

# Zhone 6218-i3 4-Port Wi-Fi Ethernet Router

# User Manual Version 1.0

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# **General Information**

The 4-Port Wireless Ethernet Router features 4 LAN ports for added convenience and accessibility.

## Package Contents

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

- 4-Port Wireless Ethernet Router
- 12V 1.5A power adapter
- RJ-11 telephone cable
- RJ-45 Ethernet cable
- User Manual

#### Important Safety Instructions

- 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
	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.
Status	Solid	Connection established. The router is able to communicate with your ISP via ADSL.
	Flashing	The router is trying to connect to your ISP.
	Solid	ADSL is connected.
Link	No light	ADSL is not connected. The ALARM led will be red.
	Blinking	The router is connected to ADSL.
	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
	Solid	Wireless is enabled.
AP	No light	Wireless is disabled.
	Blinking	There is wireless traffic.

# Back Panel View



**NOTE:** The below port descriptions are listed as they appear on the back panel from left to right.

Port	Description
Power	Connects to a 15VAC 1A power adapter.
Reset / Default	<i>Restart</i> —press the button for less than 4 seconds. <i>Default settings</i> —press the button for 4 seconds or longer.
LAN1-LAN4	RJ-45 connects the unit to an Ethernet device such as a PC or a switch.
Phone	RJ-11 cable connects to telephone (no external splitter necessary; unit has internal splitter).
Line	RJ-11 cable connects between telephone and the LINE port using a splitter (not included) if needed.

# Installing the Router

### Connect the ADSL Line and Telephone

• Connect one end of an RJ-11 cable from your ADSL connection and the other end to the LINE port of the router using a splitter if needed.

NOTE: See connections on the installation diagram.

#### Connect the PC to the Router

- To use the Ethernet connection, connect the Ethernet cable from the computer directly to the router.
- Connect one end of the Ethernet cable to one of the 4 ports labeled LAN (LAN1 LAN4) on the back of the router and attach the other end to the Ethernet port of your computer.

#### **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 or the USB 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 Dial-up 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**.
- 10. 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**.

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#### 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**.
- 4. 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**.

# Log in to the Router

This section will explain 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 press Enter.

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

Enter Netw	vork Passwor	d	<u>?</u> ×
<b>?</b> >	Please type yo	ur user name and password.	
খ	Site:	192.168.1.1	
	Realm	ADSL Router	
	User Name		
	Password		
	🔲 Save this p	assword 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 information of the router by clicking on "Summary" under "Device Info". It shows details of the router such as the version of the software, bootloader, LAN IP address, etc. It also displays the current status of your DSL connection as shown below—

PARADYNE	- @ - -					
ADSL CPL						
United Info	Device Info				~	
Quick Setup     Advanced Setup     Wireless	Paradyne Firmware:	03.00.3	34		1	
	Product Name:	6218-I	6218-13-xxx			
Diagnostics     Management	Serial Number:	N/A			-	
	Hardware Version:	/ersion: N/A				
	Board ID:	F				
	Software Version:	3-06-0	6-2900.A2pB0	22g2.d19b		
	Bootloader (CFE) Version:	1.0.37	-6.5			
	Wireless Driver Version: 3.131.35.4.cpe2.0					
	MAC Address:	00:E0:	18:00:00:01			
	This information reflects the c	urrent s	tatus of your [	OSL connec	tion.	
	Line Rate - Upstream (Kbp	os):				
	Line Rate - Downstream (	Kbps):				
	LAN IP Address:		192.168.1.1			
	Default Gateway:					
	Primary DNS Server:		192.168.1.1			
	Secondary DNS Server:		192.168.1.1			

### WAN

Access the WAN status report from the router by clicking on "WAN" under "Device Info". Below is how the screen will look once a WAN connection is set up.

PARADY	NE° CPE										
Welcome	WAN Info										
Summary     WAN     Statistics		Con. ID	Category	Service Name	Interface Name	Protocol	IGMP	QoS	State	Status	IP Address
Route ARP	0/35	1	UBR	br_0_35	nas_0_35	Bridge	N/A	Disabled	Enabled	ADSL Link Down	
ARP     DHCP     Ouick Setup     Advanced Setup     Wireless     Diagnostics     Management										Down	

# Statistics

### LAN Statistics

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

Welcome  Comparison  Welcome  Summary  Summary  Summary  Statistics	Statistics -								
	Interface	Received				Putes Plats Fire Dues			1
		Bytes	PKts	Errs	Drops	Bytes	PKts	Errs	Drops
WAN	Ethernet	125677	1026	0	0	324581	1026	0	0
🛅 ATM	Wireless	0	0	0	0	5694	42	0	0
ATM ADSL Route	Ethernet Wireless	125677 0	1026 0	0	0	324581 5694	1026 42	0	

### WAN Statistics

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



## **ATM Statistics**

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

PARADY												
Welcome	Statistic	orface (	M									
WAN Statistics LAN WAN ATM ADSL Route AAP DHCP Quick Setup Advanced Setup Mineless Diagnostics Management	In Octets	Out Octets	In Errors	In Unknown	In Hec Errors	In Invalid Vpi Vci Errors	In Port Not Enable Errors	In PTI Errors	In Idle Cells	In Circuit Type Errors	In OAM RM CRC Errors	In GFC Errors
	0	0	0	0	0	0	0	0	0	0	0	0
	AAL5 In In Octe	terface tsOut O C	Statist ctets In	ics I Ucast Pki O	tsOut Vo	ast Pkts In O	0 Errors Out	Errors I	n Disca O	ards Out Di	scards	
	AAL5 VI	C Stati	stics	P Timeout	Duarei		port Backet	Frorel	onath	Frore		
	0/25	0	U SUA	n	sover siz	n	nor t Packet	LITUISI	.engu	1		

## **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.

ADSL	GPE							
Welcome	Statistics ADSL							
Device Info	Mada		ki (A					
	Moue:							
E G Statistics	Line Coding:	N/A						
	Chatue:	Status						
- 🗋 WAN	Link Dowor State:							
ATM	Link Power state.							
		Downstre	amUnstream					
ARP	SNR Margin (dB):	N/A	N/A					
DHCP	Attenuation (dB):	N/A	N/A					
Quick Setup	Output Power (dBm):	N/A	N/A					
Advanced Setup	Attainable Rate (Kbps):	N/A	N/A					
₽ <mark></mark> Wireless Diagnostics ₽ Management	Rate (Kbps):		4					
	K (number of bytes in DMT frame):	N/A	N/A					
	R (number of check bytes in RS code wo	rd):N/A	N/A					
	S (RS code word size in DMT frame):	N/A	N/A					
	D (interleaver depth):	N/A	N/A					
	Delay (msec):	N/A	N/A					
	Super Frames:	N/A	N/A					
	Super Frame Errors:	N/A	N/A					
	RS Words:	N/A	N/A					
	RS Correctable Errors:	N/A	N/A					
	RS Uncorrectable Errors:	N/A	N/A					
	HEC Errors:	N/A	N/A					
	OCD Errors:	N/A	N/A					
	LCD Errors:	N/A	N/A					
	Total Cells:	N/A	N/A					
	Data Cells:	N/A	N/A					
	Bit Errors:	N/A	N/A					
	Total ES:	N/A	N/A					
	Total SES:	N/A	N/A					
	Total UAS:	N/A	N/A					

#### **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 🕻	<u> </u>
ADSL BER Test - Start	<b></b>
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 and the error bits and ratio.

http://192.168.1.1/berstop.tst - Mice	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".



#### ARP

Access the ARP status report from the router by clicking on the "ARP" item under "Device Info". ARP (Address Resolution Protocol) maps the IP address to the physical address, labeled *HW Address* (the MAC address) and helps to identify computers on the LAN.



### DHCP

Access the DHCP Leases screen by clicking "DHCP" under "Statistics". This shows the computers, identified by the hostname and MAC address that have acquired IP addresses by the DHCP server with the time that the lease for the IP address is up.



# Quick Setup

This section will explain how to quickly configure the router for the sole purpose of connecting to the Internet.

# 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.

PARADY	NE°					
ADSL	GPE					
Welcome	Quick Setup					
Device Info     Quick Setup     Advanced Setup	This Quick Setup will guide you through the steps necessary to configure your DSL Router.					
	ATM PVC Configuration					
🗄 🧰 Management	Select the check box below to enable DSL Auto-connect process.					
	DSL Auto-connect					
	Nevt					
	INC.					

If you uncheck the *DSL Auto-connect* box, the resulting screen is seen below. Enter the VPI / VCI as indicated by your ISP and decide whether or not to enable quality of service and click on **Next**.

PARADY	NE
ADSL C	
Welcome  Device Info  Advanced Setup  Diagnostics  Management	Quick Setup         This Quick Setup will guide you through the steps necessary to configure your DSL Router.         ATM PVC Configuration         Select the check box below to enable DSL Auto-connect process.         DSL Auto-connect         The Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) are needed for setting up the ATM PVC. Do not change VPI and VCI numbers unless your ISP instructs you otherwise.         VPI: [0-255]       3         VCI: [32-65535]       38         Enable Quality Of Service       Enabling QoS for a PVC improves performance for selected classes of applications. However, since QoS also consumes system resources, the number of PVCs will be reduced consequently. Use Advanced Setup/Quality of Service to assign priorities for the applications.
	Next

Following is the Connection Type screen where you select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use. The following is a PPPoA example. Click on **Next** to continue.

PARADY	NE
ADSL	GPE
Welcome Device Info Duick Setup Duick Setup Diagnostics Diagnostics Diagnostics	Connection Type 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. PPP over ATM (PPPA) PPP over Ethernet (PPPOE) MAC Encapsulation Routing (MER) Prover ATM (IPoA) Encapsulation Mode VC/MUX
	Back Next

Enter the PPP username and password as given by your ISP. Then decide if you will be using any features such as *dial on demand*, *PPP IP extension*, *keep alive* and then click on **Next**.

PARADY	
ADOL	UPE
Welcome Device Info Ouick Setup Advanced Setup Wieless Diagnostics	PPP Username and Password PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.
⊕ 🖸 Management	PPP Username:         (Do not use "<>%\^[]`+\$,='#8.:)           PPP Password:         (Do not use "<>%\^[]`+\$,='#8.:)           Authentication         AUTO           Method:         Image: Automatication in the second seco
	Dial on demand (with idle timeout timer)
	PPP IP extension
	C Keep Alive
	Use Static IP Address
	Use the following default gateway: Use IP Address: Use WAN Interface:
	Back Next

The next step is to configure the Network Address Translation (NAT) settings. For the example, NAT will be enabled. The remaining fields are left as default and then click on **Next** to continue.

PARADY	NE°
ADSL	GPE
Welcome	Network Address Translation Settings
Ouick Setup     Advanced Setup     Wireless	Network Address Translation (NAT) allows you to share one Wide Area Network (WAN) IP address for multiple computers on your Local Area Network (LAN).
🖃 🛄 Management	Enable NAT 🔽
	Enable Firewall
	Enable IGMP Multicast, and WAN Service
	Enable IGMP Multicast
	Enable WAN Service 🔽
	Service Name: pppoa_3_38_1
	Back Next

You can configure the DSL Router IP address and Subnet Mask for the LAN interface to correspond to your LAN's IP Subnet. If you want the DHCP server to automatically assign IP addresses, then enable the DHCP server and enter the range of IP addresses that the DHCP server can assign to your computers. Disable the DHCP server if you would like to manually assign IP addresses. Click on **Next** to continue.

PARADY	NE° GPE
Welcome Device Info Quick Setup	<b>Device Setup</b> Configure the DSL Router IP Address and Subnet Mask for LAN interface.
ia - Cale Advanced Setup ia - Cale Wireless	IP Address: 192.168.1.1
🖃 📄 Diagnostics 🕀 🦳 Management	Subnet Mask: 255.255.0
	O Disable DHCP Server
	Enable DHCP Server     Start IP Address: 192.168.1.2
	End IP Address: 192.168.1.254
	Leased Time (hour): 24
	Configure the second IP Address and Subnet Mask for LAN interface

The next screen allows you to enable or disable the router's wireless option. Also be sure to enter the SSID and click on **Next** to continue.

PARADY	
Welcome	Wireless Setup
Quick Setup     Advanced Setup	Enable Wireless 🔽
<ul> <li>■ Diagnostics</li> <li>■ Management</li> </ul>	Enter the wireless network name (also known as SSID). SSID: Broadcom
	Back Next

After all of the WAN configurations have been made, the WAN Setup Summary screen displays all WAN settings that you have made. Check that the settings are correct before clicking on the Save / Reboot button. Clicking on Save / Reboot will save your settings and restart your router.

PARADY	NE						
	WAN Coture - Cumm						
Welcome Device Info Devick Setup Duick Setup DAdvanced Setup	Make sure that the settings below match the settings provided by your ISP.						
Diagnostics	VPI / VCI:	3 / 38					
⊞- <mark>—</mark> Management	Connection Type:	PPPoA					
	Service Name:	pppoa_3_38_1	-				
	Service Category:	UBR	-				
	IP Address:	Automatically Assigned	-				
	Service State:	Enabled	-				
	NAT:	Enabled	-				
	Firewall:	Disabled	-				
	IGMP Multicast:	Disabled	-				
	Quality Of Service:	Disabled	-				
	Click "Save/Reboot" to NOTE: The configurati	save these settings and on process takes about 1	reboot router. Click "Back" to make any modifications. . minute to complete and your DSL Router will reboot. Back Save/Reboot				

# Advanced Setup

This section of the setup is an advanced version of the quick setup. If you want to make specific configurations to your router such as firewall, port mapping, quality of service, DNS, etc., consider going through this advanced setup for a more comprehensive configuration.

#### WAN

Configure the WAN settings as provided by your ISP.

PARADY	(NE° CPE												
Welcome Device Info Duick Setup Duick Setup Duick Setup Duickless Diagnostics Diagnostics Diagnost	WAN Setu Choose Ad Choose Fin	<b>ip</b> d, Edit ish to	, or Remove apply the cha	to configure WA anges and reboo	N interfaces. It the system.								
	VPI/VCI	Con. ID	Category	Service	Interface	Protocol	IGMP	QoS	VlanId	State	Remove	Edit	Action
	3/38	1	UBR	pppoa_3_38_1	ppp_3_38_1	PPPoA	Disabled	Disabled	N/A	Enabled		Edit	Up
					Add Remov	/e Finisł	n						

Click on the **Add** button if you want to add a new connection for the WAN interface. The ATM PVC Configuration screen follows as seen below. The ATM PVC Configuration screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category.

PARADYN	
ADSL C	
Welcome  Device Info Device Info Advanced Setup Advanced Setup LAN DAT	ATM PVC Configuration This screen allows you to configure an ATM PVC identifier (VPI and VCI) and select a service category. Choose an existing interface by selecting the checkbox to enable it. VPI: [0-255] 0 VCI: [32-65535] 35 Service Category: UBR Without PCR •
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 Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use Advanced Setup/Quality of Service to assign priorities for the applications.
	Enable Quality Of Service
	Back Next

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Find out the following values from 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 (Unspecified Bit Rate without Peak Cell Rate)— UBR service is suitable for applications that can tolerate variable delays and some cell losses. Applications suitable for UBR service include text/data/image transfer, messaging, distribution, and retrieval and also for remote terminal applications such as telecommuting.
  - UBR With PCR (Unspecified Bit Rate with Peak Cell Rate)--
  - CBR (Constant Bit Rate)—used by applications that require a fixed data rate that is continuously available during the connection time. It is commonly used for uncompressed audio and video information such as videoconferencing, interactive audio (telephony), audio / video distribution (e.g. television, distance learning, and pay-per-view), and audio / video retrieval (e.g. video-on-demand and audio library).
  - Non Realtime VBR (*Non-Real-time Variable Bit Rate*)—can be used for data transfers that have critical response-time requirements such as airline reservations, banking transactions, and process monitoring.
  - **Realtime VBR** (*Real-time Variable Bit Rate*)—used by time-sensitive applications such as real-time video. Rt-VBR service allows the network more flexibility than CBR.

#### 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.

PARADY	ΝE°
ADSL	GPE
Welcome	Connection Type
Device Info     Quick 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.
Diagnostics	C PPP over ATM (PPPoA)
	C PPP over Ethernet (PPPoE)
	C MAC Encapsulation Routing (MER)
	C IP over ATM (IPoA)
	C Bridging
	Encapsulation Mode
	Enable 802.1q
	Back Next

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

PARADY	NE° GPE	
Welcome Device Info Quick Setup Advanced Setup Wireless Diagnostics Management	<b>Unselect the check</b> Enable Bridge Service Service Name:	box below to disable this WAN service :  P br_0_35
		Back Next

When the settings are complete, the next screen shows a **WAN Setup - Summary** screen displaying the WAN configurations made. Click on **Save** to save the settings.

PARADYN	*		
ADSL CP		_	
Welcome  Device Info  Cuick Setup  Advanced Setup	WAN Setup - Summ Make sure that the se	a <b>ry</b> ttings below mate	th the settings provided by your ISP.
	VPI / VCI:	0 / 35	
⊞- <mark>`</mark> Management	Connection Type:	Bridge	
	Service Name:	br_0_35	
	Service Category:	UBR	
	IP Address:	Not Applicable	
	Service State:	Enabled	
	NAT:	Disabled	
	Firewall:	Disabled	
	IGMP Multicast:	Not Applicable	
	Quality Of Service:	Disabled	
	Click "Save" to save the NOTE: You need to re	nese settings. Clic boot to activate t	k "Back" to make any modifications. nis WAN interface and further configure services over this interface. Back Save

After the settings are saved, the below screen will follow displaying the WAN settings that you made with the option to **Add** or **Remove** any of the connections that you have made. When satisfied with the settings click on the **Finish** button.

PARAD	(NE° GPE												
Welcome Device Info Quick Setup Chiveless Wireless	WAN Setu Choose Ad Choose Fir	<b>ip</b> d, Edit nish to	, or Remove apply the cha	to configure WA anges and reboo	N interfaces. It the system.								
⊡ Diagnostics ⊞-	VPI/VCI	Con. ID	Category	Service	Interface	Protocol	IGMP	QoS	VlanId	State	Remove	Edit	Action
	0/35	1	UBR	br_0_35	nas_0_35	Bridge	N/A	Disabled	N/A	Enabled		Edit	
	3/38	1	UBR	pppoa_3_38_1	ppp_3_38_1	PPPoA	Disabled	Disabled	N/A	Enabled		Edit	Up
					Add Remov	/e Finisł	1						

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



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## LAN Local Area Network (LAN) Setup

You can configure the DSL Router IP address and Subnet Mask for the LAN interface to correspond to your LAN's IP Subnet. If you want the DHCP server to automatically assign IP addresses, then enable the DHCP server and enter the range of IP addresses that the DHCP server can assign to your computers. Disable the DHCP server if you would like to manually assign IP addresses. Click on **Next** to continue. The **Save** button only saves the LAN configuration data, but does not apply the configurations. Select the **Save/Reboot** button to save the LAN configurations.

PARADYN	
ADSL G	
Welcome Outck Setup Outck Outck Setup Outck Out	Local Area Network (LAN) Setup         Configure the DSL Router IP Address and Subnet Mask for LAN interface. Save button only saves the LAN configuration data and reboots the router to make the new configuration effective.         IP Address:       192.168.1.1         Subnet Mask:       255.255.255.0         Enable DHCP Server       Enable DHCP Server         Start IP Address:       192.168.1.2         End IP Address:       192.168.1.254         Leased Time (hour): 24       24

Save Save/Reboot

#### Ethernet Mode

Ethernet mode allows you to select the speed of your Ethernet connection. Modes include—auto, 100 full, 100 half, 10 full and 10 half. If you select "auto" then the router will use the common mode that all the connected interfaces can operate at.

nood	Status
peeu	100Mbps Full Duploy
auto	Disconnected
auto 💌	Disconnected
auto 💌	Disconnected
Save/Aj	pply

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

#### **Virtual Servers**

A virtual server allows you to direct incoming traffic from the WAN side to a specific IP address on the LAN side. The following figure shows the screen that allows you to configure your virtual server(s). Click on the **Add** button to configure a virtual server.

PARADYN Adsl gf	E° E							
Welcome Device Info Quick Setup Advanced Setup LAN NAT Device Info Advanced Setup NAT Device Info Advanced Setup Device Info Device Info D	NAT Virtual Servinternal servinternal servinto be convector configured.	tual Servers Set ver allows you to d ver with a private rrted to a different	up irect incoming IP address on port number u	traffic from th the LAN side. sed by the se	ne WAN side (ide The internal port rver on the LAN s Add	ntified by prot : is required or side. A maxim	ocol and external nly if the external um of 32 entries (	port) to the port needs can be
DM2 Host     ALG     ALG     Gality of Service     Routing     DNS     DNS     Port Mapping     DPSec     Certificate	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove
⊕ Wireless   Diagnostics ⊕ Management								

Zhone 4-Port Wireless Ethernet Router

Select the virtual server from the drop-down list and complete the server IP address, then click on the **Save / Apply** button.

PARADYNE	- -						
ADSL CPI		_	_	_	_	_	
Welcome Device Info Quick Setup Quick Set	NAT Virtual Server Select the service name to the specified server. End" normally and w modified. Remaining number of Server Name: © Select a Service: © Custom Server: Server JP Address:	rs e, and enter the se NOTE: The "Inter ill be the same as f entries that can Select One 192.168.1.	rver IP add nal Port E s the "Inte n be confi	fress : End" ( ernal gure	and click "Save/Apply cannot be changed Port Start" or "Ex d:32	" to forward IP pack I. It is the same as ternal Port End" if	ets for this service • "External Port either one is
E Certificate				Save	e/Apply		
Diagnostics	External Port Start	xternal Port End	Protoc	ol	internal Port Start	Internal Port End	
<b>⊞</b> Management			TCP	-			
			TCP	-			
			TCP	•			
			TCP	-			
			TCP	-			
			TCP	•			
			TCP	•			
			TCP	•			
			TCP	•			
			TCP	•			
			TCP	•			
			TCP	•			
				Save	e/Apply		

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

	NE <sup>°</sup> Pe							
Welcome Device Info Ouick Setup Advanced Setup LAN LAN Virtual Servers Port Triagering	NAT Virtu Virtual Server internal serve to be convert configured.	al Servers Setu allows you to dim with a private IF ad to a different p	p ect incoming t address on t ort number us	raffic from th ne LAN side. <sup>-</sup> ied by the ser Add	e WAN side (id The internal po ver on the LAN Remove	entified by prot rt is required o side. A maxim	ocol and external nly if the external um of 32 entries (	port) to the port needs tan be
ALG	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove
B C DNS ADSL	MSN Messenger	6891	6901	TCP	6891	6901	192.168.1.5	
Port Mapping IPSec B-C Certificate	MSN Messenger	1863	1963	тср	1863	1963	192.168.1.5	
Wireless     Diagnostics     Management	MSN Messenger	1863	1863	UDP	1863	1863	192.168.1.5	
	MSN Messenger	5190	5190	UDP	5190	5190	192.168.1.5	
	MSN Messenger	6901	6901	UDP	6901	6901	192.168.1.5	

# Port Triggering

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

PARADYN	-								
ADSL CP	5	_	_	_	_	_	_	_	_
₩elcome ⊕ Device Info	NAT Port Triggering Setup								
Ourick Setup     Advanced Setup     WAN     LAN     Ourick Setup     WAN     DAT     Ourick Setup     DAT     Ourick Setup     DAT     DAT     DAT     DAT     DAT	Some applications require that spe Trigger dynamically opens up the ' connection to a remote party using establish new connections back to t be configured.	cific ports in Open Ports' the 'Trigger the applicati	the Rou in the fir ing Port	uter's f rewall ts'. The le LAN Add	irewall be o when an ap Router all side using f	pened f plication ows the the 'Ope	or acc n on th remot n Port	ess by the re le LAN initiat e party from s'. A maximi	emote parties. Port es a TCP/UDP I the WAN side to um of 32 entries can
B D Firewall	Application	Tri	gger		0	lpen		Remove	
Quality of Service     Routing	Name	Protocol	Port R	ange	Protocol	Port R	ange		
DNS     ADSL     Port Mapping     DIPSec     Certificate     Wireless     Diagnostics			Start	End		Start	End		

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.

PARADYN		
ADSL G	PE	
Welcome Device Info Quick Setup Advanced Setup Device NAT Divitual Servers Device NAT Divitual Servers DAT Triggering DMZ Host Ad G Firewall DNS ADSL Port Mapping DNS ADSL Port Mapping Diagnostics Management	NAT Port Triggering Some applications such as games, video conferencing, remote access applications ports in the Router's frewall be opened for access by the applications. You can screen by selecting an existing application or creating your own (Custom applicated Remaining number of entries that can be configured:32 Application Name:	ons and others require that specific configure the port settings from this ation)and click "Save/Apply" to add it.
1		

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.



#### DMZ Host

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

PARADYN	
ADSL C	PE
Welcome  Device Info  Quick Setup Advanced Setup Van LAN Virtual Servers DMZ Host ALG Cuality of Service Routing DNS	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:

## ALG

ALG, Application Layer Gateway can be used to allow firewall traversal with SIP. To enable voice packets to successfully pass through firewalls and NATs, click on the *SIP enabled* checkbox.

PARADYN	лЕ°	
ADSL C	PE	
Welcome	ALG	
→ Quick Setup → Advanced Setup → → WAN	Select the ALG below.	
	SIP Enabled	
Port Triggering DMZ Host		Save/Apply
ALG     ALG     Firewall     Quality of Service		
Routing     DNS     ADSL		
Port Mapping IPSec II-Certificate		
Wireless     Diagnostics		
m in management		

#### 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.

	_						
ADSL CPE		_		_			_
Welcome	Outgoing	IP Filterin	g Setup				
Quick Setup     Advanced Setup	By default,	all outgoin	g IP traffic from LAN is allow	ed, but some IF	<sup>p</sup> traffic can be <b>BLOCK</b>	D by setting up	filters.
	Name	Protocol	Source Address / Mask	Source Port	Dest. Address / M	ask Dest. Port	Remove
Articewall     Display and the second s				Add			
Kouling     DNS     DNS     Pott Mapping     Pisec     B: Certificate     Wireless     Diagnostics							

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**.

PARADYN								
ADSL C								
Welcome	Add IP Filter Outgoing							
Quick Setup Advanced Setup UNAN LAN NAT	The screen allows you to create a filter rule to identify outgoing IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the filter.							
□ □ NAT □ □ □ Firewall □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Filter Name:							
Outgoing	Protocol:							
MAC Filtering	Source IP address:							
Quality of Service	Source Subnet Mask:							
⊕- □ Routing     ⊕- □ DNS	Source Port (port or port:port):							
ADSL	Destination IP address:							
- D IPSec	Destination Subnet Mask:							
Certificate     Wireless	Destination Port (port or port:port):							
Diagnostics Management	Save/Apply							

The following screen appears when you **Save / Apply** the IP filter. The screen lists the IP filters that were added from the previous screen. To change your settings, click on the **Add** or **Remove** buttons. The Remove button appears only when you have an existing IP filter already set up.

PARADYN	Ē						
ADSL CP	E	-		-	-	-	
Welcome Device Info Quick Setup Advanced Setup	Outgoing By default,	IP Filterin	g Setup g IP traffic from LAN is allow	ed, but some IF	traffic can be <b>BLOCKED</b> b	iy setting up f	ìlters.
	Name	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove
	Test	TCP/UDP	192.168.10.1		192.185.15.1		
PF Filtering     Outgoing     Outgoing     MAC Filtering     Parental Control     Ouality of Service     Ouality of Service     DNS     ADSL     Port Mapping     IPSec     Octrificate     Wireless     Oiagnostics     Management				Add Remov	e		

# IP Filtering-Incoming

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

PARADYNE	-									
	Incomi	ag ID filta	ving Cotur		-	-	-	-		
Welcome Outick Setup Outick Setup Outick Setup Outick Name Outick Setup Outick Set	Recomming IP Intering Secup 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.									
	Name	VPI/VCI	Protocol	Source Address / Mask	Source Port	Dest. Address / Mask	Dest. Port	Remove		
Outgoing     Incoming     Outgoing     MAC Filtering     Outling     Parental Control     Outling of Service     Outgoing     ODN     ONS     ONS     ONS     Ott Mapping     OFSec     Octrificate     Oiagnostics     Management					Add					

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

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

PARADYN	IE <sup>®</sup>
ADSL C	
Welcome  Advanced Setup  Advan	Add IP Filter Incoming         The screen allows you to create a filter rule to identify incoming IP traffic by specifying a new filter name and at least one condition below. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. Click 'save/Apply' to save and activate the filter.         Filter Name:
	Save/Apply

## **MAC Filtering**

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

PARADYN	*								
ADSL CP	5	_	_	_	_	_			
Welcome	MAC Filtering	Setup							
Device Info     Ouick Setup     WAN     Device Setup     WAN     Device Info     LAN     NAT	MAC Filtering (	tering Global Policy: FDRWARDED Change Policy							
Firewall     Filewall     Outgoing     Incoming     MAC Filtering     MAC Filtering     Descented	MAC Filtering is only effective on ATM PVCs configured in Bridge mode. FORWARDED means that all MAC layer frames will be FORWARDED except those matching with any of the specified rules in the following table. BLOCKED means that all MAC layer frames will be BLOCKED except those matching with any of the specified rules in the following table.								
- Quality of Service	Choose Add or	Remove to	configure N	MAC filtering rules.					
Routing     DNS		VPI/VCI	Protocol	Destination MAC	Source MAC	Frame Direction	Remove		
ADSL     Port Mapping     Port Mapping     Pisec     Certificate     Wireless     Diagnostics     Management				2	Add				

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

PARADYNE								
ADSL CP								
₩elcome ⊕ Device Info	Change MAC Filtering Global Policy							
Ouick Setup     Advanced Setup     WAN	WARNING: Changing from one global policy to another will cause all defined rules to be REMOVED AUTOMATICALLY! You will need to create new rules for the new policy.							
☐ LAN ⊕ NAT ⊟ Firewall	Are you sure you want to change MAC Filtering Global Policy from FORWARDED to BLOCKED ?							
P Filtering     Outgoing     Incoming     MAC Filtering	NO YES							
Quality of Service  Control  Control								
ONS								
🖻 🦰 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.

PARADYN	
ADSL CP	
Welcome	Add MAC Filter
Device Info     Quick Setup     Advanced Setup	Create a filter to identify the MAC layer frames by specifying at least one condition below. If multiple conditions are specified, all of them take effect. Click "Apply" to save and activate the filter.
	Protocol Type:
E G Firewall	Destination MAC Address:
Outgoing	Source MAC Address:
MAC Filtering	Frame Direction:
□ Quality of Service     □ Routing     □ DNS	WAN Interfaces (Configured in Bridge mode only)
ADSL	Select All
- Port Mapping - IPSec B- Certificate	✓ br_0_35/nas_0_35
⊕ Wireless Diagnostics ⊕ Management	Save/Apply

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.

PARADYN	Ê											
ADSL G	Time of Day R	estrictions - Username	- A ma	Mon	n of 1 Tue	Wed	ies ca Thu Rei	an be co Fri Sat move	nfigur	red. Start	Stop	Remove
Routing     ADSL     Port Mapping     Pecc     Certificate     Diss     Diss     Diss     Diss     Diss     Diagnostics     Management												

After you click you **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.

PARADYN	*	
ADSL CP		
Welcome	Time of Day Restriction	
Ourck Setup     Ourck Setup     Ourck Setup     WAN     LAN     PAT     Firewall     P Filtering     Parental Control     Ourclify of Service     Ourclify of Service	This page adds a time of day i automatically displays the MAC device, click the "Other MAC A address of a Windows-based i User Name © Browser's MAC Address	restriction to a special LAN device connected to the router. The "Browser's MAC Address" address of the LAN device where the browser is running. To restrict another LAN ddress" button and enter the MAC address of the other LAN device. To find out the MAC address of the command prompt window and type "ipconfig /all". D0:07:40:FD:1C:F9
DNS     ADSL     Port Mapping	C Other MAC Address (IOCOCOCOCOCOC)	
E Certificate	Days of the week	MonTueWedThuFri SatSun
Wireless     Diagnostics	Click to select	
🗄 🦳 Management	Start Blocking Time (hh:mm)	
	End Blocking Time (hh:mm)	
		Save/Apply