

ASUS 4-Port Wireless Ethernet Router

User Manual Version 1.0

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General Information

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

Package Contents

The package includes one of each of the following items-

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



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	ADSL is connected, and there is no ADSL traffic.				
ADSL ACT	No light Quick blinking	ADSL is not connected. There is ADSL traffic.				
	Solid	Router is connected to the LAN.				
LAN1-LAN4	No light	No connection to the LAN. Check if the LAN cable is connected to the router.				
	Blinking	LAN traffic				
! (Alarm)	Solid (red)	ADSL is not connected.				
	No light	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
On / Off	Press to turn the router on and off.
Power	Connects to a 15 VAC AC power adapter.
	Restart-press the button for less than 4
Reset	seconds.
RESEL	Default settings-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.
	<i>NOTE:</i> To be used by maintenance
Console	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



Mounting the Router

The router can be mounted on the wall with the screws provided. Mounting can be done on wall material including concrete, wood, or drywall. Select an appropriate location free from obstructions or any possible interference. Make sure the cables can be easily attached to the router without strain. The illustration below shows how to mount the router horizontally on a wall.



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 2 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

- 1. 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.
- 3. 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.

Enter Nets	work Passwoi	rd	<u>? ×</u>
? >	Please type ye	our user name and password.	
<u>ا</u> لا	Site:	192.168.1.1	
	Realm	ADSL Router	
	User Name		
	Password		
	🔲 Save this	password in your password list	
		OK Car	icel

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–

⊒Welcome ⊐ 🔁 Device Info	Device Info			
Summary WAN	Board ID:	WLAN		
E C Statistics	Software Version:	3-02-0	2-0000.A2pB0)18e.d16f
Route	Bootloader (CFE) Version:	Bootloader (CFE) Version: 1.0.37-0.8		
DHCP	Wireless Driver Version:	Wireless Driver Version: 3.91.41.0		
Advanced Setup	This information reflects the cu	urrent si	tatus of your D)SL connec
Advanced Setup Kireless Diagnostics Management	This information reflects the cu	200000	tatus of your E 800	OSL connec
Wireless Diagnostics	(os):	800	OSL connec
Wireless	Line Rate - Upstream (Kbp	os):	800	OSL connec
Wireless Diagnostics	Line Rate - Upstream (Kbp Line Rate - Downstream (I	os):	800 8000	OSL connec
Wireless Diagnostics	Line Rate - Upstream (Kbp Line Rate - Downstream (I LAN IP Address:	os):	800 8000	DSL connec

WAN

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

x. C	VPI/VCI	Con. 10	Category	Service Name	Interface Name	Protocol	HMP	QoS	State	Status	IP Address	
	14/40	1	LBR	ppp0a_14_40_1	ppp_14_40_1	PPPDA	Deabled	Deabled	Enabled	pep Down		

STATISTICS

LAN Statistics

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

Summary WAN	Interface		Rece	eived		1	ransi	mitte	d
Statistics		Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
	Ethernet	1872	15	0	0	3196	15	0	0
	Wireless	0	0	0	0	0	0	0	0
tup	Reset S	tatistics							
ADSL ite P CP Setup ced Setup iss	Reset S	tatistics							
0	Reset S	tatistics							
	Reset S	tatistics							
	Reset S	tatistics							
	Reset S	tatistics							
e	Reset S	tatistics							

WAN Statistics

Access the WAN statistics from the router by clicking on the "WAN" item under "Statistics". The below screen shows a PPPoA WAN connection example.

Welcome	WAN Statistics										
Summary	Service	VPL/VCI	Protocol	Interface		Recei	/ed	14. 3	fransr	nitted	
I WAN					liyte	sPktsE	rrsDro	ps Byte	s Pkts	ErrsD	rops
Statistics	pppoa 14_40_	1 14/40	PPPoA	ppp_14_40_1	0 1	0	0 0	0	0	0	0
ARP ARP DHCP Ouick Setup Advanced Setup Diagnostics Management											

ATM Statistics

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

Welcome Device Info Summary WAN Statistics LAN	Statistic ATM Int			cs								
	in Octets	Out Octets	In Errors	ln Unknown	In Hec Errors	In Invalid Vpi Vci Errors	In Port Not Enable Errors	In PII Errors	In Idle Cells	In Circuit Type Errors	In DAM RM CRC Errors	In GFC Errors
WAN	0	4560	0	0	0	0	0	0	0	0	8	0
ARP DHCP Quick Setup	0	45	60	0	ts Dut U	05	0	0	0		scands D	
Advanced Setup Wireless				R Timeout	Dversi	zed SDUs S	hort Packet	Errors	ength	Errors		
Diagnostics	14/40	0		0	-	0	0			0		
18 😋 Management	Feed	t Statute	CK.									

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:		G.DMT
WAN	Type:		Fast
Statistics	Line Coding:		Trellis On
- D LAN	Status:		No Defect
- WAN	Link Power State:		10 000000
ATM	CHRISTON STOLES		LO
Route		Downstre	amUpstream
ARP	SNR Margin (dB):	11.9	13.0
DHCP	Attenuation (dB):	49.0	1.0
Quick Setup	Output Power (dBm):	7.8	12.5
Advanced Setup	Attainable Rate (Kbps):	9504	1056
Wireless	Rate (Kbps):	8000	800
Diagnostics Management	K (number of bytes in DMT frame):	251	26
wanagement	R (number of check bytes in RS code w	ord):0	0
	S (RS code word size in DMT frame):	1	1
	D (interleaver depth):	1	1
	Delay (msec):	0	0
	Super Frames:	26171	26169
	Super Frame Errors:	o	348
	RS Words:	D	0
	RS Correctable Errors:	þ	0
Advanced Setup	RS Uncorrectable Errors:	0	N/A
Wireless	HEC Errors:	D	152
Diagnostics Management	OCD Errors:	0	0
management	LCD Errors:	0	0
	Total Cells:	10454350	O
	Data Cells:	O	D
	Bit Errors:	0	0
	Total ES:	1	0
	Total SES:	1	0
	Total UAS:	77	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?ber5tate=0 - Microsoft I 📘	
ADSL BER Test - Start	
The ADSL Bit Error Rate (BER) test determines the quality of the ADSL connection. The test is done by transferring idle cells containing a known pattern and comparing the received data with this known pattern to check for any errors.	
Select the test duration below and click "Start".	
Tested Time (sec): 20 💌	
Start Close	
	-

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

🊰 http://192.168.1.1/berstop.tst - Mi	crosoft Internet Explo 💶 🗙					
ADSL BER Test - Result						
The ADSL BER test completed	d successfully.					
Test Time (sec):	20					
Total Transferred Bits:	0					
Total Error Bits:	268478476					
Error Ratio:	3.74e-01					
Close	•					

Route

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

Welcome Device Info Summary WAN Statistics	Device Info Route Flags: U - up, I - reject, G - gateway, H - host, R - reinstate D - dynamic (redirect), M - modified (redirect).								
	Destination	Gateway	Subnet Mask	Flags	Metric	Service	Interface		
ATM	192.168.1.0	0.0.0.0	255.255.255.0	U	0		br0		
ADSL Route ARP DHCP Quick Setup Advanced Setup Advanced Setup Diagnostics Management									

ARP

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

🖳 Welcome E 🔁 Device Info	Device Info ARP						
- Summary - T WAN	IP Address	Flags	HW Address	Device			
	192.168.1.2	Complete	00:08:02:00:36:00	br0			
- Route							

Quick Setup

This section will explain how to quickly configure the router for the main purpose of connecting to the Internet. If you need to configure any advanced functions, then those can be performed in the advanced section.

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	Quick Settup
Ouick Satup	This Quick Setup will guide you through the steps necessary to configure your DSL Router.
Advanced Setup Wireless Diagnostics	ATM PVC Configuration
Hanagement	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.
	VP1: (0-255) 14
	VCI: [32-65535] 40
	Enable Quality Of Service
	Enabling Qu5 for a PVC improves performance for selected classes of applications. However, since Qu5 also consumes system resources, the number of PVCs will be reduced consequently. Use Advanced Setup/Quality of Service to assign priorities for the applications.
	Brable Quality Of Service
	[Pacint]

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.

11000 march						
Welcome	Connection Type					
Quick Setup Advanced Setup Wireless	Select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use. Note that 802.1q VLNN tagging is only available for PPMoB, MBR and Bridging.					
Diagnostics	O PPP over ATM (PPPDA)					
	PPP over Ethernet (PPPoE)					
	O MAC Encapsulation Routing (MER)					
	O IP over ATM (IFbA)					
	O Bridging					
	Encapsulation Mode					
	LLC/SNAP-BRIDGING 🗶					
	Frable 602.1q					
	Back Mext					

The next screen to appear will depend on the connection type that was selected in the previous screen.

Welcome	PPP Username a	nd Password	
Ouick Setup Advanced Setup Ouick Setup Ouick Ouick Setup Ouick O			user name and password to establish your connection. In the boxes below, ente sur ISP has provided to you.
	PPP Username:		(Do not use "<>%\^[]"+\$,='#8)
	PPP Password		(Do not use *<>%\^{]*\$,='#8.:)
	Authentication Method:	AUTO	
	FPP P extens Keep Alive		
	Use Static IP	Address	
	Use the follow	1000	ay:
			[Dack: [Hest]

The next screen lets you decide if you want to enable NAT, firewall, IGMP multicast, and WAN service.

Welcome	Network Address Translation Settings
Quick Setup Advanced Setup Wireless	Network Address Translation (NAT) allows you to share one Wide Area Network (WMN) IP address for multiple computers on your Local Area Network (LAN).
Diagnostics	Enable NAT
	Enable Firewall
	Enable IGMP Multicast, and WAN Service
	Litable tare multicast, and was before
	Enable IQM* Multicast
	Enable WAN Service 🕑
	Bervice Name: pppos_14_40_1
	Back Next

The following is the Device Setup screen where you enter the IP address / subnet mask as well as enable or disable DHCP server.

Welcome	Device Setup			
Quick Setup Advanced Setup	Configure the DS	iL Router	r IP Address and Subn	et Mask for LAN interface.
🕀 🧰 Wireless	IP Address:	192.1	168.1.1	
 Diagnostics Management 	Subnet Mask: 255		255.255.0	
	 Disable DHC Enable DHC 			
	Start IP Add		192.168.1.2	
	End IP Address:		192.168.1.254	
	Leased Tim	e (hour)	:24	
	Configure the	e second	IP Address and Subne	t Mask for LAN interface
				Back Next

The last screen under the Quick Start section allows you to set up the wireless feature of the router.

Welcome	Wireless Setup
Device Info Quick Setup Advanced Setup Wireless	Enable Wireless 🔽
Diagnostics	Enter the wireless network name (also known as SSID).
E Management	SSID: Broadcom
	Back Next

When you click on Next, the summary screen shows the settings made under WAN setup.

Ovice Info Ouick Satup Advanced Satup Wireless Wireless Minopostics Management	WAN Setup - Summary Make sure that the settings below match the settings provided by your ISP.					
	VPI / VCI:	14/40	-			
	Connection Type:	PPPOE				
STORY OF BOULD	Service Name:	pppoe_14_40_1				
	Service Category:	LIBR				
	IP Address:	Automatically Assigned				
	Service State:	Enabled				
	NAT:	Enabled				
	Firewall:	Disabled				
	IGMP Multicast:	Disabled				
	Quality Of Service:	Disabled				
		on process takes about 1	reboot router. Click "Back" to make any modificatio 1 minute to complete and your DSL Router will rebo Back Sawn/Reboot			

Advanced Setup

This section of the user manual is on the advanced configurations of the router. The topics under Advanced Setup are *WAN, LAN, NAT, firewall, QoS, routing, DNS, ADSL,* and *port mapping.*

WAN

Configure the WAN settings as provided by your ISP.

Welcome Quick Info Quick Setup Advanced Setup		ap id, Edit,		to configure WAN ariges and reboot									
	VP1/VCI	Con. ID	Category	Service	Interface	Protocol	10MP	QaS	vlantd	State	Remove	Edit	Action
Guality of Service	14/40	1	CBR	10000_14_40_1	ppp_14_40_1	PPPUE	Disabled	Disabled	N/A.	Enabled	С	Etht.	Up:
Routing DNS DNS DNS DNS DOSL Port Mapping Wireless Diagnostics Management					Add Ramov								

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 Ouick Setup Advanced Setup Advanced Setup UNAN CLAN CLAN COURT OF Service COUNT OF Ser	Atter PVC Configuration This sphere allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category. Choose an existing interface by velocing the checkbox to enable it. VPI: [0-295] 0 VCI: [32-65555] 15 Service Category: UBR Without PCR
🛞 🋅 Management	Enable Quality Of Service
	Unabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for OBR 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.
	Briekle Quality Of Service
	Back Niert

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
 - o UBR With PCR
 - o CBR
 - Non Realtime VBR
 - o 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**.

Also available is the option to enable 802.1q, a standard to allow multiple bridged networks to transparently share the same physical network link without leakage of information between networks (i.e. "trunking"). Click on the checkbox if you wish to enable this function.

Welcome	Connection Type
Ourice Info Ourick Setup Advanced Setup	Select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use. Note that 802.1q VLAN tagging is only available for PPPoE, MER and Bridging.
D WAN D LAN	C PPP over ATM (PPPDA)
Garage Contract	C PPP over Ethemet (PPPoE)
Routing	MAC Encapsulation Routing (MER)
Port Mapping	C IP over ATM (IPoA)
Wireless Diagnostics Management	@ Bridging
	Encapsulation Mode
	LLC/SNAP-BRIDGING
	Enable 802.1q
	Dack Tear

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

B Welcome	
Contract Contrac	Unselect the check box below to disable this WAN service
Advanced Setup	Enable Bridge Service: 🔽
	Service Name: br_0_35
Firewall Guality of Service	
🖻 🧰 Routing	
ADSL	Back Next
Port Mapping Wireless	
Diagnostics	

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

Wolcome	WAN Setup - Summ Make sure that the se	and a second sec	ch the settings provided by your ISP.
WAN	VPI / VCI:	0/35	
LAN	Connection Type:	Bridge	
Grewall Guality of Service GRouting ONS ADSL	Service Name:	br_0_35	
	Service Category:	RT_VER	
	IP Address:	Not Applicable	
	Service State:	Enabled	
Port Mapping	NAT:	Disabled	
Diagnostics	Firewallt	Deabled	
🗉 🛄 Management	IGMP Multicast:	Not Applicable	
	Quality Of Service:	Disabled	
			k 'Back' to make any modifications. this WAN interface and further configure services over this interface.

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.

			o configure WWW a riges and reboot th									
VPL/VCI	Con. ID	Cotegory	Service	Interface	Protocol	1049	Qo5	Vlasid	State	Remove	Edit	Action
14/40	1	LER	sppce_14_40_1	1.09_14_40_1	PPPIE	Deabled	Deabled	NA	Dubled	Г	Edit	Up.
0/35	1	LER	85,0,35	nai_0_35	Bridge	N/A	Disabled	N/A	Drabled	- C	Edit.	
	14/40	14/40 1	14/40 1 SUR	14/40 1 LER 1000_14_40_1	VEVEN ID Category Service Intentitie 14/40 1 LER IDD00_14_40_1 D00_14_40_1 D00_14_40_1 0/35 1 LER br_0.35 non_0.35	VPU-VI ID Category Service Internate Protocol 14/40 1 LBR ppoor_14_40_1 ppo_14_40_1 ppo_14_40_1 PPHE 0/35 1 LBR tr_0_355 nm_0_355 Bridge	VEVEX ID Category Service Intensity Protocol Intensity 14/40 1 LBR Intensity Intensity Intensity PPHIL PPHIL Daubled 0/35 1 LBR br_0.35 nos_0.35 Bodge N/A	VEVEX ID Category Service Intentice Protocol Intentice Intentice Protocol Intentice Intenite Intentice<	VEVEN ID Contegery Service Interface Protocol ID-P QoS Interface 14/40 1 LER pppoe_14_40_1 ppp_14_40_1 PPPiE Deabled Deabled N/A 0/35 1 LER br_0.35 nm.0.35 Bridge N/A Deabled N/A	VEX.VIX.100 Contengery Service Interface Pressound Low Low Low Service Interface Pressound Low Low Service Interface Pressound Low Low Service Low Low <thlow< th=""> <thlow< th=""> Low</thlow<></thlow<>	VEV.VIX ID Consequery Service Intentitie Product ID Op Main State Permove 14/40 1 LER IDD00e_14_40_1 IDD0_14_40_1 PPFuit Deabled N/A Drabled IV/A IV/A	VEVEX ID Conceptiny Service Intentice Product ID Vevex None Concepting Name State Remove Concepting Conce

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



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.

Device Infe Ouick Setup Ouick Setup WAN WAN WAN DAT Ouality of Service Routing ONS DNS Port Mapping Disgnostics Management		192.168.1.2 192.168.1.254
	Configure the seco	and IP Address and Subnet Mask for LAN interface

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 Sotup Quick Sotup Advanced Setup D VAN D LAN NAT	Virtual Serv internal serv	tual Servers Setta or alows you to dir ver with a private B to a different port r	ect incoming traff Pladdress on the L	AN side. The server or	he internal port is	required only if th	e external port	needs to be
AT Virtual Servers Port Triggering DM2 Hast DM2 Hast ALG Ouality of Service AGuality of Service ADSL Port Mapping Wireless Diagnostics Management	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove

ASUS 4-Port Wireless Ethernet Router User Manual Version 1.0 Document #: BD-AU0014-10 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.

Velcome	NAT — Virtual Servers			
Device Info Quick Setup Advanced Setup WAN	the specified server. NOTE: The normally and will be the same Remaining number of entries	k "Save/Apply" to forward IP packets for the e changed. It is the same as "External I or "External Port End" of either one is o	Port E	
NAT	G Select a Service: Select C	Ine		
Port Triggering	C Custom Server:	ale.		
ALG				
Firewall Guality of Service Routing ADSL Port Mapping Wireless	Server IP Address: 192.168.	<u> </u>		
		Slave/Ap	ole I	
		-10+01 M	Pri Comencescio escala de la comencia	
	External Port StartExternal F	And and a supervised descent statements of the local division of t	al Port StartInternal Port End	
Diagnostics Management		TCP 💉		
		TCP 💽		
		TCP 💽		
		TCP .		
		TCP ·		
		TCP .		
		TCP ·		
		TCP .		
		TOP .		
		TCP 💽		
		TCP -		
		TCP .		
	1			

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 Quick Setup Advanced Setup LAN Well NAT Virtual Servers	Virtual Servintornal Servin	tual Servers Setu ver allows you to de ver with a privato 3 to a different port i	ect incoming traff Pladdress on the	LAN side. T	he internal port is	required only if th	he external port r	neid: to be
Port Triggering DMZ Host TALG	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove
Firewall Ouality of Service	Active Works	3000	3000	TOP	3000	3000	192.160.1.2	Г
# CI DNS	Active Works	5670	5670	TOP	5670	5670	192.168.1.2	r
Port Mapping	Active Worlds	1111	7777	TOP	7777	1111	192.168.1.2	F
Diagnostics	Activa	7000	7000	TOP	7000	7000	192,168,1,2	E

Port Triggering

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

Winkcome Device Info Outek Setup Advanced Setup UkN LAN LAN Virtual Servers Pert Triggering	NAT Port Triggen Some applications real Trigger dynamically op- connection to a remot establish new connect configured.	are that specific enic up the 'Opi le party using th	en Ports' in 1e "Triggeri	the free	wall wh	en an apple fouter allow ide using th	tation o	n the L emote	AN initiates a party from th	T(P/UDP e WAN side
DMZ Host		Application	Îr	iqqer	-		pen	-	Remove	
18 C Firewall		Name	Protocol	Port R	tange	Protocol	Port R	ange		
Ouality of Service Routing			*******	Start	End		Start	End		
DNS ADSL						1				

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.

elcome	NAT Port 1	riggering						
Device Info Ouick Setup VAVanced Setup LAN NAT Port Triggoring DMZ Host	the Router's fi selecting an e Remaining in Application Ne @ Select i	and the second se	or access by the creating your (applica	itions. You ca astom applicat	n configure the pr	ort settings from	n this scree
Outling Action	Tricener Port	StartTrigger Por	t EndTrioner I		Save/Apply	Start Down Port	EndOnen Br	storol
Port Mapping	6699	6699	TCP		6699	6699	TCP	*
Wireless Disgnostics	6699	0699	TCP	*	6697	6697	TCP	*
Management	6699	6699	TCP		4444	4444	TCP	
	6699	0899	TCP		5555	5385	TCP	
			-	-	6666	6566	TCP	
	6609	6699	TCP	*	0000	and the second sec	1.000	
	6699	6699 6699	TCP		7777	7777	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.

Device Info Quick Setup Advanced Setup WAN LAM NAT Virtual Servers Port Triggering	Some applications require that a Trigger dynamically opens up th connection to a remote part up establish new connections back configured.	a 'Open Ports' a sing the 'Trigge	the fire	e LAN s	ien an appl Router allo	cation o	in the l	AN initiates a TCP/I party from the WA
DMZ Hast ALG E-C Firewall	Applica	tion	rigger	-		pen :		Remove
Ouality of Service Reving DNS	Nam	e Protoco	tocol Port Range		Protocol	Port F	Range	
			Start	End	1	Start	End	
ADSL Port Mapping	Napster	TOP	6699	6699	TOP	6699	6699	E I
Wireless	Napsber	TCP	6699	6699	TCP	6697.	6697	E.
Diagnostics Management	Napster	TOP	6699	6699	TOP	4444	4444	Г
	Napster	TCP	6699	6699	TCP	5555	5555	F
	Napster	TOP	6699	6099	TOP	6666	6666	г
	Napuber	TOP	6699	6699	TCP	7777	2772	F
	Napstor	TOP	6699	6699	TOP	8888	8888	Г

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 The Device Info Outek Sotup Advanced Setup WAN Utrual Servers Port Triggering DBZ Nost Ad.G Firewall Quality of Service B Rooting DDS ADSL Port Mapping Composities Management	NAT DM2 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 DM2 host computer. Enter the computer's IP address and click "Apply" to activate the DM2 host. Clear the IP address field and click "Apply" to deactivate the DM2 host. DM2 Host IP Address: [Swer/Apply]

ALG

The application layer is a window between various application processes to allow open information exchange. To use the Application Layer Gateway (ALG), the appropriate Application Layer Gateway definition was selected in the service configuration item.

Velcome	ALG	
Device Info	Select the ALG below.	
Quick Setup	JEIECT THE ALC BEIDW.	
WAN		
	SIP Enabled	
3 🔄 NAT		Court Marsh
Port Triggering		Save/Apply
DMZ Host		
ALG		
Firewall Quality of Service		
E Cuality of Service		
- DADSL		
Port Mapping		
🗋 Wireless		
Diagnostics		

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.



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**.

The second se	Add IP Filter Outgoing	
Welcome	Act in Facer - Outgoing	
Ouick Setup	The screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new filter na	
Advanced Setup	condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take a Save/Apply' to save and activate the filter.	moct. Cick
BUAN		
E HAT	Filter Name:	
😑 🖼 Firewall		
B C IP Filtering	Protocol	
Incoming	Source IP address:	
Parental Control	Source Subnet Mask:	
Quality of Service	Source Port (port or portiport):	
III CI DNS	Destination IP address:	
ADSL Port Mapping	Destination Subnet Mark	
🕷 🛄 Wireless	Destruction Port (port or port:port)	
Diagnostics		

IP Filtering–Incoming

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

Wescome Device Info Ouick Setup Advanced Setup WAN	Incoming IP Filtering Setup By default, all incoming IP traffic from WAN is blocked when the firewal is enabled, but some IP traffic can be ACCEPTED by setting up filters.											
LAN	Name	VPI/VEI	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove				
ANT Firewall Outpoing Outpo					100							

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, and then click on **Save/Apply** to add the setting.

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.

Parental Control Outlity of Service Outlity of Service Outlity of Service Outlity DHS OUtlity Part Mapping Wireless		VPI/VCI	Protocol	Destination MAC	Source MAC	Frame Direction	Resove	
Device Info Outo Setup WAN WAN WAN WAN NAT With Market Device Info WAN WAN Device Info WAN Device Info Up Filtering Device Info MAC Filtering	be FORWARDED	ly offective except the will be ULO	on ATM P see matchin ICKED ence antigure MA	Chan ACs configured in Bis g with any of the sp pt these matching v C filtering rules:	ecited rules in with any of the	the following table. specified rules in th	e following t	nears that all
Welcome	MAC Filtering Se	rtup						

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

Welcome Device Info Quick Setup Advanced Setup	Change MAC Filtering Global Policy WARMING: 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.
D WAN D LAN	Are you sure you want to change MAC Filtering Global Policy from FORWARDED to BLOCKED ?
NAT Firewall Filering Outgoing Incoming Parental Control Quality of Service Routing DNS ADSL Port Mapping Wireless	NO YES
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	
Ouick Setup Advanced Setup WAN	Create a fitter to identify the specified, all of them take of	e MAC layer transes by specifying at least one condition below. If multiple conditions are ffect. Click "Apply" to save and activate the filter.
	Protocol Type:	Z
🖶 🤷 Firewall	Destination MAC Address:	
Cutyoing	Source MAC Address:	
Parental Control	Frame Directions	LANK-WAN
Quality of Service Routing	WAN Interfaces (Configure	d in Bridge mode only)
a CIDNS TADSL	Select Al	
Port Mapping	P br_0_35/nac_0_35	
Diagnostics		Barrel/Apply

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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.

Parental Control

In a home setting, parents can also restrict the day of the week certain computers can access the router. Click on **Add** to set up the restrictions.

Welcome	Time of Day Re	strictions – A	A max	mum	of 16	entrie	s can	be confi	gured			
Advanced Setup		Username	MAC	Mon	Tue	Wed	Thu	Fri Sat	Sun	Start	Stop	Remove
NAT Firewall P Filtering Outgoing Incoming Parental Control Ouality of Service Routing DNS ADSL Port Mapping Wireless						Add	Re	emoye.				

After you click on **Add**, you will see the below screen. You will be able to enter the MAC address of the PC that you wish to place on a time of day restriction. Click on **Save / Apply** to save the settings and to continue.

Welcome	Time of Day Restriction	
Device Info Quick Setup Advanced Setup Device Info WAN DAN NAT	This page adds a time of day restriction to a special LAN device connected to the router. The "Browser's MAC Adde automatically displays the MAC address of the LAN device where the browser is unning. To rostist another LAN dev click the "Other MAC Address" button and enter the HAC address of the other LAN device. To find out the MAC ad a Windews-based PC, open a command prompt window and type "pconfig Jal".	VICE,
Firewall	User Name	
MAC Filtering	Rrowser's MAC Address D0:07:40 FD:10 F9	
Quality of Service	C Other M&C Address (Inconcencersite)	
ADSL	Days of the week MoniTue/Wed/ThuFri Sat Sam Odds to select C C C C C C	
Diagnostics	Start Blocking Time (Inform)	
E 🛄 Management	End Blocking Time (thomm) See (Apply	
IP Filtering Outgoing Incoming MAC Filtering Parental Control Quality of Service Routing DNS ADSL Pert Mapping Wireless	Fromser's MAC Address Octor-40 FD:10 F9 Other MAC Address (xcoccorporacted) Days of the week Monifue Wed[ThuFri Sat Sun Other to select T	

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Quality of Service

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

Wetcome Ovice Info Ovick Setup Ovick Setup Ovick Setup	Quality of Service Setup Choose Add or Remove to configure network traffic classes.												
WAN			MAR	ĸ		1	19	AFFIC CLA	SSIFICA	TION RUL	ES.		
			1112-124					SET	F-1	Contract Sector		SET-2	
WAN LAN H INAT Firewoll MAC Filering Parenta Control Clausity of Service H Routing DNS DNS DOS DOS DOS DOS Dispossios	Name	Name Priority IP precedence of 002.1P Port						802.1P	Remove				
							Add						

On this screen you can view and delete QoS settings.

Welcome Device Info Outick Statp Advanced Setup WAN LAN NAT Filtering Parental Control Quality of Service Routing DNS ADSL Port Mapping Wireless Diagnostics Management	Add Network Traffic Class Rule The screen creates a traffic class rule to classify the upstream traffic, assign queue header TOS Byte. A rule consists of a class name and at least one constitution below classification rule must be satisfied for the rule to take effect. Citic 'Servi/Apply' to Traffic Class Name: Assign Phontty and/or IP Precedence and/or Type Of Service for the class If non-blark value is selected for Mark IP Precedence' and/or Mark IP Type Of Ser P header of the upstream pacient will be overwritten by the selected value Assign ATM Transmit Phonty: Mark IP Type Of Service: Mark 802. Ip if 502. To is erabled on WAN: Specify fraffic Classification Rules Enter the following conditions either for IP level, SET-1, or for IEEE 802.1 SET-1 Physical LAN Port:	All of the specified conditions in this serve and activate the rule.
	Protocol:	
	Source IP Address:	
	Source Subnet Mask:	
	UDP/TCP Source Port (port or part:port):	
	Destination IP Address: Destination Subnet Mask:	
	UDP/TCP Destination Port (port or port:port):	
	SET-2 B02.1p 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.

Routing — Default Gateway
If Brable Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default gateway assignment from one of the PPPoul, PPPoul or MBA(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.
NOTE: If changing the Automatic Assigned Default Gateway from unvelocted to selected, You must reboot the router to get the automatic assigned default gateway.
P Enable Automatic Assigned Default Gateway
Save/Apply .

Static Route

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

Welcome	Routing Static Rout	e (A maximum	32 entries car	be config	ured)	
Quick Setup		Destination	Subnet Mask	Gateway	Wan Interface	Remove
WAN LAN NAT Firewall Parental Control Quality of Service Routing Default Gateway Static Route RIP DNS ADSL Port Mapping Diagnostics Management				Add		

Enter the route information and click on **Save/Apply** to make it active. No reboot is required.
Welcome Device Indo Quick Setup Advanced Setup	Routing — Static Route Add Enter the destination network address, subriet mark, gateway AND/OR available WANI interface then click "Save/Apply" to add the entry to the routing table.
WAN LAN NAT Firewall P Filtering NAC Filtering Parental Control Quality of Service Wating	Destination Network Address: Subnet Mad: Use Gateway IP Address W Use Interface pppoe_14_40_1/ppp_14_40_1
Default Gateway Static Route RIP M DHS Port Mapping Diagnostics Management	Ease/Apply

RIP

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

Welcome	Routing - RIP Configuration To activate RIP for the device, select the Trabled radio button for Global RIP Mode. To configure an individual interface, Clob the device RIP version and operation, followed by ploong a check in the Trabled' checkbox for the interface. Clob the device RIP Mode P Deabled P
DNS	

DNS Server

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

Welcome Device Infe Ouick Setup Advanced Setup LAN CAN CAN CAN CAN CAN CAN CAN C	DNS Server Configuration If Tinable Automatic Assigned DNS' checkbox is selected, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If the checkbox is not selected, enter the primary and optional secondary DNS server IP addresses. Click: Save button to save the new configuration. You must reboot the router to make the new configuration effective.
Duality of Service Routing DNS DNS DNS DNS DNS ADSL Port Mapping Wireless Wireless	Frable Automatic Assigned CP45
# Management	Sam

If the automatic assigned DNS checkbox is not selected, then enter the primary and secondary DNS Server IP addresses as illustrated below.

🖅 Welcome	DNS Server Configuration
Advanced Setup	If 'Broble Automatic Assigned DND' checkbox is selected, this router will accept the first received DND assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If the checkbox is not selected, enter the primary and optional secondary DNS server IP addresses. Click 'Save' button to save the new configuration. You must reboot the router to make the new configuration effective.
D Quality of Service B Quality of Service B Quality of Service D DNS Server	Enable Automatic Assigned DNS
Dynamic DNS ADSL	Primary DNS server:
Port Mapping	Sucondary DNB server
Diagnostics	Save

Dynamic DNS

Dynamic DNS (D-DNS) allows you to have your own permanent domain name linked to your dynamic IP address. To configure a dynamic DNS, click on Add. If you have already created a dynamic DNS that you want to delete, click on Remove.

Welcome * 🙄 Device Info	Dynamic DNS
Quick Setup Advanced Setup WAAN LAN B LAN B MAT	The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains, allowing your DSL router to be more easily accessed from various locations on the Internet. Choose Add or Remove to configure Dynamic DNS.
Quality of Service	Hostname Username Service Interface Remove
ONS DHS Server DHS Server DASL Pret Mapping Olagnostics Management	Add Famove

The below screen allows you to set up the Dynamic DNS provider. Note that you will have to first register at the Dynamic

DNS site that you wish to use. Select from either *DynDNS.org* or *TZO*. Then enter the hostname and the interface that you want to establish the D-DNS address to. Enter the username / password for the D-DNS account that you have signed up for and then click on **Save / Apply**.

elcome] Device Info] Quick Setup	Add dynamic DDNS	
Advanced Setup	This page allows you to	add a Dynamic DNS address from DynDNS.org or TZO.
LAN NAT Firewall	D-DNS provider	DynDNS.org
Quality of Service Routing	Hostname	
DNS DNS Server	Interface	pppoe_14_40_1/ppp_14_40_1
Dynamic DNS ADSL	DynDNS Settings	
- 🖸 Port Mapping	Username	
Wireless Diagnostics Management	Password	
		Save/Apply

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.

Steelcome	DSL Settings		
Device Info Quick Setup	Select the modulation below.		
Advanced Setup	G.Dmt Enabled		
	G.lite Enabled		
AT Firewall	T1.413 Enabled		
Quality of Service	ADSL2 Enabled		
🗄 🗋 DNS	AnnexL Enabled		
ADSL Port Mapping	ADSL2+ Enabled		
- 🗋 Wireless - 📄 Diagnostics - 🗀 Management	AnnexM DISABLED		
	Select the phone line pair below.		
	Inner pair		
	O Outer pair		
	Capability		
	🔽 Bitswap Enable		
	SRA Enable		
		Save/Apply	Advanced Settings

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

🖳 Welcome	DSL Advanced Settings	
🕀 🛄 Device Info		
Quick Setup	Select the test mode below.	
E Setup		
🛅 LAN	Normal	
🗈 🗀 NAT 🕀 🛄 Firewall	C Reverb	
Quality of Service Routing	C Medley	
⊡ DNS ⊡ ADSL	C No retrain	
Port Mapping	OL3	
Wireless		
 Diagnostics Management 		
in in management		Apply Tone Selection

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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 instructed by your ISP.

<u>e</u> 1	htl	tp://	/19	2.16	8.1	.1/a	dsl	cfgto	one	.htm	il - I	Micr	050	ft Ir	itei	net	Exj	olore	r												_	
	ADSL Tone Settings																															
	Upstream Tones																															
	~		2		Б			3			2	_		ր 6					is V		Б	10	БЛ	11		10		10				15
		-	_	-	_	_	_	-	_	1	_	-	_		_			-	_	-	_		_		_		_		_		_	
L R	~	16	M	17	M	18	V	19	V	20	M	21						24 1 To i			M	26	V	27	M	28	M	29	V	30	M	31
F	7	22		22		24	J	35		26	J	27										42	J	42	J	лл	J	45	J	46	5	47
	_							51										. –		. –				. –				. –		40 62		
· ^		· · ·	_		_		_	67	_		_		_	- · ·	_		_		_		_		_		_		_	· ·	_	· · ·	-	
			_		_		_	83	_		_		_		_		_	. –	_		_		_		_		_		_		_	
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																																127
								131																								
								147																								
								179																								
								195																								
			_		_		_	211	_		_		_		_		_		_		_		_		_		_		_		_	
								227																								
	~	240	V	241	M	242		243		244	M	245	M	246	M	247	V	248	M	249	M	250	M	251		252	M	253	M	254	M	255
											-				-					. 1	- 1		i.									
											C	heck	: Al		C	lear	All	1	\pp	ily [CI	ose										

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 e To support this button. The Rev	A maximum 16 entries ca upports multiple port to PVC and feature, you must create map move button will remove the gro buil ports on [244(1-4)]	t bridging groups, ing groups with ap	Each group propriate L	AN and W	AN interfaces using the Add
Couting DNS ADSL	Group Name	Interfaces	IGMP Shooping	Remove	Edit	
Port Mapping Wireless Diagnostics	Default	LAN(1-4), nas_0_35, Wireless	Ň		Edit	
🖷 🛅 Management	Add Remov					

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

Welcome	Port Mapping Configuration	
Outce Info Outce Setup Advanced Setup	To create a new mapping group: 1. Enter the Group name and sele	act extensions from the available interface last and add it to the grouped interface last using
A WAN	the arrow buttons to create the	required mapping of the ports. The group name must be unique.
R C NAT	2. Cick Save/Apply button to make	e the changes effective immediately
- Quality of Service	Note that the selected interfa	ces will be removed from their existing groups and added to the new group.
B DNS ADSL Port Mapping	Group Name:	
🕀 🛄 Wireless	Enable 16MP Snooping	
Diagnostics	Grouped Interfaces	Available Interfaces
		LAN(1-4) nas_0_35 Wireless
		(Saver,Mggbl)

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.

Weicome	Wireless – Basic This page allows you to configure basic features of the weekess LAN interface. You can enable or disable the weekess LAN interface, you can enable or disable the weekess LAN interface. You can enable or disable the weekess land interface. You can enable or disable the weekess LAN interface. You can enable or disable the weekess land interface. You can enable or disable the weekess land interface. You can enable or disable the weekess land interface. You can enable or disable the weekess land interface. You can enable or disable the weekess land interface. You can enable or disabl
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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.

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- 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 Device Info Quick Setup Advanced Setup UAN NAT		gare security features of the wreless LAN interface. You can sets the network authentication option, specify whether a network key is required to authenticate to this wreless network and oth.
NAT Ouality of Service Routing DMS ADSL Pert Mapping Batic Security Mireless Bridge Advanced Station Info Diagnetics Management	Notwork Authoritication:	Open Shored 802.1X WPA WPAPSK WPA2 WPA2-PSK Mozed WPA2/WPA Mozed WPA2/WPA-PSK
	WEP Encryption	Disabled 💌
		Save//¢p/y

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.

Welcome	Wireless MAC Filter	
	WHENESS - PARA FREET	
Oevice Info Ouick Setup		
E CAdvanced Setup		MAC Restrict Mode: @ Disabled C Allow C Deny
WAN		
LAN		
D NAT		MAC Address Remove
E Firewall		
Quality of Service		
B- Routing		
E DNS		Add Roman
ADSL		
Port Mapping		
E G Wireless		
Basic		
Security		
- MAC Filter		
Wireless Bridge		
Advanced		
- Station Info		
Diagnostics		
🗷 🧰 Management		

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

Caddress to the wireless MAC address filters.
Save/Apply

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	Wireless - Bridge		
Device Info Outick Setup WAN WAN WAN NAT Firewall Outick Service Routing DNS DNS	(also known as Wireless Dis functionality, Wireless bridg Select Disabled in Bridge Re Delecting Imabled or Iinable be granted access. Click "Refresh" to update th	Higher wheless bridge features of the wheless LAN interface trouction System) to disable a costs point functionally. Side in functionality will all be available and wheless statutes will strict which disables wheless bridge restriction. Any wheless d(Scon) enables wheless bridge restriction. Only those brid he remote bridges. Wait for few seconds to update, use the wheless bridge cotions.	ting Acess Point enables access point be able to associate to the AP. bridge will be granted access.
Part Mapping Wireless Basic Secontly Mireles Bridge Advanced Station Info Diagnostics Management	Undge Restrict:	Disabled	2

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.



Station Info

The **Station Info** page shows stations that have been authorized access to the router through its wireless function.

This pag	le shows authe	enticated wireless stations and their sta	atus
BSSID	Associated	Authorized	
		0.6-	ala
		Keire	sn
			This page shows authenticated wireless stations and their sta BSSID Associated Authorized Refre

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 Mireless Basic Security		troublesh	on. The individual tests are listed below. If a test displays of this page to make sure the fiel status is consistent. If the coting procedures.	
MAC Filter	Test your Ethernet Connection:	PASS	Holp	
Wireless Bridge	Test your Wireless Connection:	PASS	tests	
Station Info	Test the connection to your DSL servi	the second s	tor	
🗄 🛄 Management	Test ADSL Synchronization:	PASS	Holp	
	Test ATM 0AM F5 segment ping:	FAR	Help	
	Test ATM DAM F5 end-to-end ping:	FAIL	Halo (
	Test the connection to your Internet	service p	rovider	
	Test PPP server connection:	FAIL	Help	
	Test authentication with ISP:	PASS	teeto	
	Test the assigned IP address:	FAIL	Help	
	Ping default gateway:	FAIL	tedo	
	Ping primary Domain Name Server:	PASS	Help	

Management

The Management section gives you access to certain setups for the purpose of maintaining the system, including backing up the configurations, viewing system log, maintaining access control, updating software, etc.

Settings

Backup Settings

To save a copy of the configurations that you have made on your router, click on the **Backup Settings** button.

Welcome Device Info Quick Setup WAN UAN Firewall Quality of Service Routing DNS ADSL	Settings - Backup Backup DSL router configurations. You may save your router configurations to a file on your PC. Backup Settings
Port Mapping Wireless Diagnostics Management Settings	
Backup Settings Restore User Settings Restore Default System Log SNMP	
Access Control Update Software Reboot Router	

The below pop-up screen will appear with a prompt to open or save the file to your computer.

File Dowr	nload 🔀
?	Some files can harm your computer. If the file information below looks suspicious, or you do not fully trust the source, do not open or save this file.
	File name: backupsettings.conf File type:
	From: 192.168.1.1
	Would you like to open the file or save it to your computer?
	Open Save Cancel More Info
	Always ask before opening this type of file

Restore User Settings

To restore saved settings, select Management Settings Restore User Settings. Then select the backup file you want to restore and click on **Update Settings**.

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 Settings Restore Default.

Reply OK to the confirmation dialog.

Welcome	Tools Restore Default Settings
Quick Setup	Restore DSL router settings to the factory defaults.
	Restore Default Settings
ADSL Port Mapping Wireless Diagnostics	
Management Settings Backup Settings Restore User Setting System Log SNMP Internet Time Access Control Wpdate Software Reboot Router	S
Microsoft I	internet Explorer
?	Are you sure you want to restore factory default settings?
	OK Cancel

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.

E Device Info	System Log	
Ouick Setup	The System Log dialog allows you to view the	System Log and configure the System Log options.
BWAN	Click "View System Log" to view the System L	69
Ouality of Service Routing	Click "Configure System Log" to configure the	System Log options.
Constant Constant ADSL Port Mapping	View System	m Log Configure System Log
Wireless Diagnostics		
Management Setings Dackup Settings Restore User Settings Restore Default		
System Log System Log SNMP Internet Time Access Control Update Software Rebort Router		

Below is a view of the System Log.

Date/Time	Facility	Severity	Message
lan 1 00:00:1		emerg	BCM96345 started: BusyBox v1.00 (2005.08.26-12:06+0000)
lan 1 00:00:2		crit	kernel: ADSL G.992 started
lan 1 00:00:2	6 user	crit	kernel: ADSL G.992 channel analysis
an 1 00:00:2	Buser	crit	kernel: ADSL link up, fast, us=800, ds=8000
an 1 00:00:5	4 user	crit	kernel: OAM loopback response not received on VPI/VCI 14/40.
lan 1 00:00:5	5 user	crit	kernel: OAM loopback response not received on VPI/VCI 14/40.
			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.

Bevice Info	System Log Configuration If the log mode is enabled, the system will begin to log all the selected avents. For the Log Level, all events above or
Advanced Setup	equal to the selected level will be logged. For the Deplay 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.
Quality of Service Routing	Select the desired values and click "Save/Apply' to configure the system log options.
ADSL Port Mapping	Log: C Datable @ Enable
Wireless Diagnostics	Log Level: Debugging Dipplay Level: Error
Management Sottings Dackup Settings Restore User Settings Restore Default System Log	Mode: Local I
SNMP Internet Time Control Update Suftware Reboot Router	Saves/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

SNMP is Simple Network Management Protocol that provides a means to monitor status and performance as well as set configuration parameters. It enables a management station to configure, monitor and receive trap messages from network devices.

Welcome	SNMP - Configurat	lon	
III Device Info			
Quick Setup	Simple Network Man	agement Protocol (52	e-P) allows a management application to retrieve statistics and status from
Advanced Setup	the SMAP agent in th	va devica.	
	Select the desired w	www.and.click *Apply	to configure the SMMP options.
Firewall Ouality of Service Routing	SNMP Agent @ Dis	able C Enable	
B DNS ADSL	Pead Community:	public.	
Port Mapping	Set Community:	priva/ta	
Diagnostics	System Name:	Systame	
E G Management	System Location)	unknown	
Backup Settings	System Contact:	urknovm	
Restore Default	Trap Manager IP:	0.0.0.0	
System Log			
Internet Time Access Control			Save/Acchy
Update Software			
Reboot Router			

Internet Times

The Time Settings page allows you to automatically synchronize your time with a timeserver on the Internet.



If you choose to automatically synchronize with Internet time servers, then click on the box and the below fields appear. Select from the list of NTP (Network Time Protocol) time servers. Then select the time zone that you are in and click on **Save / Apply** to save and complete your time settings.

Welcome	Time settings			
Curick Setup Advanced Setup	This page allows you to t	he modem's time confi	guration.	
BLAN	R Automatically synchro	onize with Internet time	e servera	
Can NAT Gamma Service Quality of Service	First NTP time server:	clock.tmt.he.net		16
+ C Routing = C DNS	Second NTP time server:	None		lä
Port Mapping	Time zone offset:	(GMT-12:00) Internet	tional Date Line West	2
E C Wireless Diagnostics E Management			Charles and Charles	
Settings			Gave/Apply	
Restore User Settings				
System Log SNMP				
Access Control				
Reboot Router				

ASUS 4-Port Wireless Ethernet Router

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

Services that can be enabled / disabled on the LAN / WAN are FTP, HTTP, ICMP, SNMP, SSH, Telnet, and TFTP.

es or disables	services from I	being used.
es or disables	services from I	being used.
1		
-		
		12
Service	LAN	WAN
FTP	Frabled	🗆 Enabled
нттр	F Enabled	Enabled
ICMP	🔽 Enabled	🔽 Enabled
SNMP	Enabled	🗖 Enabled
SSH	🔽 Enabled	Enabled
TELNET	Enabled	Enabled
TETP	Enabled	Enabled
	HTTP ICMP SNMP SSH TELNET	HTTP Image: Enabled HTTP Image: Enabled ICMP Image: Enabled SNMP Image: Enabled SSH Image: Enabled TELNET Image: Enabled

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 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.



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 Device Info	Access Control
Quick Setup Advanced Setup	Enter the IP address of the management station permitted to access the local management services, and click "Seve/Apply."
Diagnostics Management	IP Ackness:
System Log SNMP	SamerAppart
Access Control	
Passwords	
Deboot 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 9 Device Infe 9 Oulek Setup 9 Advanced Setup 9 Wircless 10 Diagnostics	Access Control Passwords
	Access to your DSL router is controlled through three user accounts: admin, support, and user.
	The user name "admin" has unrestricted access to change and view configuration of your DSL Router.
Management Sattings System Log	The user name "support" is used to allow an DP technician to access your DSL Pouter for maintenance and to run diagnositics.
SiMP Internet Time Screis Control Ssrvices PAddresses Passwords Update Software Reboot Router	The user name "user" can access the DGL 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 pasewords. Note: Paseword cannot contain a space.
	Username:
	Old Password:
	New Password:
	Confirm Rassword:
	Bave/Apply

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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.

Welcome	Tools — Update Software
🖸 🛄 Device Info	Tools - opene portware
Oulck Setup	Step 1: Obtain an updated coffware image file from your ISP.
- Diagnostics	Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file
Settings	Step 3: Click the "Update Software" button once to upbad the new image file.
SHMP Internet Time	NOTE: The update process takes about 2 minutes to complete, and your DSR Router will reboot.
Access Control	Software File Name. Browse.
Passwords Update Software Reboot Router	Lipidate Bothware
- Ranoor Router	

Reboot Router

Select Management 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 Device Info Quick Setup Advanced Setup Wireless Diagnostics Settings Settings System Log StMAP Internet Time Access Control Update Software Reboot Router	Click the button below to save and reboot the router.