super Frame Errors:	N/A	N/A					
	RS Words:	N/A	N/A					
	RS Correctable Errors:	N/A	N/A					
	RS Uncorrectable Errors:	N/A	N/A					
	HEC Errors:	N/A	N/A					
	OCD Errors:	N/A	N/A					
	LCD Errors:	N/A	N/A					
	Total Cells:	N/A	N/A					
	Data Cells:	N/A	N/A					
	Bit Errors:	N/A	N/A					
	Total ES:	N/A	N/A					
	Total SES:	N/A	N/A					
	Total UAS:	N/A	N/A					
	i o cor or or	211	2.0					

ADSL BER Test

A **Bit Error Rate Test (BER Test)** is a test that reflects the ratio of error bits to the total number transmitted.

If you click on the **ADSL BER Test** button at the bottom of the ADSL Statistics page, the following pop-up screen will appear allowing you to set the tested time and to begin the test.

http://	192.168.1.1/berstart.tst?berState=0 - Microsoft I 💻 🔲
A	DSL BER Test - Start
	he ADSL Bit Error Rate (BER) test determines ne quality of the ADSL connection. The test is
de	one by transferring idle cells containing a known attern and comparing the received data with
ť	his known pattern to check for any errors.
S	elect the test duration below and click "Start".
Т	ested Time (sec): 20 💌
	Start Close

Below is an ADSL BER Test result screen displaying information about the test and the error bits and ratio.

est Time (sec):	20
Total Transferred Bits:	0
Total Error Bits:	268478476
Error Ratio:	3.74e-01

Route

Access the routing status report from the router by clicking on the "Route" item under "Device Info".

Welcome Device Info Summary SumMan Statistics LAN		- reject, G	- gateway, H - h · modified (redire		reinstate	э	
🛅 WAN	Destination	Gateway	Subnet Mask	Flags	Metric	Service	Interface
ATM ADSL	192,168,1.0	0.0.0.0	255.255.255.0	U	0		br0
ARP Quick Setup ARP Advanced Setup Wireless Diagnostics Management					<u>.</u>	<u>.</u>	<u>.</u>

ARP

Access the ARP status report from the router by clicking on the "ARP" item under "Device Info".

🖳 Welcome 🖻 🔄 Device Info	Device Info -	- ARP		
Summary	IP Address	Flags	HW Address	Device
E Statistics	192,168,1,5	Complete	00:07:40:FD:1C:F9	br0
WAN ATM ADSL ADSL Quick Setup Advanced Setup Advanced Setup Wireless Diagnostics Management				

Quick Setup

This section will explain how to configure the router.

ATM PVC Configuration

To enable the auto-connect process, click on the box labeled DSL Auto-connect, a process that will automatically detect the first usable PVC and automatically detect PPPoE, PPPoA, and Bridge Protocol (with DHCP Server available). To continue, click on the **Next** button.

If you do not use DSL Auto-connect, then you may need to change the VPI and VCI numbers. Quality of service can also be enabled on this screen.

Welcome Device Info Wan Statistics LAN WAN ATM ADSL Route AAPP Quick Setup Advanced Setup Advanced Setup Diagnostics Management	Quick Setup This Quick Setup will guide you through the steps necessary to configure your DSL Router. ATM PVC Configuration Select the check box below to enable DSL Auto-connect process. DSL Auto-connect The Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) are needed for setting up the ATM PVC. Do not change VPI and VCI numbers unless your ISP instructs you otherwise. VPI: [0-255] 0 VCI: [32-65335] 35
	Enable Quality Of Service Enabling QoS for a PVC improves performance for selected classes of applications. However, since QoS also consumes system resources, the number of PVCs will be reduced consequently. Use Advanced Setup/Quality of Service to assign priorities for the applications. Enable Quality Of Service Next
	Next

Furthermore, if you do not use DSL Auto-connect, then you will need to select the connection type and encapsulation mode from a list as shown below.

e Welcome	Connection Type
Summary	Select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use.
Cartistics	C PPP over ATM (PPPoA)
ATM DADSL	C PPP over Ethernet (PPPoE)
- ARP Quick Setup	O MAC Encapsulation Routing (MER)
Advanced Setup Getup Wireless Diagnostics	C IP over ATM (IPOA)
⊡ Dragnosites ⊕ 🗋 Management	C Bridging
	Encapsulation Mode
	Back Next

The next screen to appear will depend on the connection type that was selected in the previous screen. The following screen is a result of choosing IP over ATM (IPoA) as the connection type.

Use Welcome	WAN IP Settings
Contraction Contracti	Enter information provided to you by your ISP to configure the WAN IP settings.
Cartistics	Notice: DHCP is not supported in IPoA mode. Changing the default gateway or the DNS effects the whole system. Configuring them with static values will disable the automatic assignment from other WAN connection.
ATM	WAN IP Address:
	WAN Subnet Mask:
Wireless Diagnostics	Use the following default gateway: Use IP Address:
⊕- <mark>``</mark> Management	Use WAN Interface: ipoa_0_35/ipa_0_35
	Use the following DNS server addresses:
	Primary DNS server:
	Secondary DNS server:
	Back Next

Advanced Setup

This section contains information about WAN, LAN, and ADSL settings.

WAN

Configure the WAN settings as provided by your ISP.



Click on the **Add** button if you want to add a new rule for the WAN interface. The ATM PVC Configuration screen appears.

The ATM PVC Configuration screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category.

Welcome Device Info Summary WAN Government Statistics Characteristics Characte	ATM PVC Configuration This screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category. Otherwise choose an existing interface by selecting the checkbox to enable it. VPI: [0-255] 0 VCI: [32-65535] 35
ADSL Route ARP Quick Setup Advanced Setup Advanced Setup Advanced Setup Firewall Port Mapping	Service Category: UBR Without PCR UBR Without PCR UBR With PCR CBR Non Realtime VBR Realtime VBR Enable Quality Of Service
Quality of Service Quality of Service Dots Dots Dots Wireless Diagnostics Management	Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use Advanced Setup/Quality of Service to assign priorities for the applications. Enable Quality Of Service
	Back Next

Verify the following values with your ISP before you change them.

- VPI: Virtual Path Identifier. The valid range is 0 to 255.
- VCI: Virtual Channel Identifier. The valid range is 32 to 65535.
- Service Category: Five classes of traffic are listed-
 - UBR Without PCR
 - UBR With PCR
 - o CBR
 - Non Realtime VBR
 - Realtime VBR

Enabling QoS for a PVC improves performance for selected classes of applications. However, since QoS also consumes system resources, the number of PVCs is reduced. If you want to enable QoS service, click on the **Enable Quality Of Service** check box.

Connection Type

This screen shows the below types of network protocols and encapsulation modes –

- PPP over ATM (PPPoA)
- PPP over Ethernet (PPPoE)
- MAC Encapsulation Routing (MER)
- IP over ATM (IpoA)
- Bridging

Select the mode that your ISP has instructed you to use and click on Next.

Welcome	Connection Type
Device Info	Select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use.
Statistics	C PPP over ATM (PPPoA)
ATM	C PPP over Ethernet (PPPoE)
Route ARP	C MAC Encapsulation Routing (MER)
	C IP over ATM (IPoA)
WAN LAN NAT	C Bridging
Firewall Port Mapping	
Quality of Service	Encapsulation Mode
DNS ADSL Wireless	
	Back Next

After you click on **Next**, the below screen appears allowing you disable the bridge service if desired.

→	Jnselect the check bo Enable Bridge Service: Service Name:	vx below to disable this v ✓ or_0_35	WAN service Back Next
---	--	--	--------------------------

When the settings are complete, the next screen shows a **WAN Setup - Summary** screen displaying the WAN configurations made.

Welcome Device Info Quick Setup Advanced Setup	WAN Setup - Summary Make sure that the settings below match the settings provided by your ISP.						
WAN LAN	VPI / VCI:	0 / 35					
E-C NAT	Connection Type:	Bridge					
Port Mapping	Service Name:	br_0_35					
Quality of Service Generating	Service Category:	UBR					
DNS ADSL Mireless Security MAC Filter	IP Address:	Not Applicable					
	Service State:	Enabled					
	NAT:	Disabled					
	Firewall:	Disabled					
Wireless Bridge	IGMP Multicast:	Not Applicable					
Diagnostics Diagnostics Diagnostics	Quality Of Service:	Disabled					
			: It "Back" to make any modifications. his WAN interface and further configure services over this interface. Back Save				

Click on the **Save** button when the settings are correct. The below screen will appear showing the WAN settings that you made. When satisfied with the settings, and no changes are necessary, click on the **Finish** button. To remove any settings, click on the **Remove** button.

Device Info Quick Setup		- d, Edit,			re WAN inter reboot the s							
AAT Firewall Ort Mapping	VPI/VCI	Con. ID	Category	Service	Interface	Protocol	IGMP	QoS	State	Remove	Edit	Action
Quality of Service C Routing C DNS C ADSL	0/35	1	UBR	br_0_35	nas_0_35	Bridge Remove	N/A Finis	Disabled	Enabled		Edit	
Wireless Basic Security MAC Filter Wireless Bridge Advanced Diagnostics Management												

After selecting the **Finish** button, the below screen will appear. At this point, the router will reboot to save the changes made.

🖳 Welcome	DSL Router Reboot
Device Info	
Quick Setup Advanced Setup	The DSL Router has been configured and is rebooting.
- WAN	
LAN	Close the DSL Router Configuration window and wait for 2 minutes before reopening your web browser. If necessary,
⊕ 🛄 NAT	reconfigure your PC's IP address to match your new configuration.
Firewall Port Mapping	
- Quality of Service	
🕀 🗋 Routing	
⊕ DNS	
Basic	
Security	
MAC Filter	
Wireless Bridge	
- Diagnostics	
🗄 🛅 Management	

LAN Local Area Network (LAN) Setup

You can configure the DSL Router IP address and Subnet Mask for the LAN interface to correspond your LAN's IP Subnet. The **Save** button only saves the LAN configuration data, but does not apply the configurations. Select the **Save/Reboot** button to save the LAN configuration data and reboot the router and apply the new configurations.

Welcome Device Info Duick Setup Advanced Setup WAN	Configure the DSL R configuration data.	Local Area Network (LAN) Setup Configure the DSL Router IP Address and Subnet Mask for LAN interface. Save button only saves the LAN configuration data. Save/Reboot button saves the LAN configuration data and reboots the router to make the new							
C LAN AT Forwall Port Mapping Quality of Service C Routing	configuration effecti IP Address: Subnet Mask:	ve. 192.168.1.1 255.255.255.0							
ONS ADSL Wireless Security MAC Filter Wireless Bridge Advanced Diagnostics Management									
		Save /Reboot							

NAT

If you enable NAT (Network Address Translation), you can configure the Virtual Server, Port Triggering, and DMZ Host.

Virtual Servers

Welcome Device Info Quick Setup GANANCEd Setup HOMANCED Setup HOMANCED SETUP ANN HOMANCED ANN H	Virtual Serve Internal serv	ual Servers Sett er allows you to di erwith private IP I to a differentpor	rect incoming tr address on the L	AN side. Th y the server	e Internal port is r on the LAN side	requiredonly if	the external por	rt needs to
Virtual Servers Port Triggering DMZ Host Firewall Port Mapping Quality of Service Pouting	Server Name	External Port Start	External Port End	Protocol	Add Internal Port Start	Internal Port End	Server IP Address	Remove
Coulity of Service Quality of Service Ons DNS ADSL Basic Basic Security Mireless Bridge Advanced Diagnostics Onagement								

A virtual server allows you to direct incoming traffic from the WAN side to a specific IP address on the LAN side. Select the virtual server from the drop-down list and complete the server IP address, then click on the **Save / Apply** button.

💭 Welcome	NAT Virtual Servers
Device Info Quick Setup Quick Setup WAN LAN Device Info MAT Device Info Device Setup Device Info Device Setup Device Setup	Select the service name, and enter the server IP address and click "Save/Apply" to forward IP packets for this service to the specified server. NOTE: The "Internal Port End" cannot be changed. It is the same as "External Port End" normally and will be the same as the "Internal Port Start" or "External Port End" if either one is modified. Remaining number of entries that can be configured:32 Server Name: Select a Service: Select One Server IP Address: 192.168.1.
Basic	Save/Apply
MAC Filter	External Port Start External Port End Protocol Internal Port Start Internal Port End
Advanced Diagnostics	
⊞ Cagnosics ⊞ Canagement	
	Save/Apply

The following screen appears after you save your selection. To add additional virtual servers, click on the **Add** button. If you need to remove any of the server names, select the check box and click on the **Remove** button.

Welcome Device Info Advanced Setup Advanced Setup Advanced Setup Advanced Setup DAT DAT DAT DAT DAT DAT DAT DA	Virtual Serv Internal ser	NAT Virtual Servers Setup Virtual Server allows you to direct incoming traffic from WAN side(identified by Protocol and External port) to the Internal server with private IP address on the LAN side. The Internal port is requiredonly if the external port needs to be converted to a differentport number used by the server on the LAN side. Maximum 32 entries can be configured. Add Remove									
	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove			
Quality of Service Generating DNS	Active Worlds	3000	3000	ТСР	3000	3000	192.168.1.100				
ADSL Wireless Basic Security Advanced Diagnostics Management	Active Worlds	5670	5670	ТСР	5670	5670	192.168.1.100				
	Active Worlds	7777	7777	тср	7777	7777	192.168.1.100				
	Active Worlds	7000	7000	тср	7000	7000	192.168.1.100				

Port Triggering

Click on the **Add** button to add Port Triggering to your Internet application.



The below screen appears when you click on Add allowing you to select the application that you want to set the port settings for. After a selection has been made, click on the **Save / Apply** button.

Welcome Advanced Setup DMZ Host DMZ Host DMZ Host Advanced Advanced Diagnostics Management	NAT 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)and click "Save/Apply" to add it. Remaining number of entries that can be configured:32 Application Name: Select an application: Select One Custom application:
	Trigger Port Start Trigger Port End/Trigger Protocol/Dpen Port Start Dpen Port End/Dpen Protocol TCP TCP

The below screen appears after you save your selections. You will be able to add or remove selections made, by clicking on the **Add** and **Remove** buttons.

Welcome Device Info Quick Setup Advanced Setup ULAN LAN NAT Port Triggering DMZ Host Port Triggering DMZ Host Port Mapping	NAT Port Triggering Setup Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Port Trigger dynamically opens up the 'Open Ports' in the firewall when an application on the LAN initiates a TCP/UOP connection to a remote party using the 'Triggering Ports'. The Router allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the 'Open Ports'. Maximum 32 entries can be configured. Add Remove									
Quality of Service		Trigger		Open			Remove			
🕀 🧰 DNS		Name	Protocol Port Range		Protocol Port Range		ange			
- ADSL Wireless				Start	End		Start	End		
Basic		Aim Talk	тср	4099	4099	тср	5191	5191		
AC Filter Wireless Bridge Advanced Diagnostics Management										

DMZ Host

You can define the IP address of the DMZ Host on this screen. Enter the IP address and click on **Save / Apply**.

Welcome Advanced Setup Advanced Advanced	NAT DMZ Host The DSL router will forward IP packets from the WAN that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer. Enter the computer's IP address and click "Apply" to activate the DMZ host. Clear the IP address field and click "Apply" to deactivate the DMZ host. DMZ Host IP Address: Save/Apply

Firewall

IP Filtering–Outgoing

The outgoing filter will block the LAN traffic from entering the WAN side. Click on the **Add** button to create filters.

🤐 Welcome 🗄 🗀 Device Info	Outgoing IP Filtering Setup									
Quick Setup Advanced Setup MAN	By default,	all outgoin	g IP traffic from LAN is allo	wed, but some I	^o traffic can be <mark>BLOCKED</mark>	by setting up f	îlters.			
	Name	Protocol	Source Address / Mas	k Source Port	Dest. Address / Mas	Dest. Port	Remove			
Griewall Griewall Grievall Grievall				Add						
Port Mapping Quality of Service Routing DNS										
☐ ADSL ⊟- 🔄 Wireless										
Basic Security MAC Filter Wireless Bridge Advanced										
- Diagnostics - Diagnostics Management										

The below screen will appear when you click on **Add**. Input the filter name, source information (from the LAN side), and destination information (from the WAN side). Then click on **Save / Apply**.

Uvelcome	Add IP Filter Outgoing
Quick Setup Advanced Setup WAN AN AN	The screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the filter.
⊕-C⊐ NAT ⊡-C⊒ Firewall ⊡-C⊒ IP Filtering	Filter Name:
Outgoing	Protocol:
MAC Filtering	Source IP address:
Quality of Service Generating DNS	Source Port (port or port;port):
ADSL	Destination IP address:
Basic Security	Destination Subnet Mask: Destination Port (port or port:port):
MAC Filter Wireless Bridge Advanced	
■ Diagnostics ■ Management	Save/Apply

IP Filtering–Incoming

Incoming filter filters the WAN traffic to the LAN side. Click on the Add button to add incoming filter settings.

Welcome Device Info Ouick Setup Ouick Setup Ouick Setup Ouick Astup	Incoming IP Filtering Setup By default, all incoming IP traffic from WAN is blocked when firewall is enabled, but some IP traffic can be ACCEPTED by setting up filters.								
LAN LAN AT Firewall Gup File file	Name	VPI/VCI	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove	
IP Filtering Utgoing Utgoing Incoming Port Mapping Ouality of Service Routing DNS ADSL Wireless Basic Security MAC Filter Wireless Bridge Advanced Diagnostics Management					Add				

Enter a filter name, information about the source address (from the WAN side), and information about the destination address (to the LAN side). Select the protocol and WAN interface, then click on **Save/Apply** to add the setting.

You can view and delete the incoming filter settings from this screen.

Welcome Device Info Quick Setup Advanced Setup WAN LAN BC NAT CAP Firewall	Add IP Filter Incoming The screen allows you to create a filter rule to identify incoming IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the filter. Filter Name:
P Filtering Outgoing Outgoing Outgoing MAC Filtering Outgoing MAC Filtering Outlivy of Service Outlivy of Service ONS ODS Mireless Basic Security	Protocol: Image: Colored
MAC Filter Wireless Bridge Advanced Diagnostics Management	WAN Interfaces (Configured in Routing mode and with firewall enabled only) Select at least one or multiple WAN interfaces displayed below to apply this rule. Image: Select All Save/Apply

MAC Filtering

MAC filtering can forward or block traffic by MAC address. You can change the policy or add settings to the MAC filtering table using the MAC Filtering Setup screen.

Welcome +	MAC Filtering	1.1		יחבה				
Advanced Setup	MACT INSTITUTE	iobai Policy			ge Policy			
Firewall Green Pritering Outgoing Incoming MAC Filtering	frames will be	FORWARD	ED except	1 PVCs configured in hose matching with be BLOCKED except	any of the spec	ified rules in the fol	lowing table	BLOCKED
Port Mapping Quality of Service End Content Content	Choose Add or	Remove to	configure (MAC filtering rules.				
DNS ADSL		VPI/VCI	Protocol	Destination MAC	Source MAC	Frame Direction	Remove	
Wireless Basic Becurity MAC Filter Wireless Bridge Advanced				ł	Add			
i] Diagnostics ⊞ <mark>i</mark> ⊃ Management								

If you click on **Change Policy**, a confirmation dialog allows you to verify your change.

₩elcome	Change MAC Filtering Global Policy WARNING: Changing from one global policy to another will cause all defined rules to be REMOVED AUTOMATICALLY! You will need to create new rules for the new policy.
LAN LAN NAT	Are you sure you want to change MAC Filtering Global Policy from FORWARDED to BLOCKED ?
P Filtering Outgoing Difference MAC Filtering	NO YES
Port Mapping Quality of Service Courting DNS	
ADSL ADSL Basic Security MAC Filter	
 → Wireless Bridge → Advanced → Diagnostics ⊕ Management 	

If you want to add a setting to the MAC filtering table, enter the Source and Destination MAC address, and select protocol type, frame direction, and WAN interface. Then click on **Save / Apply** to save it.

🖳 Welcome	Add MAC Filter	
🖭 🗋 Device Info		
– 📄 Quick Setup	Create a filter to identify the	MAC layer frames by specifying at least one condition below. If multiple conditions are
🖻 🔄 Advanced Setup		fect. Click "Apply" to save and activate the filter.
- 🗋 WAN		
🕀 🛄 NAT E- 😋 Firewall	Protocol Type:	
E-G IP Filtering	Destination MAC Address:	
- Outgoing		
	Source MAC Address:	
MAC Filtering		
- 📄 Port Mapping	Frame Direction:	LAN<=>WAN
- Duality of Service		
🕀 🛄 Routing	WAN Interfaces (Configured	in Bridge made only)
😐 🧰 DNS	What I del laces (comigarea	In bridge mode only)
ADSL	Select All	
🖻 🔄 Wireless		
- Security	🔽 br_0_35/nas_0_35	
MAC Filter		
— 🗎 Wireless Bridge		
Advanced		Save/Apply
Diagnostics		
🗄 🧰 Management		

After you save the settings, a screen showing the settings will appear. On this screen you will be able to view and delete MAC filtering rules.

Port Mapping

Port mapping is a feature that allows you to open ports to allow certain Internet applications on the WAN side to pass through the firewall and enter your LAN. To use this feature, mapping groups need to be created. To do this, follow the below instructions—

1. Click on the Add button as displayed below.

🖳 Welcome	Port Mapping A maximum 16 entries can be configured							
🖻 🗋 Device Info	· · · · · · · · · · · · · · · · · · ·							
— 📄 Quick Setup	Port Mapping supports multiple port to PVC and bridging groups. Each group will perform as an independent network.							
🖻 🔄 Advanced Setup	To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add							
WAN	button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group							
	5.5 5. 5.							
	Enable virtual ports on eth0							
🖻 🚖 IP Filtering								
- Dutgoing								
Incoming						1		
MAC Filtering	Group Name	Interfaces	IGMP Snooping	Remove	Edit			
Port Mapping Quality of Service	Default	eth0, nas_0_35, Wireless	N		Edit			
Guarry of Service Routing	Default	eulo, nas_o_co, un eless	14		Luit			
ADSL	Add Remove							
🖻 🔁 Wireless								
Basic								
- Wireless Bridge								
Advanced								
📄 Diagnostics								
🗄 💼 Management								

2. After clicking the **Add** button, the below configuration screen appears, allowing you enter the groups and the interfaces they are associated with.

Welcome Cuick Setup Quick Setup Advanced Setup WAN LAN NAT Firewall Gamma Duttion Incoming MAC Filtering MAC Filtering Cutoping Cuto	Port Mapping Configuration To create a new mapping group: 1. Enter the Group name and select interfaces from the available interface list and add it to the grouped interface list using the arrow buttons to create the required mapping of the ports. The group name must be unique. 2. Click Save/Apply button to make the changes effective immediately Note that the selected interfaces will be removed from their existing groups and added to the new group.						
ADSL Wireless	Group Name: Enable IGMP Snooping Grouped Interfaces	Available Interfaces eth0 nas_0_35 Wireless Save/Apply					

Quality of Service

You can configure the Quality of Service to apply different priorities to traffic on the router.

Welcome Come Come Come			ice Setup emove to conf	igure net	work traf	fic cla	sses.						
	MARK TRAFFIC CLASSIFICATION RULES												
🕀 🛅 NAT								SET	F-1			SET-2	
i ← ☐ Firewall i ← ☐ IP Filtering i ← ☐ Outgoing i ← ☐ Incoming	Name	Priority	IP Precedence	Type of Service		Lan Port	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	802.1P	Remove
							Add						

On this screen you can view and delete QoS settings.

🖳 Welcome	Add Network Traffic Class Rule										
Device Info											
Quick Setup	The screen creates a traffic class rule to classify the upstream traffic, assign queuing priority and optionally overwrite										
WAN	the IP header TOS byte. A rule consists of a class name and at least one condition below. All of the specified										
		must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate									
🕀 🧰 NAT	the rule.										
E C Firewall											
Port Mapping Quality of Service	Traffic Class Name:										
E Cuality of Service											
DNS		edence and/or Type Of Service for the class									
ADSL		Precedence' and/or 'IP Type Of Service', the corresponding TOS byte in the IP the susceptible builty extended when									
E-Ca Wireless	neader of the upstream packet will	header of the upstream packet will be overwritten by the selected value.									
Security	Deireite										
MAC Filter	Priority:										
— 📄 Wireless Bridge	IP Precedence:	<u> </u>									
Advanced	IP Type Of Service:	•									
 Diagnostics Management 											
	Specify Traffic Conditions for the class										
	Enter the following conditions either for IP layer or for the IEEE 802.1p priority.										
	Protocol:	•									
	Source IP Address:										
	Source Subnet Mask:										
	Source Port (port or port:port):										
	Destination IP Address:										
	Destination Subnet Mask:										
	Destination Port (port or port:port)										
	802.1p Priority:	•									
		Save/Apply									

Routing

Default Gateway

You can enable automatic assigned default gateway on the Routing - Default Gateway screen. As default, the box is checked for automatic assigned default gateway to be enabled. Click the **Save / Apply** button to enable or disable this feature.

🖳 Welcome	Routing Default Gateway
🗉 🚞 Device Info	
Quick Setup	If Enable Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default
E-C Advanced Setup	gateway assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s). If the checkbox is not selected,
	enter the static default gateway AND/OR a WAN interface. Click 'Save/Apply' button to save it.
🗉 🛅 NAT	
🗄 🚞 Firewall	NOTE: If changing the Automatic Assigned Default Gateway from unselected to selected, You must reboot the router to
Port Mapping	get the automatic assigned default gateway.
Quality of Service Grand Routing	
Default Gateway	🔽 Enable Automatic Assigned Default Gateway
Static Route	
ADSL Wireless	
Basic	
- Difference Security	
MAC Filter	
Wireless Bridge	Save/Apply
- Diagnostics	
🗄 🗋 Management	

Static Route

Use the Routing - Static Route screen to add a static route to the routing table.

□ Quick Setup ⊟⊐ Advanced Setup	Destination	Subnet Mask	Gateway	Wan Interface	Remove
- D WAN - LAN - NAT - Firewall			Add		
Port Mapping Quality of Service					
🖻 😋 Routing					
- 🔄 Wireless					
Security					
Wireless Bridge					

Enter the route information and click on **Save/Apply** to make it active. No reboot is required.

Advanced Setup to add the e	stination network address, subnet mask, gateway AND/OR available WAN interface then click "Save/Apply" ntry to the routing table.
Port Mapping Quality of Service Subnet Mas Grouting Default Gateway	eway IP Address

RIP

If RIP is enabled, the router operation can be configured as active or passive.

Welcome Cuick Setup Advanced Setup WAN LAN NAT	Routing RIP Configuration 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 'Apply' button to save the configuration, and to start or stop RIP based on the Global RIP mode selected.
 □ Firewall □ Port Mapping □ Quality of Service □ Routing □ Default Gateway □ Static Route 	Global RIP Mode Interface Disabled Enabled Interface VPI/VCI Version Operation Enabled br0 (LAN) 2 Active
Pup Basic ADSL ADSL Basic Basic Mireless MAC Filter Wireless Bridge Advanced Diagnostics Management	Apply

DNS

DNS Server

Use the DNS Server screen to request automatic assignment of a DNS or to specify a primary and secondary DNS.



Dynamic DNS



ADSL

There are three major items in the ADSL settings:

Modulation Methods

Six modulation methods for different linking speed are supported by the 6211 ADSL router: G.Dmt Enabled, G.lite Enabled, T1.413 Enabled, ADSL Enabled, Annex L Enabled, and ADSL2+ Enabled. Set this value only as directed by your ISP.

Phone Line Pair

The 6211 ADSL router supports phone lines on pins 2 and 3 or pins 1 and 4 to connect your ADSL line. If your phone system uses pins 2 and 3, attach a normal RJ11 cable to the router and select "Inner pair" on the screen; if your phone system uses pins 1 and 4, attach the phone with the supplied RJ11 cable and select "Outer pair" on the screen.

Capability

Do not change these settings unless directed by your ISP.



DSL Advanced Settings

The test mode can be selected from the DSL Advanced Settings page.

Test modes are as follows-

- Normal
- Reverb
- Medley
- No retrain
- L3

United States St	DSL Advanced Settings	
Quick Setup Advanced Setup	Select the test mode below.	
WAN LAN	• Normal	
Virtual Servers	O Reverb	
Dort Triggering DMZ Host	C Medley	
⊖ 🔁 Firewall ⊕ 🛅 IP Filtering	O No retrain	
MAC Filtering	C L3	
- 📄 Quality of Service		
Routing Default Gateway Static Route RIP DNS	Apply Tone Select	ion
⊡ <mark>⊂</mark> Management		

Tone Settings

The frequency band of ADSL is split up into 256 separate tones, each spaced 4.3125 kHz apart. With each tone carrying separate data, the technique operates as if 256 separate modems were running in parallel. The tone range is from 0 to 31 for upstream and from 32 to 255 for downstream. Do not change these settings unless so directed by your ISP.

₩elcome ⊕ 🗀 Device Info	DSL Advanced Settings	
Quick Setup	Select the test mode below.	
	⊙ Normal	
E Firewall	O Reverb	
Port Mapping Quality of Service	C Medley	
⊕-	C No retrain	
DNS Server	OL3	
ADSL Wireless		
Basic Security MAC Filter Wireless Bridge	4	xpply Tone Selection
Advanced - Diagnostics - Management		

49 🔽 65 🗹 81 🔽	18 🔽 34 🔽 50 🔽 66 🔽 82 🔽	19 35 51 67 83 99	☑ 36 ☑ 52 ☑ 68 ☑ 84	0 1 6 1 2 1 8 1 4 1 7	21 37 53 69	ব ব ব	6 22 Dow 38 54 70	☑ 7 ☑ 2 ☑ st ☑ 3 ☑ 5 ☑ 7	7 13 1 7 19 15	24 24	マ 9 マ 2 nes マ 4 マ 5	25 F 11 F 57 F	₹ 42 ₹ 58	<u>ব</u> ব ব	27 43	₹ 28	ব	29 45	ব	30 46	<u> </u>	31
17 33 49 65 81 97 7	18 🔽 34 🔽 50 🔽 66 🔽 82 🔽	19 35 51 67 83 99	20 7 36 7 52 7 84 7 84	0 1 6 1 2 1 8 1 4 1 7	21 37 53 69	র র র ব	22 Dov 38 54 70	☑ 2 vnst ☑ 3 ☑ 5 ☑ 7	13 F I rea 19 F 15 F	☑ 24 am To ☑ 40 ☑ 56		25 F 11 F 57 F	7 26 7 42 7 58	<u>ব</u> ব ব	27 43	✓ 28✓ 44	ব	29 45	ব	30 46	<u> </u>	31
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49 🔽 65 🔽 81 🔽 97 🔽	50 🔽 66 🔽 82 🔽	51 67 83 99	☑ 52 ☑ 68 ☑ 84	2 🔽 8 🔽 4 🗹	53 69	ব ব ব	38 54 70	☑ 3 ☑ 5 ☑ 7	19 F	☑ 40 ☑ 56		57 F	Z 58	1								47
49 🔽 65 🔽 81 🔽 97 🔽	50 🔽 66 🔽 82 🔽	51 67 83 99	☑ 52 ☑ 68 ☑ 84	2 🔽 8 🔽 4 🗹	53 69	ব ব	54 70	₽5 ₽7	is P	56		57 F	Z 58	1								47
65 🔽 81 🔽 97 🔽	66 № 82 № 98 №	67 83 99	 № 68 № 84 	- 8 🔽 4 🗹	69	•	70	7			1	- 18 B		S. 1	59 I	7 60	V	61	1	62		
81 🔽	82 🔽 98 🔽	83 99	₽ 84	4 🔽					1 F	72	17	72 6		Sec. 1							14	63
97 🔽	98 🔽	99			85							0 1	74	7	75 I	76	V	77	1	78	7	79
			⊠ 10			12	86	P 8	17 F	88	V 8	89 F	7 90	•	91 I	7 92	V	93	1	94	•	95
113 🔽	114 🔽			00 🔽	101	•	102	▼ 1	.03 F	✓ 104	☑ 1	LOS F	7 106	•	107	7 10	3 🔽	109	1	110	1	11
	CONTRACTOR NO.	115	▼ 11	16 🗖	117	1	118		.19 F	✓ 120		121 6	122	•	123	▼ 12	4 🔽	125	1	126	2	12
129 🔽	130 🔽	131	▼ 13	32 🔽	133		134		.35 F	✓ 136		137 🖡	7 138	•	139 	✓ 14		141	1	142	1	14
145 🔽	146 🔽	147	▼ 14	48 🔽	149	•	150	▼ 1	51 F	✓ 152		153 🖡	7 154	•	155 I	✓ 15	5 🔽	157	1	158	•	15
161 🔽	162 🔽	163	№ 16	64 🔽	165	1	166		.67 F	✓ 168		169 F	7 170	•	171	✓ 17:	2 🔽	173	1	174	7	17
177 🔽	178 🔽	179	№ 18	80 🔽	181	V	182		.83 F	✓ 184		185 🖪	7 186	1	187 J	✓ 18	3 🔽	189	1	190	1	19
193 🔽	194 🔽	195	№ 19	96 🔽	197	1	198		.99 F	200		201 6	202	1	203 I	₹ 20	1	205	2	206	2	20
209 🔽	210	211	21	12 🔽	213	1	214		15	216		217	218	1	219	₹ 22		221	5	222	1	22
225 🔽	226 🔽	227	₽ 22	28 🔽	229	1	230		31 F	232		233 6	234	2	235	₹ 23	5 🔽	237	1	238	5	23
241 🔽	242 🔽	243	24	44 🔽	245	1	246		47	248		249	250	1	251	₹ 25	2 🔽	253	1	254	2	25
	161 🔽 177 🔽 193 🔽 209 🔽 225 🔽	161 🔽 162 🔽 177 🔽 178 🔽 193 🔽 194 🔽 209 🔽 210 🔽 225 🔽 226 🔽	161 ₩ 162 ₩ 163 177 ₩ 178 ₩ 179 193 ₩ 194 ₩ 195 209 ₩ 210 ₩ 211 225 ₩ 226 ₩ 227	161 ₩ 162 ₩ 163 ₩ 1 177 ₩ 178 ₩ 179 ₩ 1 193 ₩ 194 ₩ 195 ₩ 1 209 ₩ 210 ₩ 211 ₩ 2 225 ₩ 226 ₩ 227 ₩ 2	161 ♥ 162 ♥ 163 ♥ 164 ♥ 177 ♥ 178 ♥ 179 ♥ 180 ♥ 193 ♥ 194 ♥ 195 ♥ 196 ♥ 209 ♥ 210 ♥ 211 ♥ 212 ♥ 225 ♥ 226 ♥ 227 ♥ 228 ♥	161 1 162 1 163 1 164 1 165 177 1 178 1 179 1 180 1 181 193 1 194 1 195 1 196 1 196 209 1 210 1 211 1 212 1 213 225 1 226 1 227 1 228 1 229	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 166 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 182 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 198 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 214 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥ 230	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 166 ♥ 1 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 182 ♥ 1 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 198 ♥ 1 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 214 ♥ 2 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥ 230 ♥ 2	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 166 ♥ 167 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 182 ♥ 183 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 198 ♥ 199 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 214 ♥ 215 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥ 230 ♥ 231	161 🔽 162 🔽 163 🔽 164 🔽 165 🔽 166 🖾 167 🖾 168 177 🔽 178 🔽 179 🖾 180 🔽 181 🖾 182 🖾 183 🖾 184 193 🖾 194 🖾 195 🖾 196 🖾 197 🖾 198 🖾 199 🖾 200 209 🖾 210 🖾 211 🖾 212 🖾 213 🖾 214 🖾 215 🖾 216 225 🖾 226 🖾 227 🖾 228 🖾 229 🖾 230 🖾 231 🖾 232	161 Image: Constraint of the state o	161 1 162 1 163 1 164 1 165 1 166 1 167 1 168 1 169 1 177 1 178 1 179 1 180 1 181 1 182 1 183 1 184 1 185 1 193 1 194 1 195 1 196 1 197 1 198 1 199 1 200 1 201 1 209 1 210 1 211 1 212 1 213 1 214 1 215 1 216 1 217 1 225 1 226 1 227 1 228 1 229 1 230 1 231 1 232 1 233 1	161 ✓ 163 ✓ 165 ✓ 166 ✓ 167 ✓ 168 ✓ 169 ✓ 170 177 ✓ 178 ✓ 179 ✓ 180 ✓ 181 ✓ 182 ✓ 183 ✓ 184 ✓ 185 ✓ 186 193 ✓ 194 ✓ 195 ✓ 197 ✓ 198 ✓ 199 ✓ 200 ✓ 201 ✓ 202 209 ✓ 210 ✓ 211 ✓ 213 ✓ 214 ✓ 215 ✓ 216 ✓ 217 ✓ 218 225 ✓ 226 ✓ 228 ✓ 229 ✓ 230 ✓ 231 ✓ 233 ✓ 234	161 Image: Constraint of the state o	161 ✓ 163 ✓ 164 ✓ 165 ✓ 166 ✓ 167 ✓ 168 ✓ 169 ✓ 170 ✓ 171 177 ✓ 178 ✓ 179 ✓ 180 ✓ 182 ✓ 183 ✓ 184 ✓ 185 ✓ 186 ✓ 187 193 ✓ 194 ✓ 195 ✓ 196 ✓ 198 ✓ 199 ✓ 200 ✓ 201 ✓ 202 ✓ 203 209 ✓ 210 ✓ 211 ✓ 213 ✓ 214 ✓ 215 ✓ 216 ✓ 217 ✓ 218 ✓ 219 225 ✓ 226 ✓ 228 ✓ 229 ✓ 231 ✓ 232 ✓ 233 ✓ 235 ✓	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 166 ♥ 167 ♥ 168 ♥ 169 ♥ 170 ♥ 171 ♥ 177 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 182 ♥ 183 ♥ 184 ♥ 185 ♥ 186 ♥ 187 ♥ 18 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 198 ♥ 199 ♥ 200 ♥ 201 ♥ 202 ♥ 203 ♥ 20 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 214 ♥ 215 ♥ 216 ♥ 217 ♥ 218 ♥ 219 ♥ 22 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥ 230 ♥ 231 ♥ 232 ♥ 233 ♥ 234 ♥ 235 ♥ 23	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 166 ♥ 167 ♥ 168 ♥ 169 ♥ 170 ♥ 171 ♥ 172 ♥ 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 182 ♥ 183 ♥ 184 ♥ 185 ♥ 186 ♥ 187 ♥ 188 ♥ 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 198 ♥ 199 ♥ 200 ♥ 201 ♥ 202 ♥ 203 ♥ 204 ♥ 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 214 ♥ 215 ♥ 216 ♥ 217 ♥ 218 ♥ 219 ♥ 220 ♥ 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥ 230 ♥ 231 ♥ 232 ♥ 233 ♥ 234 ♥ 235 ♥ 236 ♥	161 ♥ 162 ♥ 163 ♥ 164 ♥ 165 ♥ 166 ♥ 167 ♥ 168 ♥ 169 ♥ 170 ♥ 171 ♥ 172 ♥ 173 177 ♥ 178 ♥ 179 ♥ 180 ♥ 181 ♥ 182 ♥ 183 ♥ 184 ♥ 185 ♥ 186 ♥ 187 ♥ 188 ♥ 189 193 ♥ 194 ♥ 195 ♥ 196 ♥ 197 ♥ 198 ♥ 199 ♥ 200 ♥ 201 ♥ 202 ♥ 203 ♥ 204 ♥ 205 209 ♥ 210 ♥ 211 ♥ 212 ♥ 213 ♥ 214 ♥ 215 ♥ 216 ♥ 217 ♥ 218 ♥ 219 ♥ 220 ♥ 221 225 ♥ 226 ♥ 227 ♥ 228 ♥ 229 ♥ 230 ♥ 231 ♥ 232 ♥ 233 ♥ 234 ♥ 235 ♥ 236 ♥ 237	161 Image: Constraint of the state interview	161 Image: Constraint of the state interview	145 ✓ 147 ✓ 148 ✓ 149 ✓ 150 ✓ 152 ✓ 153 ✓ 155 ✓ 156 ✓ 157 ✓ 158 ✓ 161 ✓ 163 ✓ 164 ✓ 165 ✓ 166 ✓ 167 ✓ 168 ✓ 169 ✓ 170 ✓ 171 ✓ 172 ✓ 173 ✓ 174 ✓ 177 ✓ 178 ✓ 179 ✓ 181 ✓ 183 ✓ 185 ✓ 186 ✓ 187 ✓ 188 ✓ 189 ✓ 190 ✓ 193 ✓ 194 ✓ 185 ✓ 186 ✓ 187 ✓ 188 ✓ 189 ✓ 190 ✓ 201 ✓ 202 ✓ 203 ✓ 201 ✓ 203 ✓ 203 ✓ 203 ✓ 203 ✓ 203 ✓ 201 ✓ 201 ✓ 201

Wireless

This section allows you to configure wireless settings on your router.

Basic

The below **Wireless - Basic** screen lets you enable or disable wireless. The default setting for wireless is enabled. You can also hide the access point so others cannot see your ID on the network.

Welcome	Wireless Basic This page allows you to configure basic features of the wireless LAN Interface. You can enable or disable the wireless
Advanced Setup	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" to configure the basic wireless options.
Griewall Port Mapping Quality of Service Couling Outs DNS ONS ONS	Enable Wireless Hide Access Point SSID: wireless
Dynamic DNS 	BSSID: 02:50:C9:08:88:D8 Country: ALL
Security MAC Filter MAC Filter Wireless Bridge Advanced Jiagnostics Management	Save/Apply

Security

The next screen is the **Wireless - Security** screen which allows you to select the network authentication method and to enable or disable WEP encryption. Note that depending on the network authentication that is selected, the screen will change accordingly so additional fields can be configured for the specific authentication method.

Network authentication methods include the following-

- **Open**-anyone can access the network. The default is a disabled WEP encryption setting.
- Shared–WEP encryption is enabled and encryption key strength of 64-bit or 128-bit needs to be selected. Click on Set Encryption Keys to manually set the network encryption keys. Up to 4 different keys can be set and you can come back to select which one to use at anytime.

- 802.1X–requires mutual authentication between a client station and the router by including a RADIUS-based authentication server. Information about the RADIUS server such as its IP address, port and key must be entered. WEP encryption is also enabled and the encryption strength must also be selected.
- WPA-(Wi-Fi Protected Access) usually used for the larger Enterprise environment, it uses a RADIUS server and TKIP (Temporal Key Integrity Protocol) encryption (instead of WEP encryption which is disabled). TKIP uses128-bit dynamic session keys (per user, per session, and per packet keys).
- WPA-PSK (Wi-Fi Protected Access Pre-Shared Key) WPA for home and SOHO environments also using the same strong TKIP encryption, per-packet key construction, and key management that WPA provides in the enterprise environment. The main difference is that the password is entered manually. A group re-key interval time is also required.
- WPA2 (Wi-Fi Protected Access 2)—second generation of WPA which uses AES (Advanced Encryption Standard) instead of TKIP as its encryption method. Network re-auth interval is the time in which another key needs to be dynamically issued.
- WPA2-PSK (Wi-Fi Protected Access 2 Pre-Shared Key) suitable for home and SOHO environments, it also uses AES encryption and requires you to enter a password and an re-key interval time.
- Mixed WPA2 / WPA-during transitional times for upgrades in the enterprise environment, this mixed authentication method allows "upgraded" and users not yet "upgraded" to access the network via the router. RADIUS server information must be entered for WPA and a as well as a group re-key interval time. Both TKIP and AES are used.
- Mixed WPA2 / WPA-PSK-useful during transitional times for upgrades in the home or SOHO environment, a preshared key must be entered along with the group re-key interval time. Both TKIP and AES are also used.

Welcome Cuick Setup Cuick Set		
	WEP Encryption:	Disabled -

MAC Filter

The MAC filter screen allows you to manage MAC address filters. Add the MAC addresses that you want to manage and then select the mode that you want to use to manage them. You can disable this feature or you can allow or deny access to the MAC addresses that you add to the list.

	Wireless MAC Filter
- ☐ Quick Setup ⊟- 🔄 Advanced Setup	MAC Restrict Mode: O Disabled O Allow O Deny
Firewall Port Mapping	MAC Address Remove
Duality of Service Duality of Service Duality Duality	Add Remove
DNS Server	
Basic	
 Security MAC Filter Wireless Bridge 	
Advanced	
😟 💼 Management	

The following screen appears when you want to add a MAC address to the filter. When completed, click on the **Save / Apply** button.

Welcome	Wireless MAC Filter
⊕ Device Info — [] Quick Setup ⊖ Advanced Setup	Enter the MAC address and click "Apply" to add the MAC address to the wireless MAC address filters.
	MAC Address:
⊕- <mark>∩</mark> NAT ⊕-	Save/Apply
DNS Server	
ADSL	
Basic	
MAC Filter	
Advanced Diagnostics	
⊞- <mark>©</mark> Management	

Wireless Bridge

In this next screen, you can select which mode you want the router to be in, either access point or wireless bridge.

Welcome Ourice Info Quick Setup Advanced Setup UNAT NAT Drirewall Port Mapping Quality of Service Routing DNS Server DNS S	Bridge (also known as Wireless Distri enablesaccess point functionality. Wir associate to the AP. SelectDisabled in be granted access. Selecting Enabled inRemote Bridges will be granted acc	bridges. Wait for few seconds to update.
Aosta Alexandree Alexandreee Alexandree Alexandree Alexandree Alexandree Alexandree Alexandree	Bridge Restrict:	Disabled 🔹

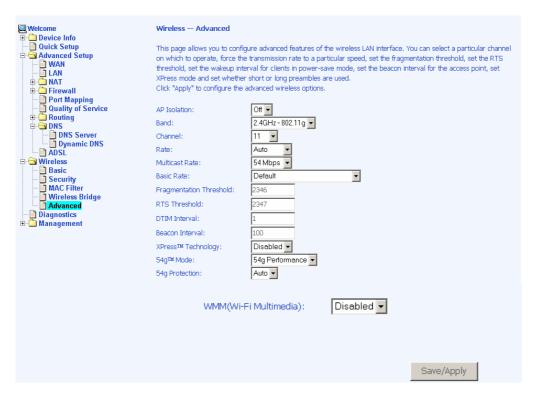
Advanced

Advanced features of the wireless LAN interface can be configured in this section.

Settings can be configured for the following-

- AP Isolation-if you select enable, then each of your wireless clients will not be able to communicate with each other.
- Band-a default setting at 2.4GHz 802.11g
- Channel 802.11b and 802.11g use channels to limit interference from other devices. If you are experiencing interference with another 2.4Ghz device such as a baby monitor, security alarm, or cordless phone, then change the channel on your router.
- **Multicast Rate**-the rate at which a message is sent to a specified group of recipients.
- **Basic Rate** the set of data transfer rates that all the stations will be capable of using to receive frames from a wireless medium.
- Fragmentation Threshold–used to fragment packets which help improve performance in the presence of radio frequency (RF) interference.
- RTS Threshold (Request to Send Threshold) determines the packet size of a transmission through the use of the router to help control traffic flow.
- **DTIM Interval**—sets the Wake-up interval for clients in power-saving mode.
- Beacon Interval—a packet of information that is sent from a connected device to all other devices where it announces its availability and readiness. A beacon interval is a period of time (sent with the beacon) before sending the beacon again. The beacon interval may be adjusted in milliseconds (ms).

- Xpress Technology—a technology that utilizes standards based on framebursting to achieve higher throughput. With Xpress Technology enabled, aggregate throughput (the sum of the individual throughput speeds of each client on the network) can improve by up to 25% in 802.11g only networks and up to 75% in mixed networks comprised of 802.11g and 802.11b equipment.
- **54g Mode** 54g is a Broadcom Wi-Fi technology.
- 54g Protection--the 802.11g standards provide a protection method so 802.11g and 802.11b devices can co-exist in the same network without "speaking" at the same time. Do not disable 54g Protection if there is a possibility that a 802.11b device may need to use your wireless network. In Auto Mode, the wireless device will use RTS/CTS (Request to Send / Clear to Send) to improve 802.11g performance in mixed 802.11g/802.11b networks. Turn protection off to maximize 802.11g throughput under most conditions.
- WMM (Wi-Fi Multimedia)—feature that improves the your experience for audio, video and voice applications over a Wi-Fi network.



Troubleshooting–Diagnostics

The diagnostics screen allows you to run diagnostic tests to check your DSL connection. In addition, you can test the connection to your DSL service provider.

Welcome Device Info Quick Setup Advanced Setup LAN DAT DEVICE Info DAT DEVICE DAT DAT DEVICE DAT DAT DAT DAT DAT DAT DAT DAT		
Port Mapping		
Quality of Service	Test your Ethernet Connection:	PASS Help
E C Routing	Test your Wireless Connection:	PASS Help
DNS DNS Server	Test the connection to your DSL servic	vice provider
- ADSL	Test ADSL Synchronization:	FAIL Help
🖻 🔄 Wireless — 📄 Basic	Test ATM DAM F5 segment ping:	FAIL Help
- Security	Test ATM DAM F5 end-to-end ping:	FAIL Help
MAC Filter Wireless Bridge Advanced Diagnostics Management	1	Test Test With OAM F4

Management

Settings

Backup Settings

University of the second secon	Settings - Backup
Quick Setup	Backup DSL router configurations. You may save your router configurations to a file on your PC.
Wireless Diagnostics	
□ ☐ Management □ ☐ Settings	Backup Settings
Backup Settings	
🔄 🗎 Restore Default	
System Log	
 Internet Time Access Control 	
Update Software	

File Dow	nload			X
?		narm your compute s, or you do not ful		
	File name: File type:	backupsettings.c	onf	
	From:	192.168.1.1		
	Wauld vau like I	o open the file or	save it to your cor	mputer?
	Open	Save	Cancel	More Info
	🔽 Always ask	before opening thi	s type of file	

Restore User Settings

To restore saved settings, select Management→Settings→Restore User Settings.

Select the backup file you want to restore and click on **Update Settings**.

🖳 Welcome	Tools Update Settings
🗄 🗅 Device Info	
— 📄 Quick Setup	Update DSL router settings. You may update your router settings using your saved files.
🖶 🧰 Advanced Setup	
🗄 🗋 Wireless	Settings File Name: Browse
Diagnostics	Drowse
🖻 🔄 Management	
🖻 🔂 Settings	Update Settings
Backup Settings	
Restore Default	
- System Log	
- SNMP	
- 📄 Internet Time	
🖻 🗀 Access Control	
🚽 🛄 Update Software	
🔤 📑 Reboot Router	

The router will restore settings and reboot to activate the restored settings.

Restore Default

Restore Default will erase all current settings and restore the router to factory default settings. To restore the router to factory default settings, select Management \rightarrow Settings \rightarrow Restore Default. Reply OK to the confirmation dialog.

Welcome Concellation Welcome Concellation Device Info Concellation Co	Tools Restore Default Settings Restore DSL router settings to the factory	defaults.
Diagnostics Diagno	I	Restore Default Settings
Microsoft Interne	et Explorer u sure you want to restore factory OK Cancel	X default settings?

The router will restore the default settings and reboot.

System Log

The System Log dialog allows you to view the System Log and configure the System Log options.

To view the System Log click on the **View System Log** button to check the log file.

	System Log				
Quick Setup	The System Log dialog allows	you to view the System Lo	g and configure the System Log options.		
Wireless Diagnostics	Click "View System Log" to view the System Log.				
Anagement	Click "Configure System Log"	to configure the System Log	g options.		
Restore Default		View System Log	Configure System Log		
SNMP		view bystern Log	Configure System Log		
Internet Time Access Control					
Update Software					

Below is a view of the **System Log**.

				System Log
Da	ite/Time	Facility	Severity	Message
Jan	1 00:00:08	syslog	emerg	BCM96345 started: BusyBox v1.00 (2005.05.03-04:41+0000)
Jan	1 00:00:09	kern	crit	kernel: eth0 Link UP.
Jan	1 00:01:04	kern	crit	kernel: eth0 Link DOWN.
				Refresh Close

Configure System Log

If the log is enabled, the system will log selected events: Emergency, Alert, Critical, Error, Warning, Notice, Informational, and Debugging. All events above or equal to the selected log level will be logged and displayed.

Welcome Device Info Ouick Setup Advanced Setup Mireless Diagnostics Backup Settings Backu	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 'Save/Apply' to configure the system log options.			
	Log: Log Level: Display Level: Mode:	C Disable C Enable Debugging Error Local		
		Save/Apply		

If the selected mode is "Remote" or "Both", events will be sent to the specified IP address and UDP port of a remote system log server. If the selected mode is "Local" or "Both", events will be recorded in the local memory. Select the desired values and click on the "**Save/Apply**" button to configure the system log options.

SNMP

Welcome	SNMP - Configurat	in
Welcome Device Info	SNIMP - Configurat	
Quick Setup	Simple Network Man	agement Protocol (SNMP) allows a management application to retrieve statistics and status from
Advanced Setup Grade Setup	the SNMP agent in th	nis device.
Diagnostics		
🖻 🔄 Management	Select the desired va	alues and click "Apply" to configure the SNMP options.
E-C Settings	SNMP Agent 💿 Dis	able C Enable
Restore User Settings	on an angent to bis	
Restore Default	Read Community:	public
System Log	Set Community:	private
- 📑 Internet Time		
Access Control	System Name:	Sysname
Update Software	System Location:	unknown
	System Contact:	unknown
	Trap Manager IP:	0.0.0
		.
		Save/Apply

Internet Times

Welcome Device Info Quick Setup Advanced Setup Diagnostics Management Backup Settings Backup Settings Backup Settings System Log NP Access Control	Time settings This page allows you to the modem's time configuration. Automatically synchronize with Internet time servers
Access Control Jupdate Software Reboot Router	Save/Apply

Access Control

You can enable or disable some services of your router by LAN or WAN. If no WAN connection is defined, only the LAN side can be configured.

Services

₩elcome ⊕- Cale Device Info	Access Control Services		
Quick Setup Advanced Setup Wireless Diagnostics	A Service Control List ("SCL") enables or disable	es service:	s from being used.
⊡🔁 Management □च Settings	[Service	LAN
Backup Settings Restore User Settings		FTP	🔽 Enabled
📄 Restore Default 📄 System Log		нттр	Enabled
SNMP		ICMP	🔽 Enabled
🖻 🔄 Access Control		SNMP	Enabled
IP Addresses		SSH	Enabled
Update Software		TELNET	Enabled
_		TFTP	Enabled
	L	1	Apply

IP Addresses

Web access to the router can be limited when Access Control Mode is enabled. The IP addresses of allowed hosts can be added using Access Control \rightarrow IP Address.

Add the IP address to the IP address list by clicking on the **Add** button, then select "**Enabled**" to enable Access Control Mode.

United States St	Access Control IP Address
Quick Setup Advanced Setup Wireless	The IP Address Access Control mode, if enabled, permits access to local management services from IP adresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP adresses for incoming packets. The services are the system applications listed in the Service Control List
Anagement Anagement Backup Settings Backup Settings Restore User Settings	Access Control Mode
- Restore Default - System Log - SNMP	IP Address Remove
Internet Time Access Control Services IP Addresses	Add
Passwords Dydate Software Reboot Router	

To assign the IP address of the management station that is permitted to access the local management services, enter the IP address in the box and click on the **Save / Apply** button.

, Welcome ⊡	Access Control
Advanced Setup	Enter the IP address of the management station permitted to access the local management services, and click 'Save/Apply.'
Diagnostics Management Settings	IP Address:
Restore Default	Save/Apply
- System Log - SNMP - Internet Time	
Access Control Services IP Addresses	
Passwords Dpdate Software	
🔤 📑 Reboot Router	

Passwords

Access the **Passwords** screen under the **Access Control** section to change a password. Select an account and enter the current password and the new password and then click on the **Save / Apply** button.

Welcome	Access Control Passwords
🖃 📋 Quick Setup 🕀 🛄 Advanced Setup	Access to your DSL router is controlled through three user accounts: admin, support, and user.
Wireless Diagnostics	The user name "admin" has unrestricted access to change and view configuration of your DSL Router.
Management Settings Backup Settings Beckup Settings Restore Default System Log Internet Time Access Control P Addresses	The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.
	The user name "user" can access the DSL Router, view configuration settings and statistics, as well as, update the router's software.
	Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords. Note: Password cannot contain a space.
Passwords	Username:
Dydate Software Reboot Router	Old Password:
	New Password:
	Confirm Password:
	Save/Apply

Update Software

If your ISP releases new software for this router, follow these steps to perform an upgrade.

- 1. Obtain an updated software image file from your ISP.
- 2. Enter the path to the image file location or click on the **Browse** button to locate the image file.
- 3. Click the **Update Software** button once to upload the new image file.

United States St	Tools Update Software
	Step 1: Obtain an updated software image file from your ISP.
Wireless Diagnostics Settings Restore User Settings Restore Default Restore Default	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: Browse
Access Control Services IP Addresses	Update Software
Passwords	
🔤 🛅 Reboot Router	

Reboot Router

Select Management \rightarrow Reboot Router to reboot the router using the web interface. The router will save the current configuration and reboot itself using the new configuration.

	Welcome Cuick Setup Advanced Setup Wireless Diagnostics Settings Backup Settings Restore User Settings Restore Default System Log SNMP Internet Time Access Control DF Addresses Passwords Update Software Reboot Router	Click the button below to save and reboot the router.
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Appendix

FCC Warning Statement

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.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna.

Declaration of Conformity for R&TTE directive 1999/5/EC

Essential requirements - Article 3

Protection requirements for health and safety - Article 3.1a Testing for electric safety according to EN 60950-1 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility - Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1 and EN 301 489-17 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum - Article 3.2

Testing for radio test suites according to EN 300 328 has been conducted. These are considered relevant and sufficient.

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.