

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.
XDSL Link	Solid No light	ADSL is connected. ADSL is not connected. The ALARM led
	Blinking	The router is connected to ADSL.
	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) 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
On / Off	Press to turn the router on and off.
Power	Connects to a 15 VAC AC power adapter.
	<i>Restart</i> -press the button for less than 4
Docot	seconds.
RESEL	Default settings-press the button for 4
	seconds or longer.
Ι ΑΝΙΊ Ι ΑΝΙΛ	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 Netv	work Passwoi	rd	<u>? ×</u>
<u> (</u>	Please type y	our user name and password.	
₹ U	Site:	192.168.1.1	
	Realm	ADSL Router	
	User Name		
	Password		
	🔲 Save this	, password in your password list	
		OK Can	cel

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–

e Info	Device Info			
immary	Board ID:	WLAN		
B-C Statistics	Software Version:	Software Version: 3-02-02-0C00.A2pB018e		
	Bootloader (CFE) Version:	1.0.37-0.8		
ICP	Wireless Driver Version:	3.91,41.0		
Advanced Setup Wireless Diagnostics	This information reflects the c	irrent st	at is of your F	
nced Setup less nostics naement	This information reflects the cu Line Rate - Upstream (Kbp	urrent st os):	atus of your D 800)SL conne
nced Setup less nostics ligement	This information reflects the c Line Rate - Upstream (Kbp Line Rate - Downstream (I	urrent st os): Kbps):	atus of your D 800 8000	OSL connec
nced Setup less nostics Igement	This information reflects the c Line Rate - Upstream (Kbp Line Rate - Downstream (I LAN IP Address:	urrent st us): Kbps):	atus of your D 800 8000 192.168.1.1	OSL conne
nced Setup less nostics ngement	This information reflects the cu Line Rate - Upstream (Kbp Line Rate - Downstream (I LAN IP Address: Default Gateway:	urrent st Is): Kbps):	atus of your D 800 8000 192,168,1,1	DSL conner
nced Setup less nostics ngement	This information reflects the cu Line Rate - Upstream (Kbp Line Rate - Downstream (I LAN IP Address: Default Gateway: Primary DNS Server:	urrent st IS): KbpS):	atus of your D 800 8000 192.168.1.1 192.168.1.1	DSL conner

WAN

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

VPI/VCI	Con. 10	Category	Service Name	Interface Name	Protocol	HAND	QoS	State	Status	IP Address
14,40	1	UBR	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	Interface		Rece	eived		1	ransi	mitte	d
		Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
LAN	Ethernet	1872	15	0	0	3196	15	0	0
WAN	Wireless	0	0	0	0	0	0	0	0
ARP DHCP Quick Setup Advanced Setup Wireless Basic	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 Device Info Summary WAN	WAN Statistics											
	Service VPL/VEIProtocol			Interface	R	eceived		Tr	ansm	tted		
					Eytes P	ktsErrsi	Drops	lytes	Pkts E	rrs Drops		
Statistics	pppoa_14_40_	1 14/40	PPPoA	ppp_14_40_1	0	0 0	0	0	0	0 0		
Route ARP DHCP Ouick Setup Advanced Setup Wireless Disgnostics												

ATM Statistics

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

Dovice Info Summary WAN Statistics LAN	Statistic ATM Int	erface	M Statisti	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
J WAN	0	4560	0	0	0	0	0	0	0	0	8	0
ARP DHCP Quick Setup	In Octe	45 00 Stati	etets b	0 0	tsDut U	05	0	0	n Disc 0	ards Out D	scands D	
+ 1 Wireless	VPL/VC	ICRC Dr	rors SA	R Timeout	Dversi	zed SDUs S	hort Packet	Errors	ength	Errors		
Diagnostics	14/40	0		0	- Carlos	0	0			0		
🖻 🔛 Management	Final	t Statute	*									

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			C DMT
	Moue;		G.DMI
	Type:		Fast Trallia Ora
	Line County:		Trems On
- D WAN	Status:		No Derect
	Link Power State:		LU
ADSL		Downstro	amUnetroam
	CND Margin (dD):	11.0	12.0
	Attenuation (dB):	40.0	1.0
Ouick Setup	Output Dowor (dPm):	7.0	12.5
Advanced Setup	Attainable Pate (Khns):	0504	1056
🗋 Wireless	Rate (Khrs):	8000	800
Diagnostics	K (number of butes in DMT frame):	251	26
🖳 🗋 Management	R (number of check bytes in BS code w	ard):0	0
	S (RS code word size in DMI frame):	1	
	D (interleaver denth):	1	1
	Delay (msec):	n.	
		M	- 7
	Super Frames:	26171	26169
	Super Frame Errors:	0	348
	RS Words:	0	D
	RS Correctable Errors:	0	0
	RS Uncorrectable Errors:	D	N/A
Advanced Setup			
Uireless Diagnaction	HEC Errors:	D	152
Management	OCD Errors:	0	0
- Management	LCD Errors:	0	0
	Total Cells:	10454350	0
	Data Cells:	0	D
	Bit Errors:	0	þ
	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	
	v

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, ! - 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		brO	
Content of the second sec								

ARP

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

Uvelcome Carl Device Info	Device Info -	- ARP		
- Di Summary	IP Address	Flags	HW Address	Device
	192.168.1.2	Complete	00:08:02:00:36:00	br0
ADSL				

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
Quick Satup	This Quick Setup will guide you through the steps necessary to configure your DSL Router.
Wireless	ATM PVC Configuration
19 Diagnostics	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] 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
	(Penet)

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.

Welcome	Connection Type
Quick Setup	Select the type of network protocol and encapsulation mode over the ATM PVC that your 35P has instructed you to use. Note that 902-29 VLMI tagging is only available for PPPOE, MER and Bridging.
Diagnostics	O PPP over ATM (PPPoA)
	PPP over Ethernet (PPPoE)
	O MAC Encapsulation Routing (NER)
	O IP over ATM (IPoA)
	O Bridging
	Encapsulation Mode
	LLC/SNAP-BRIDGING 🗵
	Enable 602.1g
	Bock Next

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

Welcome	PPP Username ar	nd Password	
Ourick Setup Ourick Setup Ourick Setup Ourick Setup Ourick Setup Orignostics Orignostics Management	fm usually require the user name and	ei that you have a u I password that you	user name and password to establish your connection. In the boxes below, enter ur ISP has provided to you.
	PPP Username:		(Do not use "<>%\^{]"+\$,="#8)
	PPP Password		(Do not use *<>%\^{] +\$,='#8.:)
	Authentication Method:	AUTO	·
	PPP IP extens Keep Alive	ion .	
	Use Static IP	Address	
	Use the follow	ving default gatewa hess: interface:	ay1
			[Back:] [Next]

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	Network Address Translation (MAT) allows you to share one Wilde Area Network (WAN) IP address for multiple computers on your Local Area Network (LAN).
Diagnostics	Enable NAT
	Enable Firewall
	Enable IGMP Multicast, and WAN Service
	Enable IOM Multicast
	Enable WAN Service
	Bervice Name: pppoe_14_40_1
	[Back:] [Hest]

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	Configure the DS	Router IP Address and Subnet Mask for	LAN interface,
Wireless	IP Address:	192.168.1.1	
■ Diagnostics ■ Management	Subnet Mask:	255.255.255.0	
	 Disable DHC Enable DHC 	Server Server	
	Start IP Add	ess: 192.168.1.2	
	End IP Addr	ss: 192.168.1.254	
	Leased Tim	(hour):24	
	Configure the	second IP Address and Subnet 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
Quick Setup	Enable Wireless 🗹
Diagnostics	Enter the wireless network name (also known as SSID).
🗄 🛅 Management	SSID: Broadcom
	Back Next

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

Welcome Device Info Ouick Setup Advanced Setup	WAN Setup - Summary Make sure that the settings below match the settings provided by your ISP.						
B 🖸 Wireless	VPI / VCI:	14/40					
Diagnostics Management	Connection Type:	PPPOE					
al stand determine	Service Name:	pppoe_14_40_1					
	Service Category:	UBR					
	IP Address:	Automatically Assigned					
	Service State:	Enabled					
	NAT:	Enabled	1				
	Firewall:	Disabled					
	IGMP Multicast:	Disabled					
	Quality Of Service:	Disabled					
	Click "Save/Reboot" to NOTE: The configurab	save these settings and on process takes about 1 (reboot router. Click "Back" to make any modifications. I minute to complete and your DSL Router will reboot. Back Saws.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 Ovice Info Quick Setup Advanced Setup	WAN Sets Choose Ad Choose Fer	e) id, Eide sh to i	, or Remove eccly the ch	to configure WAN ariges and reboot	i interfaces. the system.								
	VP1/VCI	Con. ID	Category	Service	Interface	Protocol	16249	QuS	vlantd	State	Remove	Edit	Action
Firewall Quality of Service	14/40	1	LER	pppoe_14_40_1	ppp_14_40_1	PPPUE	Disabled	Deabled	N/A	Enabled	C	Edit.	Up
Routing ONS ADSL Port Mapping Wireless Diagnostics Management					Add Ramon	Femb	1						

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 Quick Setup Advanced Setup Advanced Setup Advanced Setup Advanced Setup Coulity of Service Routing Coulity of Service Routing Diss ADSL Port Mapping Wireless	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: [0-255] 0 VCI: [32-65555] 55 Service Category: UBR Without PCR •
B d Management	Enable Quality Of Service
	Enabling packet level QOS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Roatme 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.
	Brubbe Quality Of Service
	Back Niest

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
Quick 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 PPPeE, MER and Bridging.
	C PPP over ATM (PPPDA)
Ouality of Service	C PPP over Ethemet (PPPoE)
B C Routing B DNS	C Mac Encapeutation Routing (MER)
Port Mapping	C IP over ATM (IPoA)
Diagnostics	@ Bridging
	Encapsulation Mode
	LLC/SNAP-BRIDGING -
	Enable 802.1q
	Dack Peert

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

3 Welcome	
Device Info Quick Setup	Unselect the check box below to disable this WAN service
Advanced Setup	Enable Bridge Service: 🔽
E LAN	Service Name: br 0 35
Firewall Quality of Service	L_ <u></u>
E C Routing	
- ADSL	Back Next
Wireless	
Diagnostics Management	

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

Welcome	WAN Setup - Summ Make sure that the se	ary attings below ma	ch the settings provided by your ISP.
WAN WAN	VPI / VCI:	0/35	
LAN LAN AN Constant of the service Constant of the service Constant of the service ADSL Port Mapping Wireless Diagnostics	Connection Type:	Bridge	
	Service Name:	br_0_35	
	Service Category:	RT_VER	
	IP Address:	Not Applicable	
	Service State:	Enabled	
	NAT:	Detabled	
	Frewallt	Disabled	
Management	IGMP Multicast:	Not Applicable	
	Quality Of Service:	Disabled	
	Cick "Save" to save to NOTE: You need to n	hese settings. Gi eboot to activati	k 'Back' to make any modifications. this WAN interface and further configure services over this interfac 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.

Welcome R Device Info Quick Setup R Advanced Setup	WAN Sets Choose Ad Choose Fin	₽ d, Edit, nh to a	or Remove t pply the char	s configure WANs rges and reboot th	starfaces. Je system								
D LAN	VPL/VCI	Cun. ID	Category	Service	Interface	Protocol	1049	Qo5	Viseld	State	Remove	Edit	Action
E G Firewall Quality of Service	14/40	1	LUR	sppce_14_40_1	100_14_40_1	PPPuE	Deadled	Deabled	N/A	Enabled	Г	Edt	4p
8 C Routing 8 DNS	6/35	1	LER	85,0,35	nas_0_35	Bridge	N/A	Disabled	N/A	Enabled	· E	Edit	
Port Mapping Wireless Diagnostics					Add 1	lemove .	Freib						

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

Welcome Device Infa Ouick Setup WAN LAN CAN Received Setup WAN Received Setup CAN Received Setup Received	DSL Router Reboot The DSL Router has been configured and is rebooting. Gose the DSL Router Configuration window and wait for 2 minutes before reopening your web browser. If necessary, reconfigure your PC's IP address to match your new configuration.

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.

Welcone Ouick Setup Ouick Setup WAN INN NAT Coulty of Service Record Duality of Service Record Port Mapping Wireless Diagnostics Management	Enable UPnP Detable UPnP Serve Enable DHCP Serve Start IP Address: End IP Address: Leased Time (hour	ar 192.169.1.2 192.169.1.254
	Configure the secon	rd 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 Outck Satap Advanced Setap Advanced Setap LAN LAN CAN Outcal Servers Out Triggering Out Triggering Out Advanced Cash of the Servers Out Advanced Servers Out Advanced Servers Outcal	NAT - Virtual Servers Setup Virtual Server alows you to direct incoming traffic from the WAN side (identified by protocol and external port) to the internal server with a private IP address on the LAN side. The internal port is required only if the external port namber used by the server on the LAN side. A maximum of 32 entres can be configured. Add:								
	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.

Nelcome	NAT — Virtual Servers			
Device Info Ouick Setup Advanced Setup WAN	Select the service name, and the specified server. NOTE: 11 normally and will be the sa Remaining number of entri	enter the server IP address a re "Internal Port End" can me as the "Internal Port S es that can be configured:	nd click "Save/Apply" to forward I not be changed. It is the same tart" or "External Port End" if 32	Packets for this serve as "External Port & either one is modifie
B NAT	Server Name:	tûne		
Port Triggering	C Custom Server:	, one		
- DMZ Host - ALG				
Firewall	Server IP Address: [192.10	0.L.		
Routing		53	ap/breds	
ADSL			idinitini	
Port Mapping Wireless	External Port StartExterna	Port End Protocol 1	nternal Port Start Internal Por	t End
Diagnostics Management		102		
		TOP 1		1000
		TCP 1		
		TCP -		
		TCP ·		
		TCP .		
		TCP .		
		TCP ·		
		TOP .		
		TCP •		
		TCP -		_
		TCP .		-

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 Cutck Info Cutck Setup Advanced Setup LAN Virtual Servers	NAT Vin Virtual Serv intornal ser converted	tual Servers Setu rer alows you to de ver with a privato 3 to a different port	p ect incoming traff P address on the i number used by t	Ic from the LAN side. The server of Add	WAN side (identitive internal port is in the LAN side. A	fied by protocol a required only if th maximum of 32 (nd external port) he external port a entries can be co	to the needs to be refigured.
Port Triggering DMZ Host	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove
Ouality of Service Ouality of Service Ous	Active Works	3000	3000	TOP	3000	3000	192.160.1.2	Г
	Active Works	5670	5670	TOP	5670	5670	192.168.1.2	г
Port Mapping	Active Works	1111	7777	TOP	7777	1111	192.168.1.2	E.
Diagnostics	Active	2000	2000	7.00	7000	2000	102 168 1 2	

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.

Wetcome Advanced Setup ALG Firewall DMZ Host ALG Firewall Duality of Service ADSL Port Mapping Mineless Diagnostics Management	NAT — Port Triggering Some applications such as games, when conferencing, numble access applications and others require that specific por the Router's frewall be opened for access by the applications. You can configure the port settings from this scient I selecting an exiting application set reasting your own (Custom Replication) and click "Save/Apply" to add it. Remaining number of entries that can be configured:32									
	Application Na Select - Counterr	me: mapikator: 🌃 appikator:	pster.	Save/Reply	1					
	Trigger Port	StartTrigger Por	EndTrigger Pro	stocol Dpen Port	Start Open Port	EndOpen Protocol				
	6699	0699	TOP	· 0097	6697	TCP .				
	6699	6699	TCP	• 4444	4444	TCP .				
	6699	0899	TCP	- 5555	5585	TCP .				
			-	al laure	Lees.	TCP al				
	6609	6699	TCP	▲ 6666	0000	104				
	6699 6699	6699 6699	TCP	 6666 7777 	7777	TCP ·				
	6699 6699 6699	6693 6897 6897	TCP TCP TCP		7777 8888	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 Ouick Setup Advanced Setup WAN LAN NAT Vintual Servers Pert Triggering DMC Near	NAT — Port Triggering Setup Some applications require that specific Trigger dynamically opens up the Top connection to a remote party using the establish new connections back to the configured.	ports in th in Ports' in re "Triggeri r application	e Route the fire ng Ports n on the Ad	er's firm wall wit d'. The e LON s E LON s	wall be ope ion an appl Router alor ide using th	ned for cation o is the r w 'Ope	access in the L unicte n Ports	by the rem AN initiates party from t . A maximiz
ALG	Application	Trigger			Open			Remove
Quality of Service	Name	Protocol Por		Lange	Protocol	Port Range		0
Rowting			Start	End	1 3	Start	End	
ADSI	Napster	TOP	6699	6699	TOP	6699	6699	с
H Wireless	Nepister	TCP	6699	6699	TCP	6697	6697	E.
a dianagement	Napster	TOP	6699	6699	TOP	4444	4444	Г
	Napoter	тср	6699	6699	TCP	5555	5555	Г
	Napstor	TOP	6699	6699	TOP	6666	6666	г
	Napular	TOP	6699	6699	TCP	7777	2772	F
	Napster	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 Heat IP Address:

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	Poloct the ALC below	
Quick Setup	Select the ALC BEIOW.	
WAN		
	SIP Enabled	
Port Triggering		Save/Apply
- DMZ Host		
ALG		
E Firewall		
Quality 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.

El Welcome	Add IP Filter - Outgoing	
# Device Info		
Ouick Setup	The screen alows you to create a filter rule to identify outgoing IP traffic by specifying a new filter n	ame and at least one
III Ca Advanced Setup	Condition below. All of the specified conditions in this inter rule must be satisfied for the rule to take Steel Apple' to save and activate the filter.	emect. Cick
WAN	chardingfully on have a reaction of a most	
LAN	Filter Name	
E - Firewall		
😑 🔁 IP Filtering	Protocol	
- Outgoing		
Incoming	Source IP address:	
Parental Control	Source Subnet Mask:	
Quality of Service	Source Port (port or portport):	
Routing ONS	Destination IP address:	
ADSL	Destination Subnet Mask	
# - Wireless	Destruction Port (part or port-port)	
Diagnostics		
🔅 🛄 Management		

IP Filtering–Incoming

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

Wetcome Device Info Quick Setup WAN	Incoming IP filtering Setup By default, all incoming IP traffic from WAN is blocked when the firewall is enabled, but some IP traffic can be ACCEPTED by setting up filters.											
LAN	Name	VPI/VEI	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove				
Advanced Setup WAN LAN Firewall G IP Filtering MAC Filtering Parental Control Duality of Service Routing HAC Filtering Parental Control Duality of Service Routing Port Mapping Diagnostics					400							

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.

Control Control Contro Control Control Control Contro		Mb1/MC1	Protocol	Dectination MAC	dd	Frame Direction	Remove		
Wetcome Device Info Quick Setup WAN ULAN NAT Firewall R UP Filtering Untgaing Incoming Incoming	MAC Filtering So MAC Filtering Got MAC Filtering is or bir FORWARDED MAC layer farms Choose Add or Re	MAC Filtering Gobal Policy: FORWARDED MAC Filtering Gobal Policy: MAC Filtering is only effective on ATM FMCs configured in Bridge mode. FORWARDED means that al MAC layer frames w be FORWARDED except those matching with any of the specified rules in the following table. Choose Add or Remove to configure MAC filtering rules:							

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 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.
	Are you sure you want to change MAC Filtering Global Policy from FORWARDED to BLOCKED ?
Firewall Firewall Firewall Firewall Outpoing Outpoing Outpoing Parental Control Ouality of Service Ous Ous Port Mapping Wireless Management	NO

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.

Wetcome	Add MAC Filter	
Ovice Inte Ovice Setup Advanced Setup WAN	Create a filter to identify the specified, all of them take of	e MAC layer frames by specifying at least one condition below. If multiple conditions are effect. Click: "Apply" to save and activate the filter.
LAN	Protocol Type:	Z
🕾 🚘 Firewall	Destination MAC Address:	
Outgoing	Source MAC Address:	
Parental Control	Frame Direction:	LANK->WAN
Quality of Service Routing	WAN Interfaces (Configure	d in Bridge mode only)
H DNS	Select All	
Port Mapping	P br_0_35/hac_0_35	
Diagnostics		Elawa/Apply

ASUS 4-Port Wireless Ethernet Router User Manual 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 Device Info Device Setup	Time of Day	Restrictions - /	A max	mum (of 16	entrie	s can	be confi	gured	5		
Advanced Setup		Username	MAC	Mon	Tue	Wed	Thu	Fri Sat	Sun	Start	Stop	Remove
NAT Simple A stress of the stress o						Add	Re	enove				
Parental Control Ouality of Service Reuting ONS ADSL												

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.

Wolcome	Time of Day Restriction	
Advanced Setup	This page adds a time of day restriction to a special LAN device connected to the router. The "Browser's MAC Addin automatically displays the MAC address of the LAN device where the browser is summing. To restrict another LAN de dick the "Other MAC Address" button and enter the MAC address of the other LAN device. To find out the MAC ad a Windows-based PC, open a command promot window and type "bconfig Jal".	ess* vice, Idress of
Firewall	User Name	
Outgoing Incoming MAC Filtering Parental Control Quality of Service	Browser's MAC Address Octor-H0 FD:10 F9 Other MAC Address (xccorcoroctor.st)	
E DNS	Days of the week MeniTue/Wed/ThuFri Sat Sun	
ADSL Port Mapping		
Wireless	Start Blocking Time (hhumm)	
🗄 🍊 Management	End Blocking Time (hhumm)	
	Sinter (Apply)	

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Quality of Service

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

Weicome Device Info Quick Setup Advanced Setup	Quality of Service Setup Choose Add or Remove to configure network traffic classes.												
WAN WAN			MAR	ĸ		1	11	AFFIC CLA	SSIFICA	TION RULE	5	- 1	
LAN						-		SE	-1			SET-2	
H C NAT	Name	Priority	IP Precedence	Type of Service	WAN 002.1P	Lan Port	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	802.1P	Remove
Parental Control Guality of Service Account of Accoun							Add						

On this screen you can view and delete QoS settings.

Welcome	Add Network Traffic Class Rule	
Outce Inte Outce Inte Outce Setup Advanced Setup WAN	The screen creates a traffic class rule to classify the up header TOS byte, A rule consists of a class name and classification rule must be satisfied for the rule to take	astream traffic, assign queuing priority and optionally overwrite the IP at least one condition below, All of the specified conditions in this efflict. Click 'Servi/Apply' to save and activate the rule.
	Traffic Class Name:	
Firewall Filtering Parental Control Ouality of Service	Assage Priority and/or IP Precedence and/or Typ If non-blank value is selected for Mark IP Precedence IP header of the upstream packet will be overwritten	er Of Service for the class and/or Maik IP Type Of Service', the corresponding TOS byte in the by the selected value
🗉 🛄 Routing	Assign ATM Transmit Priority:	
E ONS	Mark IP Precedence	-
Port Mapping	Mark IP Type Of Service:	
Diagnostics	Mark 802.1p if 802.1g is enabled on WAN:	
iii 🖾 Management	Specify Iraffic Classification Rules	
	Enter the following conditions either for IP level	l, SET-1, or for IEEE 802.1p, SET-2.
	SET-1	10 m m m m
	Physical LAN Port:	
	Protocol:	2
	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	
	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 If Ensible Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default
Advanced Setup	gateway assignment from one of the PPPut, PPPut or MUX/DHCP enabled PVC(s). If the checkbox is not selected, enter the static default gateway AND/OR a WAN interface. Clob: Save/Apply' button to save it.
B C NAT B S Firewall B C IP Filtering	NOTE: If dranging the Automatic Assigned Default Galeway from unselected to selected, You must reboot the router to get the automatic assigned default gateway.
MAC Filtering Parental Control Quality of Sirvice Routing Static Route Static Route RIP ONS	Enable Automatic Assigned Default Gateway
ADSL Pert Mapping Port Mapping Diagnostics Management	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 Wireless Diagnostics				Add		

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

Welcome Device Info Advanced Setup	Routing — Static Route Add Sinter the destination network address, subnet mark, gateway AND/OR available WAN interface then click "Save/Apply" to add the entry to the routing table.
WAN LAN LAN Firewall MAC Filtering MAC Filtering	Destination Network Address Subnet Made
Parental Control Ouality of Service Routing Default Gateway Staffc Route RIP	Use Cateway IP Address pppos_14_40_1/ppp_14_40_1 manual interface
ONS ONS ONS ONS ONS ONS One port Mapping One port Mapping One port Mapping One port Mapping Management	

RIP

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

Webcome Oulck Sotap Advanced Setap Advanced Setap WAN I LAN Firewall Firewall Firewall Firewall Parental Control Ouality of Service Ouality of Service Ou	Routing - RIP Configuration To activate RIP for the device, select the Trabled' radio button for Global RIP Mode. To configure an individual interface, the 'gop' button to save the configuration, sholl be rate to inter RIP based on the Global RIP mode selected. Global RIP Mode P Disabled P Enabled Interface VIPI/VCI Version Operation Finabled bit (LAN) 2 Active Image: Selected Interface VIPI/VCI Version Operation Enabled bit (LAN) 2 Active Image: Selected
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 Info Ouick Setup Advanced Setup UNN UNN UNN NAT IC Device Info	DNS Server Configuration If Triable Automatic Assigned DNS' checkbox is selected, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/CHCP 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.
Outlify of Service Routing DNS Server Dynamic DNS ADSL Port Mapping	Fruible Automatic Assigned CRE
# 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
Quick Setup Advanced Setup WAN LAN NAT	If 'Brubble 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.
Duality of Service	Enable Automatic Assigned DNS
Dynamic DNS	Primary DNS server:
Port Mapping	Sucondary DNS server
19 Olagnostics 19 Management	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.

Wetcome	Dynamic DNS
Quick Setup Advanced Setup Advanced Setup LAN C LAN C NAT C C Entracell	The Dynamic DNS service allows you to aliae 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 DNS Server Dynamic DNS ONS On	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 Satur	Add dynamic DDNS	
Advanced Setup	This page allows you to	add a Dynamic DNS address from DynDNS.org or TZO.
- NAT - Firewall	D-DNS provider	DynDNS.org
Quality of Service Routing	Hostname	
DNS Server	Interface	pppoe_14_40_1/ppp_14_40_1
Dynamic DNS	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.

Welcome	DSL Settings		
Device Info Ouick Setun	Select the modulation below.		
Advanced Setup	🗹 G.Dmt Enabled		
	G.lite Enabled		
	▼ T1.413 Enabled		
Quality of Service	ADSL2 Enabled		
	🗷 AnnexL Enabled		
Port Mapping	ADSL2+ Enabled		
Diagnostics	AnnexM DISABLED		
and an and a second second	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.	
Advanced Setup		
- 🗋 LAN	Normal	
🕀 🛄 NAT 🕀 🛄 Firewall	C Reverb	
□ Quality of Service □ Routing	C Medley	
⊡ DNS □ ADSL	C No retrain	
Port Mapping	O L3	
Diagnostics		
⊞- 🛄 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.

🚈 http://192.168.1.1/adslcfgtone.htr	nl - Microsoft II	nternet Explor	rer	_ 🗆 🗙
	AD	SL Tone Sett	tings	
		nstream Ton	nes	
				14 🔽 15
	№ 21 № 22	I 23 I 24		30 🔽 31
	Do	wnstream To	ones	
▼ 32 ▼ 33 ▼ 34 ▼ 35 ▼ 36	🗹 37 🔽 38	⊠ 39 ⊠ 40) 🗹 41 🔽 42 🔽 43 🔽 44 🔽 45 🗹	46 🔽 47
▼ 48 ▼ 49 ▼ 50 ▼ 51 ▼ 52	🗹 53 🔽 54	🗹 55 🗹 56	5 🗹 57 🗹 58 🗹 59 🔽 60 🗹 61 🗹	62 🔽 63
✓ 64 ✓ 65 ✓ 66 ✓ 67 ✓ 68	🗹 69 🔽 70	71 72	2 🗹 73 🔽 74 🔽 75 🔽 76 🖾 77 🗹	78 🔽 79
▼80 ▼81 ▼82 ▼83 ▼84	🗹 85 🔽 86	🗹 87 🔽 88	3 🗖 89 🗖 90 🗖 91 🗖 92 🗖 93 🗖	94 🗹 95
☑ 96 ☑ 97 ☑ 98 ☑ 99 ☑ 100	0 🗹 101 🗹 102	2 🗹 103 🗹 10	04 🗹 105 🗹 106 🗹 107 🗹 108 🗹 109 🗹	110 🗹 111
☑ 112 ☑ 113 ☑ 114 ☑ 115 ☑ 116	5 🗹 117 🗹 118	3 🗹 119 🗹 12	20 🗹 121 🗹 122 🗹 123 🗹 124 🗹 125 🗹	126 🗹 127
☑ 128 ☑ 129 ☑ 130 ☑ 131 ☑ 132	2 🗹 133 🗹 134	4 🗹 135 🗹 13	86 🗹 137 🗹 138 🗹 139 🗹 140 🗹 141 🗹	142 🗹 143
🔽 144 🗹 145 🗹 146 🗹 147 🔽 148	3 🗹 149 🗹 150) 🗹 151 🗹 15	i2 🗹 153 🗹 154 🗹 155 🗹 156 🗹 157 🗹	158 🗹 159
🔽 160 🗹 161 🗹 162 🔽 163 🔽 164	4 🗹 165 🗹 166	5 🗹 167 🗹 168	i8 🗹 169 🗹 170 🗹 171 🗹 172 🗹 173 🗹	174 🗹 175
🗹 176 🗹 177 🔽 178 🗹 179 🔽 180) 🗹 181 🗹 182	2 🗹 183 🗹 18	34 🗹 185 🗹 186 🗹 187 🗹 188 🗹 189 🗹	190 🗹 191
🔽 192 🔽 193 🗹 194 🔽 195 🔽 196	5 🗹 197 🗹 198	3 🗹 199 🗹 20	0 🗹 201 🗹 202 🗹 203 🗹 204 🗹 205 🗹	206 🗹 207
🔽 208 🗹 209 🗹 210 🔽 211 🔽 212	2 🗹 213 🗹 214	4 🗹 215 🗹 210	6 🗹 217 🗹 218 🗹 219 🗹 220 🗹 221 🗹	222 🗹 223
🗹 224 🗹 225 🗹 226 🗹 227 🔽 228	3 🗹 229 🗹 230) 🗹 231 🗹 23	32 🗹 233 🗹 234 🗹 235 🗹 236 🗹 237 🗹	238 🗹 239
🔽 240 🔽 241 🗹 242 🔽 243 🔽 244	4 🗹 245 🗹 246	5 🗹 247 🗹 24	18 🗹 249 🗹 250 🗹 251 🗹 252 🗹 253 🗹	254 🗹 255
	Check All	Clear All	Apply Close	

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 Device Infe Quick Setup Quick Setup WAN LAN NAT Firewall Quality of Service Device	Port Mapping Port Mapping so To support this button. The Ren I Enable vet	A maximum 16 entries ca apports multiple port to PVC and feature, you must create mapp move builtan will remove the gro built ports on [L4N(1-4)]	in be configured I bridging groups ing groups with ap suping and add the	Each group propriate L Lungroupe	s will perfo AN and W d interface	rm as an indepe AN interfaces u s to the Default	endent network sing the Add group
Counting Counting	Group Name	Interfaces	IGMP Shooping	Remove	Edit		
Port Mapping	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 Device Info Oulck Setup Advanced Setup	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				
- D WAN	the arrow buttons to create the required mapping of the ports. The group name must be unique.				
NAT IS EXPRIMENT	2. Ock Save/Apply button to make the changes effective immediately				
Quality of Service	Note that the selected interfaces will be removed from their existing groups and added to the new group.				
	Group Name:				
Port Mapping Wireless Diagonatics	Enable IGMP Shooping				
🗉 🛅 Management	Grouped Interfaces	Available Interfaces			
		LAN(T-f) nes_0_35 Wireless			
	· · · · · ·	L			
		Save, Mpphy			

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 Duvice Infe Ouick Setup Advanced Setup Advanced Setup Advanced Setup Advanced Setup Advanced Setup Ouality of Service Routing DNS ADSL DNS ADSL Port Mapping Commented Station Infe Diagnostics Commented Station Infe Diagnostics Commented	Wateres - East: This page allows you to configure basic features of the weeless LAN interface. You can enable or diable the weeless LAN interface, hide known as SSID) and restrict the channel set basic metwork from active scars, set the weeless network name (also known as SSID) and restrict the channel set basic weeless option: Image: Set basic Frade weeless Image: Set basic<
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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 LAN	Wireless – Security The page allows you to cont method, selecting data encr specify the encryption strens Click "Apply" to comfigure the	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.
Advanced Station Info Station Info	Notwork Authoritication:	Open Shered 802.1X WPA WPAPSK WPA2 WPA2-PSK WPA2-PSK Moud WPA2/WPA Moud WPA2/WPA
	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.

Malagena	Windows - MAC Elline	
Welcome	WEIGESS - PAM, FRUIT	
Device into		
Culick Setup		MAC Restrict Mode: @ Disabled C Allow C Deny
Advanced Setup		
DIAN		
E NAT		MAC Address Remove
R C Firmeall		
D Quality of Senden		
T D Routing		Internet internet
T-CLONS		ACICI - REPERCIVE
TADSI		
Port Mapping		
E - 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.

Welcome Oulck Setup Advanced Setup WAN	Wireless MAC Filter Enter the MAC address and click "Apply" to add the MAC address to the wireless MAC address filters MAC Address:
	Save/Apply
Wireless Basic Security MAC Filter Wireless Bridge Advanced Station Info	
Diagnostics	

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 Quick Setup WAN WAN LAN NAT Ouslity of Service Routing DNS DNS	This page allows you' to cor (also innown as Winkless Dis Select Disabled in Bridge Re Delecting Instead or Disable De granted access. Clob. "Refresh" to update th Clob. "Save/Apply" to config AP Moder:	Hquie wheles bridge features of the wheles LAN interface troution System) to disable access point. functionality, Salide e functionality, will still be available and wheles statutors with strict which disables wheless bridge restriction. Any wheless d(Scan) enables wheless bridge restriction. Only these bridge re-remote bridges. Wait for few seconds to update. ure the wheless bridge options.	. You can select Wrieless Bridge ting Actes Point enables access point e sele to associate to the AP. bridge will be granted access set selected in Remote Bridges will
Port Mapping Wireless Basic Security MAC Filter Wireless Bridge Advanced Station Info Disgnostics B 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.

Welcome	Wireles	s Authent	icated Stations	
Quick Setup Advanced Setup	This pag	je shows authe	enticated wireless stations and their	status
	BSSID	Associated	Authorized	
NA1 Firewall Quality of Service Couting DNS ADSL Port Mapping			Ret	fresh
→ Wireless → Basic → Security → MAC Filter → Wireless Bridge → Advanced				
Station Info Diagnostics Management				

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.

Wilcom Device Info Oulck Setup Advanced Setup Wireless Dasic	pppoe_14_40_1 biagnostics Your modern is capable of testing your DSL status, click "Herun Diagnostic Tests" at the continues to fail, click "Help" and follow the Test the connection to your local netv	connectio bottom o troublesh work	m. The individual tests are listed below. If a test dep if the page to make sure the fail status is consistent, coting procedures.	lays a fa If the ter
MAC Filter	Test your Ethernet Connection:	PASS	Holo	
Wireless Bridge Advanced	Test your Wireless Connection:	PASS	testp:	
Station Info	Test the connection to your DSL servi	ce provid	ler.	
Management	Test ADSL Synchronization:	PASS	Help	
	Test ATM 0AM F5 segment ping:	FAIL	tielp	
	Test ATM DAM FS end-to-end ping:	FAIL	Halp	
	Test the connection to your Internet	service p	rovider	
	Test PPP server connection:	FAB.	Help	
	Test authentication with ISP:	PASS	teelp	
	Test the assigned IP address:	FAIL	Help	
	Ping default gateway:	FAIL	thelp	
	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 Oulck Setup Advanced Setup WAN UAN UAN CLAN COUNTRY OF Service COUNTRY CO	Gettings - Backup Backup DSL router configurations. You may save your router configurations to a file on your PC. Backup Settings
Port Mapping Wireless Diagnostics Management Backup Settings Restore User Settings Restore Default	
System Log SNMP Internet Time 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 Down	load 🛛
?	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 Restore Default System Log SNMP Internet Time Access Control Update Software Reboot Router	S
Microsoft I	nternet 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.

Welcome	System Log		
Ouick Setup	The System Log dialog allows you to vi	ew the System Log	g and configure the System Log options.
BWAN	Click "View System Log" to view the Sy	stem Log.	
E I NAT E Firewall Quality of Service	Click "Configure System Log" to config.	ine the System Log	g options.
	View	System Log	Configure System Log
Great Mapping Wireless Diagnostics			
Management Backup Settings Restore Usor Settings Restore Default			
System Log System Log SNMP Internet Time Access Control Update Software Reboot Router			

Below is a view of the System Log.

Date/Time	Facility	Severity	Message
an 1 00:00:1	5 syslog	emerg	BCM96345 started: BusyBox v1.00 (2005.08.26-12:06+0000)
an 1 00:00:2	1 user	crit	kernel: ADSL G.992 started
an 1 00:00:2	6 user	crit	kernel: ADSL G.992 channel analysis
an 1 00:00:2	8 user	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.
an 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.

Wolcome	System Log Configuration
Quick Setup Advanced Setup LAN LAN	If the log mode is enabled, the system will begin to log all the selected avents. 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 node is "Remote' or "Both," events will be sent to the specified IP address and UCP port of the remote systog server. If the selected mode is "Local" or "Both," events will be recorded in the local memory.
Quality of Service	Select the desired values and click "Save/Apply' to configure the system log options.
ADSL	Log: C Daubla @ Erubla
B Wireless	Log Level: Debugging
B A Management	Deplay Level: Error
Sottings Backup Settings Restore User Settings Restore Default System Log	inter line T
SMAP Reboot Router	Saim/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.

[1] Malesana	CAMD - Courlins and	low	
# CI Device Info	Siene - Considerat	icity .	
Quick Setup	Simple Network Man the SMMP agent in th	agement Protocol (S vis device.	MMP) allows a management application to retrieve statistics and status from
	Select the desired w	wes and click *Apply	* to configure the SNMP options.
Ouality of Service Routing	SMMP Agent @ Dis	able C Enable	
	Read Community:	public	
Port Mapping	Set Community:	privilite -	
Diagnostics	System Name:	Systiame	
H Management	System Location)	uniongwin	
Backup Settings	System Contact:	unknown	
Restore Default	Trap Manager IP:	0.0.0.0	
System Log			Sautheria
Internet Time Access Control Update Software			and the particular of the part
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			
Quick Setup	This page allows you to t	he modem's time confi	guration.	
B WAN LAN	R Automatically synchro	onize with Internet time	e servera	
In NAT Firewall Duality of Service	First NTP time server:	clock.tmt.he.net		10
Routing	Second NTP time server:	None		lä
Port Mapping	Time zone offset:	(GMT-12:00) Internet	tional Date Line West	
Diagnostics			Charles and Charles	
Settings			Save/Apply	
Restore User Settings Restore Default				
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.

Q Welcome	Access Control Services			
Device Info Quick Setup Advanced Setup Wireless Diagnostics	A Service Control List ("SCL") enat	bles or disables	services from I	being used.
H → Management		Service	LAN	WAN
- System Log - SNMP		FTP	Frabled	🗖 Enabled
Access Control		нттр	F Enabled	Enabled
		ICMP	🕅 Enabled	🔽 Enabled
Passwords		SNMP	Enabled	🗖 Enabled
Reboot Router		SSH	Enabled	Enabled
		TELNET	Enabled	Enabled
		TETP	Enabled	🗖 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	Access Control
Quick Setup	Enter the IP address of the management station permitted to access the local management services, and click "Save/Apply."
Diagnostics Management	IP Address:
System Log SNMP	Samericksparty
Access Control	
Passwords	
Reboet 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	Access to your DSL router is controlled through three user accounts: admin, support, and user.
B Q Wireless Diagnostics	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 Sarvices Padveses Paswords Update Software Rebost 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:
	E Sub-Revenue

ASUS 4-Port Wireless Ethernet Router User Manual

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.

Malmente	Tools - Undata Software
Device Info	
Ouick Setup Advanced Setup	Step 1: Obtain an updated coftware 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 fil
Settings	Step 3: Click the "Update Software" button once to upload the new image file.
StatP Internet Time	NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot.
Access Control	Software File Name. Browse.
Passwords Update Software	3.bidate Todtwore

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 Duick Setup Advanced Setup Diagnostics Management Settings System Log System Log System Log System Log System Cog System Co	Click the button below to save and reboot the router.