

# AR-7287WnA



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Note: The images/screenshots used in this manual are for reference only – actual screens may vary according to firmware version. The contents of this manual are based on the most recent firmware version at the time of writing.

# **1. Product Introduction**

## 1.1. Package Contents

Before you start using this product, please check if there is anything missing in the package and contact your dealer to claim the missing item(s):

- •ADSL2+ router (AR-7287WnA)
- 12V power adapter
- 1 meter RJ-45 Ethernet cable
- 1 meter RJ-11 telephone line x 2
- Quick installation guide
- CD containing setup wizard, user manual & multi-language QIG
- Splitter

# **1.2. System Requirements**

Recommended system requirements are as follows.

- A 10/100 base-T Ethernet card installed in your PC.
- A hub or Switch (connected to several PCs through one of the Ethernet interfaces on the device).
- Operating system: Windows 98 SE, Windows 2000, Windows ME, Windows XP, Windows 7, Windows 8, Windows 10.
- Internet Explorer V5.0 or higher, Netscape V4.0 or higher or Firefox 1.5 or higher.

# **1.3. Safety Precautions**

Follow the following instructions to prevent the device from risks and damage caused by fire or electric power:

- Use volume labels to mark the type of power.
- Use the power adapter included within the package contents.
- Pay attention to the power load of the outlet or prolonged lines. An overburdened power outlet or damaged lines and plugs may cause an electric shock or fire. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.

- Do not put this device close to heat sources or high temperatures. Keep the device out of direct sunshine.
- Do not put this device close to a place where it is damp or wet. Do not spill any fluid on this device.
- Do not connect this device to any PCs or electronic products, other than those which you are instructed or recommended to do so in the product's documentation, by our customer engineers or by your broadband provider – connecting to incorrect devices may cause a fire risk.
- Place this device on a stable surface.

# 1.4. LED Status & Button Definitions

## **Front Panel**

LED Status

## Front Panel:



LED	Color	Status	Description
Power	Green	On	ADSL2+ router is on.
Φ		Off	ADSL2+ router is off.
ADSL	Green	On	ADSL line is synchronized and ready to use.
		Flashing	ADSL line not synchronized.
Internet	Green	On	Internet connected in router mode
		Flashing	Internet not connected in router mode
		Off	Device in bridged mode.
LAN1–4	Green	On	LAN port connected.
		Off	LAN port not connected.
WLAN	Green	On	Successful WLAN connection.
÷.		Off	WLAN connection failed.
WPS	Green	Off	WPS is disabled.
		Flashing	WPS is enabled and waiting for client to negotiate.

🛄 Note i.

If the ADSL LED is off, please check your Internet connection. Refer to A. Hardware Installation for more information about how to connect the router correctly. If all connections are correct, please contact your ISP to check if there is a problem with your Internet service.

### User Manual Rear Panel:



Item	Description
Power On/Off Button	Switches the router on or off.
Power	Power port for included 12V power adapter.
Wireless / WPS Button	*Hold for less than 5 seconds to enable wireless signal. *Hold for more than 5 seconds to activate WPS function.
LAN 1-4	RJ-45 Ethernet ports 1–4.
Reset Button	Hold for less than 3 seconds to reset the device to factory default settings.
Line	RJ-11 port for standard telephone line.

## 1.5. Features

The device supports the following features:

- Various line modes (line auto-negotiation)
- External PPPoE dial-up access
- Internal PPPoE/PPPoA dial-up access
- 1483B/1483R/MER access
- Multiple PVCs (eight at most)

- A single PVC with multiple sessions
- Multiple PVCs with multiple sessions
- Auto PVC
- DHCP server
- IPv4/IPv6
- NAT/NAPT
- ALG
- TR-069
- SNMP
- Static route
- Firmware upgrading through Web, TFTP, or FTP
- Resetting to the factory defaults through Reset button or Web
- DNS relay
- Virtual server
- Two-level passwords and usernames
- Web interface
- Telnet CLI
- System status display
- PPP session PAP/CHAP
- IP/Port filter
- Remote access control
- Line connection status test
- Remote management (Telnet; HTTP )
- Backup and restoration of configuration file

- IP quality of service (QoS)
- Universal plug and play (UPnP)
- WLAN with high-speed data transmission rate, compatible with IEEE 802.11b/g/n, 2.4 GHz compliant equipment

# 2. Hardware Installation

## 1. Connect the ADSL line.

Connect the line port of the router of the device to the modem interface of a splitter using a telephone cable. Connect a telephone to the Phone interface of the splitter using a telephone cable. Connect the Line interface of the splitter to your existing, incoming line.

The splitter has three interfaces:

- Line: Connect to a wall phone jack (RJ-11 jack).
- Modem: Connect to the ADSL jack of the device.
- Phone: Connect to a telephone set.

## 2. Connect the router to your LAN network.

Connect the LAN interface of the router to your PC, hub or switch using an Ethernet cable.

## Note:

Use twisted-pair Ethernet cables to connect the router to a hub or switch.



## 3. Connect the power adapter to the router.

Plug one end of the power adapter into a wall outlet and connect the other end to the 12V interface of the device.

The following diagrams show how to correctly connect the router, PC, splitter and the telephone sets under two different configurations:



## **Configuration 1**

**0** shows the correct connection of the router, PC, splitter and the telephone sets, with no telephone set placed before the splitter.



Figure 1 – Connection diagram

(Without connecting telephone sets before the splitter)

## **Configuration 2**

**0** shows the correct connection when a telephone set is installed before the splitter.

User Manual



Figure 2 - Connection diagram

(Connecting a telephone set before the splitter)

## 🛄 Note:

When **Configuration 2** is used, the filter must be installed close to the telephone cable. Do not use the splitter to replace the filter.

Installing a telephone directly before the splitter may lead to failure of connection between the device and the central office, or failure of Internet access, or slow connection speed. If you really need to add a telephone set before the splitter, you must add a micro filter before a telephone set. Do not connect several telephones before the splitter or connect several telephones with the micro filter.

## 4. Check the ADSL LED status.

Please check the ADSL LED on the front panel. This light indicates the status of your ADSL broadband through your telephone line. If the light is on, you can continue setup. However if the light is flashing, there is no broadband line detected. Please call your Internet Service Provider (ISP) and inform them about the flashing ADSL light to resolve the issue.

## 5. Firewall settings.

Please turn off all personal firewalls before you continue the setup – firewalls can block communication between your PC and router.

User Manual *Note: You must use the power adapter included in the package with the router, do NOT attempt to use a third-party power adapter.* 

## 6. PC LAN IP configuration.

Configure your PC's LAN settings to automatically obtain an IP address from the router by following the steps below:

1. Click "Start" and then select "Control Panel".



2. Click **"Switch to Classic View"** in the top left to show additional setting icons.



3. Locate the **"Network Connections"** icon and double-click to open network connection settings.



4. Select the **"Local Area Connection"** icon and right-click it to open the submenu, then select **"Properties"**.



5. Select "Internet Protocol (TCP/IP)" and then click "Properties"

🕹 Local Area Connection Properties 🛛 😨 🔀	
General Authentication Advanced	
Connectusing:	
AMD PCNET Family PCI Ethemet Adap	
This connection uses the following items:	
Client for Microsoft Networks Client for Microsoft Networks Cos Packet Scheduler Statumet Peotocol (TCP)(P) Isstall	
Description  Protocol The default wide  Protocol The default wide	
Show icon in notification area when connected Notify me when this connection has limited or no connectivity	
OK Cancel	

6. Ensure that **"Obtain an IP address automatically"** and **"Obtain DNS server address automatically"** are selected and then press **"OK"**.

	Internet Protocol (TCP/IP) Properties
	General Atternate Configuration
	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
	Qbtain an IP address automatically:
	O Uge the following IP address:
Obtain an IP addr	ess automatically
	Optain DNS server address automatically     Usg the following DNS server addresses
	Atemate DNS server address automatically
	Adganced.
	OK D Cancel
	OK D

# 3. IP Address Setting

To use the router to access the Internet, the PCs in the network must have an Ethernet adapter installed and be connected to the router either directly or through a hub or switch. The TCP/IP protocol of each PC must be installed and the IP Address of each PC has to be set in the same subnet as the router.

The router's default IP Address is **192.168.2.1** and the subnet mask is **255.255.255.0**. PCs can be configured to obtain IP Address automatically through the DHCP Server of the router or a fixed IP Address in order to be in the same subnet as the router. By default, the DHCP Server of the router is enabled and will dispatch IP Address to PC from **192.168.2.100** to **192.168.2.200**. It is strongly recommended to set obtaining IP address automatically.

This section shows you how to configure your PC so that it can obtain an IP address automatically for either Windows 95/98/Me, 2000 or NT operating systems. For other operating systems (Macintosh, Sun, etc.), please follow the manual of the operating system. The following is a step-by-step illustration of how to configure your PC to obtain an IP address automatically for **Windows 10, Windows 8, Windows 7, Windows Vista and Windows XP.** 

# 3.1. Windows 10/8

 From the Windows 10/ 8 Start screen, you need to switch to desktop mode. Click the Desktop icon in the bottom left of the screen.



2. Click the Network icon 🔚 and then select Open Network and Sharing Center to open the Network and Sharing Center window.



3. Click Ethernet to open the Ethernet Status window, and then select Properties. The Local Area Connection window will appear.

<b>芽</b>	Network and Sharing Center	- 8
🛞 🛞 – 🕇 🔽 🕨 Control P.	anel + All Control Panel Items + Network and Sharing Center	✓ 🖒 Search Control Panel 🥠
File Edit View Tools Help		
Control Panel Home	View your basic network information and set up connections	
Change adapter settings Change advanced sharing settings	View your active networks           Network 2         Access type         Interest           Provide network:         Connection         Connection           Change your networking settings         Set up a new connection or network           Set up a new connection or network         Set up a new connection or network           Set up a new connection or network         Set up a new connection; or set up a router or access point.           Set up a new connection; or set up a router or access point.         Set up a new connection; or set up a router or access point.           Set up a new connection; or get troubleshooting information.         Toubleshoet problems; or get troubleshooting information.	
See also HomeGroup Internet Options Windows Firewall		

	Dend - All Control Dend Brann - N	Network	and onaning server	a la la come come a
🖯 🕘 = T 👱 > Control	Panel > All Control Panel Items > Network and S	haring Center		V C Search Control Panel
ile Edit View Tools Help	Manual hada actual informati	an and anti-in comparisons		
Control Panel Home	view your basic network informati	on and set up connections		
Change adapter settings	View your active networks		and the second second	
Change advanced sharing settings	Network 2 Private network	Access type: Internet HomeGroup: Joined	General	
		Connections: @ citemer	Connection	-
	Change your networking settings		IPv4 Connectivity: Internet	
	Set up a new connection or network		IPv6 Connectivity: No Internet access	
	Set up a broadband, dial-up, or VP1	l connection; or set up a router or access point.	Media State: Enabled	
	Troubleshoot problems		Speed: 100.0 Mbps	
	Diagnose and repair network proble	ms, or get troubleshooting information.	Detais	
			Activity	-
			<b>•</b> ••	
			Sent — Received	
			Bytes: 32,664,205 4,668,631	
			SProperties SDisable Diagnose	
			Close	
			2.	
Car also				
See also				
See also HomeGroup				
See also HomeGroup Internet Options Windows Firewall				

4. Check your list of Network Components. Select Internet Protocol Version 4 (TCP/IPv4) and click the Properties button.

Broadcom 44	0x 10/100 Integrated Co	ntroller
		Configure
File and Pri Hicrosoft N	nter Sharing for Microsofi letwork Adapter Multiplex LDP Protocol Driver	t Networks
<ul> <li>✓ Ink-Layer</li> <li>✓ Link-Layer</li> <li>✓ Link-Layer</li> </ul>	Topology Discovery Map Topology Discovery Res	pper I/O Driver ponder
	tocol Version o (TCP/ID	v5) v4)
✓ Internet Pro	tocol Version 4 (TCP/IP	,
Install	tocol Version 4 (TCP/IP Uninstall	Properties

5. In the Internet Protocol Version 4 (TCP/IPv4) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.



Internet Protocol Version 4 (TCP/IPv4) Properties ?
General Alternate Configuration
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit Advanced
OK Cancel

6. Click OK (shown above) to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

# Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

## 3.2. Windows 7

- 1. Click the Start button and select Control Panel. Double click Network and Internet and click Network and Sharing Center, the Network and Sharing Center window will appear.
- 2. Click Change adapter settings and right click on the Local Area Connection icon and select Properties. The Local Area Connection window will appear.
- 3. Check your list of Network Components. You should see Internet Protocol Version 4 (TCP/IPv4) on your list. Select it and click the Properties button.

4. In the Internet Protocol Version 4 (TCP/IPv4) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.

enerai	Alternate Configuration				
You car this cap for the	n get IP settings assigned a pability. Otherwise, you nee appropriate IP settings.	utomatically if d to ask your	your n netwoi	etwork s rk admini	supports strator
<u>o</u> <u>o</u>	otain an IP address automa	tically			
O Us	e the following IP address:				
<u>I</u> P ad	idress:				
S <u>u</u> br	iet mask:				
Defa	ult gateway:		14	- 3	
() O	otain DNS server address au	utomatically			
O Us	e the following DNS server	addresses:			
Pref	erred DNS server:			,	
<u>A</u> lter	nate DNS server:				
V	alidate settings upon exit			Adva	anced

5. Click OK to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

## 3.3. Windows Vista

- 1. Click the Start button and select Settings and then select Control Panel. Double click Network and Sharing Center, the Network and Sharing Center window will appear.
- 2. Click Manage network connections and right click on the Local Area Connection icon and select Properties. The Local Area Connection window will appear.

- 3. Check your list of Network Components. You should see Internet Protocol Version 4 (TCP/IPv4) on your list. Select it and click the Properties button.
- 4. In the Internet Protocol Version 4 (TCP/IPv4) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.

eneral	Alternate Configuration				
You car this cap for the	n get IP settings assigned au pability. Otherwise, you need appropriate IP settings.	itomatically if d to ask your i	your n networ	etwork kadmir	supports iistrator
<u>o</u>	btain an IP address automat	ically			
O Us	e the following IP address:				
<u>I</u> P ad	ddress:	+	Š.	+	
Sybr	net mask:				
Defa	ult gateway;	÷			
() O	<u>b</u> tain DNS server address au	tomatically			
O Us	se the following DNS server a	addresses:			
Pref	erred DNS server:	÷.	14	14	
<u>A</u> lter	nate DNS server:				
				Adv	anced

5. Click OK to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

# Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

## 3.4. Windows XP

- 1. Click the Start button and select Control Panel and then double click Network Connections. The Network Connections window will appear.
- 2. Right click on the Local Area Connection icon and select Properties. The Local Area Connection window will appear.

- 3. Check your list of Network Components. You should see Internet Protocol [TCP/IP] on your list. Select it and click the Properties button.
- 4. In the Internet Protocol (TCP/IP) Properties window, select Obtain an IP address automatically and Obtain DNS server address automatically as shown on the following screen.

Internet	Protocol (TCP/IP) Prop	oerties 🔹 🤶 🔀
General	Alternate Configuration	
You car this cap the app	n get IP settings assigned aut ability. Otherwise, you need t ropriate IP settings.	omatically if your network supports o ask your network administrator for
<u>⊙ 0</u> t	otain an IP address automatic	ally
	e the following IP address: -	
IP ac	ldress:	
Subr	net mask:	
<u>D</u> efa	ult gateway:	· · · ·
0 O	gtain DNS server address aut	omatically
- <b>O</b> Us	e the following DNS server a	ddresses:
Prefe	erred DNS server:	· · ·
Alten	nate DNS server:	
		Ad <u>v</u> anced
		OK Cancel

5. Click OK to confirm the setting. Your PC will now obtain an IP address automatically from your router's DHCP server.

Note: Please make sure that the router's DHCP server is the only DHCP server available on your LAN.

# 4. Web Configuration

This chapter describes how to configure the router by using the Web-based configuration utility.

## 4.1 Access the Router

The following is the detailed description of accessing the router for the first time.

Configure the IP address of the PC as 192.168.2.X (2~254), Subnet Mask as 255.

255.255.0. Open the Internet Explorer (IE) browser and enter http://192.168.2.1. In the

Login page that is displayed, enter the username and password.

• The user name and password of the super user are **admin** and 1234

NETWORKING PEOPLE TOGETHER						
AR-7	7287WnA router login					
User Name:						
Password:						
	Login Reset					

If you log in as a super user, you will see the **Device Info** page as shown below appears.

You can check the basic settings of the modem, such as firmware version, upstream

speed, downstream speed, LAN MAC address, LAN IP address, DHCP server status. You

can also view the basic status of WAN and DNS server.

## 4.1.1. Status

The tab Status contains Device Info and Statistics. Click Status > Device Info > ADSL, the

following page appears. You can see the router settings such as the Adsl Line Status,

Vendor ID and Firmware Version.

							ADSL Ro	oute
Status Wizard	Network	Adva	nced	Serv	ice	Firewall	Admin	
	ADSL Rout	ter Status						
Device Info	This page show	is the current s	tatus and	some basic set	ings of the devic	:e.		
Device Info								
ADSL	Alias Name			AR-7287WnA				
LAN	Uptime			0 0:0:19 Sup log 1 5:2	8:10 2012			
Statistics	Eirmwaro V	orgion		Sun Jan 1 5.3	0.192012			
ARP	Built Date	eraion		Feb 24 2017	4:26:15			
	Serial Num	ber		00051D03040	5			
	Hardware V	ersion		8671x	-			
	i DSL							
	Operationa	Status						
	Upstream S	peed						
	Downstream	n Speed						
	Connection Red	juest Status	N	o connection re	quest			
	② LAN Config	uration						
	IP Address		1	92.168.2.1				
	Subnet Mask		2	55.255.255.0				
	DHCP Server		E	nable				
	MAC Address		0	00:05:1D:03:04:05				
	ONS Status							
	DNS Mode		A	uto				
	DNS Servers							
	💿 ADSL WAN	Interfaces						
	Interface VP	/VCI Encap	Droute	e Protocol	IP Address	Gateway	Status	
	pppoe1 0	35 LLC	Off	PPPoE	0.0.0.0	0.0.0.0	down 0 0:0:0 /0 0:0:0 [connect]	

Status	Wizard	Network	Advanced	Service	Firewall	Admin	
		ADSL Config This page shows	guration the setting of the ADS	L Router.			
Device Inf	io						
> Device Info		Adsl Line Sta	tus	ACTIVATING.			
> ADSL		Adsl Mode		-			
		Up Stream		-			
⊻ LAN		Down Stream	I.	-			
Statistics		Attenuation E	)own Stream	-			
ARP		Attenuation L	Jp Stream				
		SNR Margin [	Down Stream				
		SNR Margin U	Jp Stream				
		CRC Errors					
		Up Stream BE	ER				
		Down Stream	BER				
		Up Output Po	ower				
		Down Output	Power				
		Down Stream	ES				
		Up Stream ES	8				
		Down Stream	SES				
		Up Stream SES	5				
		Down Stream U	JAS	-			
		Up Stream UAS	S	-			
				_			
		Adsl Retrain:	Retrain Refres	h			

Click **Status** > **LAN** > **LAN**, the following page appears. You can see lan information,

Status	Wizard	Network	Advanced	Service	Firewall	Admin		
		LAN Status	ia I AN acttings of the	doviso				
Device Info		LAN Configu	ration	device.				
> LAN		IP Address	1	92.168.2.1				
> WLAN		Subnet Mask		255.255.255.0				
> Port Mapping	> Port Mapping DH		E	Enable				
	MAC Address			00:05:1D:03:04:05				
<ul><li>Statistics</li><li>ARP</li></ul>		() DHCP Client	Table					
			IP Address	MA	AC Address	Expiry(s)	Туре	
		VEPME40NA6YK	AXD 192.168.2.100	50:	:7b:9d:e2:6c:92	In 0 days 23:58:21	Automatic	

Click **Status** > **LAN** > W**LAN**, the following page appears. You can see Wlan information

Status	Wizard	Network	Advanced	Service	Firewall	Admin		
		WLAN Status This page shows	S some basic settings of wi	reless LAN (WLAN).				
	0	() Wireless	Configuration					
> LAN		Wireless		Enabled				
> WLAN		Band		2.4 GHz (E	3+G+N)			
> Port Mapping	> Port Mapping			AP	AP			
		Broadcast		Enabled				
Statistics		Root	Root					
ARP		Status		Enabled				
		SSID		EdimaxAD	SL			
		Authenticati	on Mode	Auto				
		Encryption I	Mode	None				
		VAPO						
		Status		Disabled				
		VAP1						
		Status		Disabled				

Click Status > port Mapping , the following page appears. In this page, you can view the

### statistics of IPTV.

Status	Wizard	Network	Advanced	Service	Firewall	Admin	
		Port Mappin This page shows	<b>g</b> the mapping relation and	the status of port mapp	ing.		
Device Info     LAN		Status:			-		
> LAN		Status:	C	isabled			
> WLAN		Mapping	Relation				
Port Mapping		Select I	nterfaces				Status
Statistics		Default L	AN1,LAN2,LAN3,LAN4,w	lan,wlan-vap0,wlan-vap	o1,wlan-vap2,wlan-vap3,	pppoe1	Enabled
ARP		Group1					-
		Group2					-
		Group3					
		Group4					-

Click **Status** > **Statistics**, the following page appears. In this page, you can view the

statistics of each network port.

Status	Wizard	Network	Advanced	Servi	ce	Firewall	Admin	
		Statistics						
Device Info	)	This page shows the Statistics:	e packet statistics fo	r transmission ar	nd reception re	garding to network in	nterface.	
LAN		Interface	Rx pkt	Rx err	Rx drop	Tx pkt	Tx err	Tx drop
Statistics		lan1	0	0	0	0	D	0
Statistics		lan2	0	0	0	0	0	0
		lan3	3961	0	0	4405	0	0
ARP		lan4	0	0	0	0	0	0
		pppoe1	0	0	0	0	0	0
		w1	43215	0	0	858	0	805
		w2	0	0	0	0	0	0
		w3	0	0	0	0	0	0
		w4	0	0	0	0	0	0
		w5	0	0	0	0	0	0
		w6	0	0	0	0	0	0

## 4.1.2. Wizard

In the navigation bar, click Wizard. The tab Wizard only contains Wizard.

Status Wixard	Setup Advanced	Service Firewall Maintenance			
<ul> <li>&gt; Wizard</li> <li>&gt; Wizard</li> </ul>	Fast Config The wizard will help you do some basic Step 1: WAN Connection Setting Step 2: WLAN Connection Setting Step 3: Save Setting	configurations step by step.			
	Step 1: WAN Connection Setting	: Please select the wan connection mode			
	VPI/VCI:	VPI: 0 (0-255) VCI: 0 (32-85535)			
	Encapsulation:	📽 LLC/SNAP 🙁 VC-Mux			
		1483 Bridged			
	Connection Mode:	C 1483 MER			
		PPP over Ethernet(PPPoE)			
		C PPP over ATM(PPPoA)			
		1483 Routed			
	PPP Settings:	Usemame: Password:			
	Default Route:	Enable C Disable			
	DNS Settings:	Attain DNS Automatically			
	Set DNS Manually :				
	DNS Server 1:				
	DNS Server 2:				
	next				

1) Change the VPI or VCI values which are used to define a unique path for your

connection. If you have been given specific settings for this to configuration,

type in the correct values assigned by your ISP.

VPI/VCI:	VPI: 0	(0-255) VCI: 0	(32-65535)
	1 2 2 2 C		

2) Please select the Connection Type given by your ISP.

	1483 Bridged
	© 1483 MER
Connection Mode:	PPP over Ethernet(PPPoE)
	PPP over ATM(PPPoA)
	1483 Routed

3) Here we use PPPoE as an example. Enter the Username, Password and

Confirm Password given by your ISP, and then click Next.

PPP Settings:	Username:	Password:	

4) On the Wireless screen, we use the default SSID, select a Mode. Set a

Password or select Disable Security(Disable Security is not recommended.),

and then click **Next** to continue.

tep 2:Wireless Fast Settings:	Please config basic settings about wireless.
/LAN:	🖲 Enable 🔘 Disable
and:	2.4 GHz (B+G+N) 🔻
SID:	WLAN_Emvr
ncryption:	WPA2(AES) 💌
VPA Authentication Mode:	Enterprise (RADIUS)      Personal (Pre-Shared Key)
	Pre-Shared Key Format: Passphrase 🔻
	Pre-Shared Key: 1345678

5) On this page, please confirm all parameters. Click Prev to modify or click the

Apply Changes button to save your configuration.

Fast Config			
Step 3:Save Settings	If you need finish settin "Cancel" or " Prev".	igs in the fast conf	ig,please click "Apply Changes".otherwise please click
Settings as follow:			
VPI:			8
VCI:			35
Encapsulation:			LLC/SNAP
Channel Mode:			pppoe
ppp username:			12345678
ppp password:			12345678
DNS Setting:			DNS Automatically
WLAN :			Enable
Prev	Apply Changes	Cancel	

## 6) You will see the Complete screen below.

Status Wixerd	Setup	A	dvance	d	Servio	e	Firewall	Maintenance	- k	
	ADSL Rou This page sho	ter Stat ws the cu	<b>tus</b> rrent statu	s and sor	ne basic set	tings of the dev	ice.			
Wizard	③ System									
* WIZIN	Alias Name			AD	SL Modem					
	Uptime			0 0	:39:41					
	Date/Time	Date/Time			n Jan 1 0:39	41 2012				
	Firmware V	ersion		V2	.1.1					
	Built Date			De	c 14 2012 09	9:55:33				
	Serial Num	Serial Number 0019E0016690								
	③ DSL									
	Operationa	Status		-						
	Upstream s	speed		-						
	Downstream Speed			-	-					
	© CWMP Status									
	Inform Stat	Inform Status				Inform is broken				
	Connecion	Connecion Request Status				No connection request				
	🛞 LAN Co	LAN Configuration								
	IP Address			19	192.168.1.1					
	Subnet Ma	Subnet Mask				255.255.255.0				
	DHCP Serve	er		En	Enable					
	MAC Addre	SS		00	00:19:E0:01:66:90					
	③ DNS Status									
	DNS Mode Auto DNS Servers									
	I WAN C	onfigura	tion							
	Interface	VPI/VCI	Encap	Droute	Protocol	IP Address	Gateway	Status		
	pppoe1	8/35	LLC	On	PPPoE	0.0.0	0.0.0.0	down 0 0:0:0 /0 0:0:0	nnect	

## 4.1.3. Setup

In the navigation bar, click Setup. The tab Setup contains WAN, LAN and WLAN.

### 4.1.3.1. WAN Configuration

### \*WAN

Choose **Setup** > **WAN** > **WAN** and the page shown in the following figure appears.

In this page, you can configure WAN interface of your router.

Status	Wizard 900	Advan	ced Service	Firewall	Maintenance
> WAN	Cha This p conne	nnel Configuration age is used to configure ct type of PPPoE and PPr	h the parameters for the chanr PoA only is "Manual", the "Co	nel operation modes of your AD nnect" and "Disconnect" button	SL Modem/Router, Note : When will be enable.
> WAN > ATM	De	fault Route Selection:		Auto Specified	
> ADSL	VP	l: 0		VCI:	
🔽 LAN	En	capsulation:		ELC OVC-Mux	
VLAN	Ch	annel Mode: 1483 Bridg	ged 👻	Enable NAPT:	
	Ena	able IGMP: 🗌			
	РР	P Settings:			
	Us	er Name:	]	Password:	
	Ту	continuous	*	Idle Time (min):	
	w	AN IP Settings:			
	Ту	be:	Fixed IP	DHCP	
	Lo	cal IP Address:		Remote IP Address:	
	Ne	tmask:			
	De	fault Route:	Disable	Enable	Auto
	Un	numbered:			
		Connect Disco	Add	Modify Delete	Undo Refresh
	۲	Current ATM VC Table	e:		
	Sele	ect Inf Mode VPI VO	CI Encap NAPT IGMP DRout	te IP Addr Remote IP Net	Mask User Name Status Edit

The following table describes the parameters of this page.

Field	Description
Default Route	You can select Auto or Specified.
Selection	
	The virtual path between two points in an ATM network, ranging
VFI	from 0 to 255.

	Description
Field	Description
	The virtual channel between two points in an ATM network,
VCI	ranging from 32 to 65535 (1 to 31 are reserved for known
	protocols)
Encapsulation	You can choose <b>LLC</b> and <b>VC-Mux</b> .
Channel Mode	You can choose 1483 Bridged, 1483 MER, PPPoE, PPPoA, 1483
	Routed or IPoA.
	Select it to enable Network Address Port Translation (NAPT)
Enable NAPT	function. If you do not select it and you want to access the Internet
	normally, you must add a route on the uplink equipment.
	Otherwise, the access to the Internet fails. Normally, it is enabled.
Enable IGMP	You can enable or disable Internet Group Management Protocol
	(IGMP) function.
IP Protocol	Select this interface support ipv4/ipv6, ipv4 or ipv6.
PPP Settings	
Liser Name	Enter the correct user name for PPP dial-up, which is provided by
User Marine	your ISP.
Password	Enter the correct password for PPP dial-up, which is provided by
Fassworu	your ISP.
Туре	You can choose Continuous, Connect on Demand or Manual.
	If set the type to Connect on Demand, you need to enter the idle
Idlo Timo (min)	timeout time. Within the preset minutes, if the router does not
idle i fille (fillif)	detect the flow of the user continuously, the router automatically
	disconnects the PPPoE connection.
WAN IP Settings	
	You can choose <b>Fixed IP</b> or <b>DHCP</b> .
	• If select <b>Fixed IP</b> , you should enter the local IP address, remote IP
Туре	address and subnet mask.
	• If select <b>DHCP</b> , the router is a DHCP client, the WAN IP address is
	assigned by the remote DHCP server.
Local IP	Enter the IP address of WAN interface provided by your ISP.
Address	
Netmask	Enter the subnet mask of the local IP address.
Unnumbered	Select this checkbox to enable IP unnumbered function.
IPv6 WAN	Set ipv6 wan setting if this interface support ipv6
Setting	
Address Mode	Select this interface support Slaac or Static to generate wan ipv6

Field	Description
	addresses.
Enable DHCPv6	Enable or disable dhcpv6 client on this interface, if enable, user can
Client	specify if the dhcpv6 client request Address or request Prefix.
Add	After configuring the parameters of this page, click it to add a new
Auu	PVC into the Current ATM VC Table.
	Select a PVC in the Current ATM VC Table, then modify the
Modify	parameters of this PVC. After finishing, click it to apply the settings
	of this PVC.
Doloto	Select a PVC in the Current ATM VC Table, and then click Delete to
Delete	delete it
	This table shows the existed PVCs. It shows the interface name,
Current ATM	channel mode, VPI/VCI, encapsulation mode, local IP address,
VC Table	remote IP address and other information. The maximum item of this
	table is eight.

After proper settings, click Add and the following page appears.

Ourrent ATM VC Table:														
Select	Inf	Mode	VPI	vcı	Encap	NAPT	IGMP	DRoute	IP Addr	Remote IP	NetMask	User Name	Status	Edit
O	pppoe1	PPPoE	8	35	LLC	On	Off	Off	0.0.0.0	0.0.0.0	255.255.255.255	12345678	down	<i>i</i> 🗇
O	pppoe2	PPPoE	0	35	LLC	On	Off	On	0.0.0.0	0.0.0.0	255.255.255.255	123456	down	<i>/</i>

Click 🖋 in the **PPPoE** mode, the page shown in the following figure appears. In this page,

you can configure parameters of this PPPoE PVC.

Protocol:	PPPoE	
ATM VCC:	8/35	
Login Name:	12345678	
Password:	•••••	
Authentication Method:	AUTO -	
Connection Type:	Continuous	
dle Time (s):	0	
Bridge:	Bridged Ethernet (Transparent Bridging)	
	Bridged PPPoE (implies Bridged Ethernet)	
	Oisable Bridge	
AC-Name:		
Service-Name:		
302.1q:	Oisable O Enable	
/LAN ID(1-4095):	0	
MTU (1-1500):	1492	
Static:		
Source Mac address:	00:19:E0:01:66:90 (ex:00:E0:86:71:05:02) MACCLONE	

The following table describes the parameters and buttons of this page.

Field	Description
Protocol	It displays the protocol type used for this WAN connection.
ATM VCC	The ATM virtual circuit connection assigned for this PPP interface (VPI/VCI).
Login Name	The user name provided by your ISP.

Field	Description
Password	The password provided by your ISP.
Authenticatio	You can choose AUTO, PAP or CHAP.
n Method	
Connection	You can choose Continuous, Connect on Demand or Manual.
Туре	
Idle Time (s)	If choose <b>Connect on Demand</b> , you need to enter the idle timeout
	time. Within the preset minutes, if the router does not detect the
	flow of the user continuously, the router automatically disconnects
	the PPPoE connection.
Bridge	You can select Bridged Ethernet, Bridged PPPoE or Disable Bridge.
AC-Name	The accessed equipment type.
Service-Name	The service name.
802.1q	You can select <b>Disable</b> or <b>Enable</b> . After enable it, you need to enter
	the VLAN ID. The value ranges from 1 to 4095.
Apply	Click it to save the settings of this page temporarily.
Changes	
Return	Click it to return to the Channel Configuration page.
Reset	Click it to refresh this page.
Source Mac	The MAC address you want to clone.
address	
MAC Clone	Click it to enable the MAC Clone function with the MAC address that
	is configured.

### 4.1.3.2. ATM Setting

Click **ATM** in the left pane, the page shown in the following figure appears. In this page,

you can configure the parameters of the ATM, including QoS, PCR, CDVT, SCR and MBS.

Status	us Wizard Setup		Advar	nced	Service	Firewall	Maintenance		
> WAN		ATM Settings This page is used to configure the parameters for the ATM of your ADSL Router. Here you may change the setting for QoS, PCR,CDVT, SCR and MBS.							
> WAN		VPI:		VCI:	Q	os: UBR 🔻			
> ADSL		PCR:		CDVT:	S		MBS:		
		Adsl Retrai	n: Appl	ly Changes	Undo				
WLAN		Current ATM VC Table:							
		Select	VPI	VCI Qo	S PCR	CDVT	SCR	MBS	
		O	8	35 UB	R 6144	0			
		O	0	35 UB	R 6144	0	-	-	

The following table describes the parameters of this page.

Field	Description			
VPI	The virtual path identifier of the ATM PVC.			
VCI	The virtual channel identifier of the ATM PVC.			
QoS	The QoS category of the PVC. You can choose UBR, CBR, rt-VBR or			
	VBR.			
PCR	Peak cell rate (PCR) is the maximum rate at which cells can be			
	transmitted along a connection in the ATM network. Its value ranges			
	from 1 to 65535.			
CDVT	Cell delay variation tolerance (CDVT) is the amount of delay permitted			
	between ATM cells (in microseconds). Its value ranges from 0 to			
	4294967295.			
SCR	Sustain cell rate (SCR) is the maximum rate that traffic can pass over a			
	PVC without the risk of cell loss. Its value ranges from 0 to 65535.			
MBS	Maximum burst size (MBS) is the maximum number of cells that can be			
	transmitted at the PCR. Its value ranges from 0 to 65535.			

### 4.1.3.3. ADSL Setting

Click ADSL in the left pane, the page shown in the following figure appears. In this page,

you can select the DSL modulation. Generally you need to remain this factory default

settings. The router negotiates the modulation modes with the DSLAM.
Status Wizard	Setup A	dvanced	Service	Fi	rewall	I.	Maintenance	
S WAN	ADSL Settings This page allows you to o	choose which A	ADSL modulation setti	ngs your mo	dem router	will sup	pport.	
> WAN			🔲 G.Lite					
> ATM	ADSL modulation:		G.Dmt					
> ADSL			V T1.413					
			ADSL2					
VLAN			ADSL2+					
	AnnexL Option:		Enabled					
	AnnexM Option:		Enabled					
	ADSI Capability		🛛 Bitswap Enable	e				
	ADSL Capability:		🛛 SRA Enable					
	Apply Changes							

# 4.1.4. LAN

## 4.1.4.1. LAN

Click **LAN** in the left pane, the page shown in the following figure appears.

In this page, you can change IP address of the router. The default IP address is

192.168.1.1, which is the private IP address of the router.

Status Wizard	Setup Advanced	Service	Firewall	Maintenance
• WAN	LAN Interface Setup This page is used to configure the LAI mask, etc	N interface of your ADSL Router. H	lere you may change	the setting for IP addresss, subi
> LAN	Interface Name:	Ethernet1		
> LAN > DHCP	IP Address:	192.168.1.1		
> DHCP Static	Subnet Mask:	255.255.255.0		
VLAN	Secondary IP			
	IGMP Snooping:	Disable	© Er	nable
	Apply Changes			
	LAN Port:			
	Link Speed/Duplex Mode:			
	Modify			
	ETHERNET Status Table:			
	Select	Port		Link Mode
	0	LAN1		AUTO Negotiation
	O	LAN2		AUTO Negotiation
	O	LAN3		AUTO Negotiation
	O	LAN4		AUTO Negotiation
	MAC Address Control:	🛛 LAN1 🖾 LAN2 🗌 LAN	N3 🔲 LAN4 🔲 V	VLAN
	Apply Changes			
	New MAC Address:	Add	d	
	Current Allowed MAC Addr	ess Table:		
	MAC Add	r		Action

The following table describes the parameters of this page.

Field	Description
	Enter the IP address of LAN interface. It is recommended to use an
IP Address	address from a block that is reserved for private use. This address block
	is 192.168.1.1- 192.168.255.254.
Subnet	Enter the subnet mask of LAN interface. The range of subnet mask is
Mask	from 255.255.0.0-255.255.255.254.
Secondary	Select it to enable the secondary LAN IP address. The two LAN IP
IP	addresses must be in the different network.
LAN Port	You can choose the LAN interface you want to configure.
Link	You can select the following modes from the drop-
Speed/Dupl	downlist: 100Mbps/FullDuplex, 100Mbps/Half
ex Mode	Duplex,10Mbps/FullDuplex,10Mbps/Half Duplex and Auto Negotiation.
Modify	Select the index from Ethernet status table, and then click modify.

Field	Description
Ethernet	It shows the current Ethernet status list
Status Table	
MAC	
Address	Select the LAN interface on which you want to run MAC Address Control.
Control	
New MAC	A MAC address to be added
Address	A MAC address to be added.
Current	
Allowed	
MAC	It shows the current allowed MAC address list.
Address	
Table	

# 4.1.4.2. DHCP

Click **DHCP** in the left pane, the page shown in the following figure appears.

Status Wizard	<b>Setup</b> Advar	ced Service Firewall Maintenance
V WAN LAN LAN	DHCP Mode This page can be used to con (1)Enable the DHCP Server if hosts on your LAN. The device (2)Enable the DHCP Relay if y the DHCP server ip address. (3)If you choose "None", then f	ig the DHCP mode:None,DHCP Relay or DHCP Server. You are using this device as a DHCP server. This page lists the IP address pools available distributes numbers in the pool to hosts on your network as they request Internet access. ou are using the other DHCP server to assign IP address to your hosts on the LAN. You can he modem will do nothing when the hosts request a IP address.
> DHCP	LAN IP Address:	192.168.1.1
> DHCP Static	Subnet Mask:	255.255.255.0
VLAN	DHCP Mode	DHCP Server 💌
	Interface:	♥ LAN1 ♥ LAN2 ♥ LAN3 ♥ LAN4 ♥ WLAN ♥ VAP0 ♥ VA ♥ VAP2 ♥ VAP3
	IP Pool Range	192.168.1.2 - 192.168.1.254 Show Client
	Subnet Mask:	255.255.255.0
	Default Gateway:	192.168.1.1
	Max Lease Time:	1440 minutes
	Domain Name:	domain.name
	DNS Servers:	192.168.1.1
	Apply Changes	Undo
	Set VendorClass IP	Range

The following table describes the parameters of this page.

Field	Description
рнср	If set to DHCP Server, the router can assign IP addresses, IP default gateway
Modo	and DNS Servers to the host in Windows95, Windows NT and other
woue	operation systems that support the DHCP client.
IP Pool	It specifies the first IP address in the IP address pool. The router assigns IP
Range	address that base on the IP pool range to the host.
Pool Size	It allows the size machines that can be set up
Show	Click it, the Active DHCP Client Table appears. It shows IP addresses
Client	assigned to clients.
Default	Enter the default gateway of the IP address pool.
Gateway	
Max Lease The lease time determines the period that the host retains the ass	
Time	addresses before the IP addresses change.
	Enter the domain name if you know. If you leave this blank, the domain
Domain	name obtained by DHCP from the ISP is used. You must enter host name
Name	(system name) on each individual PC. The domain name can be assigned
	from the router through the DHCP server.
DNS	You can configure the DNS server ip addresses for DNS Relay.
Servers	
Set	Click it, the Device IP Range Table page appears. You can configure the IP
VendorCla	address range based on the device type.
ss IP	
Range	

Click **Show Client** in the **DHCP Mode** page, the page shown in the following figure

appears. You can view the IP address assigned to each DHCP client.

Ŷ				
Name	IP Address	MAC Address	Expiry(s)	Туре

Field	Description
IP Address	It displays the IP address assigned to the DHCP client from the router.
	It displays the MAC address of the DHCP client.
MAC	Each Ethernet device has a unique MAC address. The MAC address is
Address	assigned at the factory and it consists of six pairs of hexadecimal
	character, for example, 00-A0-C5-00-02-12.
Expiry (c)	It displays the lease time. The lease time determines the period that the
	host retains the assigned IP addresses before the IP addresses change.
Refresh	Click it to refresh this page.
Close	Click it to close this page.

The following table describes the parameters and buttons in this page.

Click Set VendorClass IP Range in the DHCP Mode page, the page as shown in the

following figure appears. In this page, you can configure the IP address range based on

the device type.

levice name:					
tart address:					
nd address:					
outer address:					
ption60					
add delete	modify Close				
IP Range Table:					
select:	device name:	start address:	end address:	default gateway:	option60:

Choose None in the DHCP Mode field, and the page shown in the following figure

appears.

DHCP Mode This page can be used to cont (1)Enable the DHCP Server if hosts on your LAN. The device (2)Enable the DHCP Relay if y the DHCP server ip address. (3)If you choose "None", then t	fig the DHCP mode:None,DHCP Relay or DHCP Server. you are using this device as a DHCP server. This page lists the IP address pools available to a distributes numbers in the pool to hosts on your network as they request Internet access. you are using the other DHCP server to assign IP address to your hosts on the LAN. You can set the modern will do nothing when the hosts request a IP address.
LAN IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0
DHCP Mode	None
Apply Changes	Undo
Set VendorClass IP	Range

In the DHCP Mode field, choose DHCP Relay. The page shown in the following figure

# appears.

HCP Mode his page can be used to conf DEnable the DHCP Server if y osts on your LAN. The device DEnable the DHCP Relay if y the DHCP server ip address.	g the DHCP mode:None,DHCP Relay or DHCP Server. ou are using this device as a DHCP server. This page lists the IP address pools available to distributes numbers in the pool to hosts on your network as they request Internet access. ou are using the other DHCP server to assign IP address to your hosts on the LAN. You can set he modem will do nothing when the hosts request a IP address.
LAN IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0
DHCP Mode	DHCP Relay 🔻
Relay Server:	192.168.2.242
Apply Changes	Undo
Set VendorClass IP	Range

The following table describes the parameters and buttons of this page.

Field	Description
	If set to DHCP Relay, the router acts a surrogate DHCP Server and relays
	the DHCP requests and reponses between the remote server and the
wode	client.
Relay	Enter the DHCP server address provided by your ISP.
Server	
Apply	Click it to save the settings of this page.

Field	Description
Changes	
Undo	Click it to refresh this page.

### 4.1.4.3. DHCP Static

Click **DHCP Static** in the left pane, the page shown in the following figure appears. You

can assign the IP addresses on the LAN to the specific individual PCs based on their MAC

### address.

P Address:		0.0.0.0			
lac Address:	[	00000000000	(ex. 00E08671050	)2)	
Add Del	lete Selected	Undo			

The following table describes the parameters and buttons of this page.

Field	Description
IP Address	Enter the specified IP address in the IP pool range, which is assigned to
	the host.
MAC Address	Enter the MAC address of a host on the LAN.
Add	After entering the IP address and MAC address, click it. A row will be
	added in the DHCP Static IP Table.
Delete	Select a row in the <b>DHCP Static IP Table</b> , then click it, this row is deleted.
Selected	
Undo	Click it to refresh this page.
DHCP Static	It shows the assigned IP address based on the MAC address.
IP Table	

# 4.1.5. WLAN

Choose Setup > WLAN. The WLAN page that is displayed contains Basic, Security,

MBSSID, Access Control, Advanced and WPS.

### 4.1.5.1. Basic Settings

Choose WLAN > Basic, and the following page appears. In this page, you can configure

the parameters for wireless LAN clients that may connect to the modem.

Status Wizard	Setup Advanced	Service Firewall Maintenance
V WAN	Wireless Basic Settings This page is used to configure the parameter	ers for your wireless network.
LAN	Disable Wireless LAN Interface	
D WLAN	Band:	2.4 GHz (B+G+N) 🔻
> Basic	Mode:	AP 🔹
> MBSSID	S SID:	WLAN_Emvr
> Access Control List		
> Advanced	Channel Width:	40MHZ -
> WPS	Control Sideband:	Upper -
	Channel Number:	Auto  Current Channel: 11
	Radio Power (Percent):	100% •
	Associated Clients:	Show Active Clients
	Apply Changes	

The following table describes the parameters of this page.

Field	Description
Band	Choose the working mode of the modem. You can choose from drop- down list. 2.4 GHz (B+G+N) 2.4 GHz (B) 2.4 GHz (B) 2.4 GHz (G) 2.4 GHz (B+G) 2.4 GHz (N) 2.4 GHz (G+N) 2.4 GHz (B+G+N)
Mode	Choose the network model of the modem, which is varied according to the software. By default, the network model of the modem is <b>AP</b> .
SSID	The service set identification (SSID) is a unique name to identify the modem in the wireless LAN. Wireless stations associating to the modem

|--|

Field	Description				
	must have the same SSID. Enter a descriptive name that is used when				
	the wireless client connecting to the modem.				
Broadcast	Enable or disable this function.				
SSID					
Channel	You can choose <b>20MHZ</b> , <b>40MHZ</b> or <b>20/40MHZ</b> .				
Width					
Control	You can choose Upper or Lower.				
Sideband					
Country/Are	Select the country from the drop-down list.				
а					
Channel Number	A channel is the radio frequency used by 802.11b/g/n wireless devices. You should use a different channel from an adjacent AP to reduce the				
	interference. Interference and degrading performance occurs when				
	radio signal from different APs overlap. Choose a channel from the				
	drop-down list box.				
De die Deuren	You can choose the transmission power of the radio signal. The default				
Radio Power	one is <b>100%</b> . It is recommended to choose the default value <b>100%</b> .				
Show Active	Click it to view the information of the wireless clients that are				
Clients	connected to the modem.				
Apply	Click it to apply the settings temporarily. If you want to save the settings				
Changes	of this page permanently, click <b>Save</b> in the lower left corner.				

# 4.1.5.2. Security

Choose **WLAN** > **Security**, and the following page appears.

Status	Wizard	temp	Advanced	Service	Firewall	Maintenance
		Wireless Sec This page allows	curity Setup	ss security. Turn on WEP o	or WPA by using Encryp	tion Keys could prevent any unauthorized
		SSID TYPE:	Teless network.	Root OVAP0	© VAP1 © VAP2	© VAP3
<ul> <li>Basic</li> </ul>	_	Encryption:		WPA2(AES) -		
> Security		Use 802.*	1x Authentication	WEP 64bits	WEP 128bits	
> MBSSID		WPA Authenti	cation Mode:	Enterprise (RADIU)	IS) 💿 Personal (Pre	-Shared Key)
> Access Contro	l List	Pre-Shared K	ey Format:	Passphrase	•	
> Advanced		Pre-Shared K	ey:	****	1	
> WPS		Authentication	n RADIUS Server:	Port 1812 IP add	dress	Password
		Note: When er	ncryption WEP is sele	ected, you must set WEP ke	ey value.	
		Apply Cha	nges			

The following table describes the parameters of this page.

Field	Description
SSID Type	Service Set Identifier, is a name of a local area network
	Configure the wireless encryption mode. You can choose None, WEP,
	WPA (TKIP), WPA (AES), WPA2 (AES), WPA2 (TKIP) or WPA2 Mixed.
	<ul> <li>Wired equivalent privacy0 (WEP) encrypts data frames before</li> </ul>
	transmitting over the wireless network.
	• Wi-Fi protected access (WPA) is a subset of the IEEE802.11i security
Encryption	specification draft.
	• WPA2 Mixed is the collection of WPA and WPA2 encryption modes.
	The wireless client establishes the connection between the modem
	through WPA or WPA2.
	Key differences between WPA and WEP are user authentication and
	improved data encryption.
Sot WED Koy	It is available when you set the encryption mode to WEP. Click it, the
Set WLF Key	Wireless WEP Key Setup page appears.
	• Select Personal (Pre-Shared Key), enter the pre-shared key in the
WPA Authenticati	Pre-Shared Key field.
	• Select Enterprise (RADIUS), enter the port, IP address, and password
	of the Radius server. You need to enter the username and password
	provided by the Radius server when the wireless client connects the
on Mode	modem.
	If the encryption is set to <b>WEP</b> , the modem uses 802.1 X authentication,
	which is Radius authentication.

Click **Set WEP Key**, and the following page appears.

SSID TYPE:	
Encryption:	WEP
Key Length:	64-bit 💌
Key Format:	Hex (10 characters) 🔻
Default Tx Key:	Key 1 💌
Encryption Key 1:	******
Encryption Key 2:	****
Encryption Key 3:	******
Encryption Key 4:	****
Use 802.1x Authentication	WEP 64bits  WEP 128bits
WPA Authentication Mode:	Enterprise (RADIUS)      Personal (Pre-Shared Key)
Pre-Shared Key Format:	Passphrase v
Pre-Shared Key:	*****
Authentication RADIUS Server:	Port 1812 IP address 0.0.0.0 Password

The following describes the parameters of this page.

Field	Description			
Key Length	Choose the WEP key length. You can Choose 64-bit or 128-bit.			
Key Format	<ul> <li>If you choose 64-bit, you can choose ASCII (5 characters) or Hex (10</li> </ul>			
	characters).			
	<ul> <li>If you choose 128-bit, you can choose ASCII (13 characters) or Hex (26</li> </ul>			
	characters).			
Default Tx	Choose the index of WEP Key. You can choose Key 1, Key 2, Key 3 or Key			
Кеу	4.			
	The Encryption keys are used to encrypt the data. Both the modem and			
	wireless stations must use the same encryption key for data transmission.			
Encryption	<ul> <li>If you choose 64-bit and ASCII (5 characters), enter any 5 ASCII</li> </ul>			
Key 1 to 4	characters.			
	<ul> <li>If you choose 64-bit and Hex (10 characters), enter any 10</li> </ul>			
	hexadecimal characters.			

Field	Description
	<ul> <li>If you choose 128-bit and ASCII (13 characters), enter any 13 ASCII</li> </ul>
	characters.
	<ul> <li>If you choose 128-bit and Hex (26 characters), enter any 26</li> </ul>
	hexadecimal characters.
Apply	Click it to apply the settings temporarily. If you want to save the settings
Changes	of this page permanently, click <b>Save</b> in the lower left corner.

### 4.1.5.3. Multi-BSSID

Choose WLAN > MBSSID, and the following page appears. In this page, you can configure

the multi-BSSID of the wireless clients.

Status Wizard	electrice Advanced	Service Firewall Maintenance
	Wireless Multiple BSSID Setu This page allows you to set virutal access	up ss points(VAP), Here you can enable/disable virtual AP, and set its SSID and
WAN	authentication type. click "Apply Change	s" to take it effect.
LAN	Enable VAP0	
WLAN	S SID:	RTL867x-ADSL_0
Security		
MBSSID		Crashe Disable
Access Control List		Enable Uisable
Advanced		Open System O Shared Key @ Auto
NPS	Enable VAP1	
	S SID:	RTL867x-ADSL_1
	broadcast SSID:	e Enable
	Relay Blocking:	Enable      Isable     Isable
	Authentication Type:	Open System Shared Key Auto
	Enable VAP2	
	S SID:	RTL867x-ADSL_2
	broadcast SSID:	Enable Disable
	Relay Blocking:	Enable
	Authentication Type:	Open System Shared Key Auto
	Enable VAP3	
	S SID:	RTL867x-ADSL_3
	broadcast SSID:	enable
	Relay Blocking:	Enable      Isable     Isable
	Authentication Type:	Open System Shared Key Auto

It supports 4 virtual access points (VAPs). It is a unique name to identify the modem in the

wireless LAN. Wireless stations associating to the modem must have the same name.

Enter a descriptive name that is used when the wireless client connecting to the modem.

### 4.1.5.4. Access Control

Choose **WLAN** > **Access Control List**, and the following page appears. In this page, you can configure the access control of the wireless clients.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance
V WAN		Wireless Acco If you choose 'Allor connect to your Ac Access Point.	ess Control wed Listed', only those cess Point. When 'Deny	clients whose wireless Listed' is selected, the	MAC addresses are in th se wireless clients on the	e access control list will be able to list will not be able to connect the
VLAN		Wireless Acce	ess Control Mode:	able 🔻	Apply Changes	
> Basic		MAC Address:		ex. 00E086710502)	Add Reset	
> MBSSID		Ourrent Action	ccess Control List:			
Access Control Lis	st		MAG	C Address		Select
Advanced						
> WPS		Delete Sel	ected Dele	te All		

Choose **Allow Listed** as the access control mode to enable white list function. Only the devices whose MAC addresses are listed in the **Current Access Control List** can access the modem

modem.

Choose **Deny Listed** as the access control mode to to enable black list function. The devices whose MAC addresses are listed in the **Current Access Control List** are denied to

access the modem.

### 4.1.5.5. Advanced

Choose **Wireless** > **Advanced**, and the following page appears. In this page, you can configure the wireless advanced parameters. It is recommended to use the default parameters.

ONOTE:

The parameters in the Advanced are modified by the professional personnel, it is

recommended to keep the default values.

Authentication Type:	💿 Open System 💿 Shared Key 💿 Auto
Fragment Threshold:	2346 (256-2346)
RTS Threshold:	2347 (0-2347)
Beacon Interval:	100 (20-1024 ms)
DTIM Interval:	1 (1-255)
Data Rate:	Auto 👻
Preamble Type:	Iong Preamble Short Preamble
Broadcast SSID:	Inabled Disabled
Relay Blocking:	Enabled   Disabled
Ethernet to Wireless Blocking:	Enabled      Disabled
Wifi Multicast to Unicast:	Enabled Disabled
Aggregation:	Inabled Insabled
Short GI:	Enabled O Disabled

The following table describes the parameters of this page.

Field	Description			
	Select the modem operating in the open system or encryption			
	authentication. You can choose <b>Open System, Shared Key</b> or <b>Auto</b> .			
Authenticat	<ul> <li>In the open system, the wireless client can directly connect to the</li> </ul>			
ion	device			
<ul> <li>In the encryption authentication, the wireless client connection</li> </ul>				
	modem through the shared key.			
	Choose the transmission rate of the wireless data.			
Data Rate	You can choose Auto, 1 M, 2 M, 5.5 M, 11 M, 6 M, 9 M, 12 M, 18 M, 24			
	M, 36 M, 48 M, 54M, MSC0 ~ MSC7.			
Droamblo	• Long Preamble: It means this card always use long preamble.			
Tuno	<ul> <li>Short Preamble: It means this card can support short preamble</li> </ul>			
туре	capability.			

Field	Description
	Select whether the modem broadcasts SSID or not. You can select Enable
Broadcast	or <b>Disable</b> .
SSID	<ul> <li>Select Enable, the wireless client searches the modem through</li> </ul>
5510	broadcasting SSID.
	<ul> <li>Select <b>Disable</b> to hide SSID, the wireless clients can not find the SSID.</li> </ul>
Relay	Wireless isolation. Select Enable, the wireless clients that are connected
Blocking	to the modem can not intercommunication.
Ethernet to	Whether the wireless network can communicate with the Ethernet
Wireless	network or not.
Blocking	
Wifi	Enable it to using unicast to transmit multicast packet
Multicast to	
Unicast	
Aggregation	It is applied when the destination end of all MPDU are for one STA.
Short Cl	It is not recommended to enable GI in obvious environment of Multi-
Short Gr	path effect.
Apply	Click it to apply the settings temporarily. If you want to save the settings
Changes	of this page permanently, click <b>Save</b> in the lower left corner.

# 4.1.5.6. WPS

Choose **WLAN** > **WPS** and the following page appears.

VPS Status:	Configured Our UnConfigured	
Self-PIN Number:	09811041 Regenerate F	NIN
Push Button Configuration:	S	tart PBC
Push Button Configuration: Apply Changes	Reset	tart PBC
Push Button Configuration: Apply Changes	teset	tart PBC

There are two ways for the wireless client to establish the connection with the modem through WPS. The modem generates PIN, see the above figure. Click **Regenerate PIN** to generate a new PIN, and then click **Start PBC**, In the wireless client tool, enter the PIN which is generated by the modem, start connection. The client will automatically establish the connection with the modem through the encryption mode, and you need not to enter the key. The other way is the wireless client generates PIN. In the above figure, enter PIN of the wireless client in the **Client PIN Number** field, then click **Start PIN** to establish the connection.

🛄 Note:

The wireless client establishes the connection with the modem through WPS negotiation. The wireless client must support WPS

# 4.2. Advanced

In the navigation bar, click Advanced. The tab Advanced contains Route, NAT, QoS,

CWMP, Port Mapping and Others.

### 4.2.1. Route

Choose **Advanced** > **Route**, the page shown in the following figure appears. The page that is displayed contains **Static Route**, **RIP.** 

### 4.2.1.1. Static Route

Click Static Route in the left pane, the page shown in the following figure appears. This

page is used to configure the routing information. You can add or delete IP routes.

Status Wizard	Setup Advanced	Service	Firewall	Maintenand	e
> Route	Routing Configuration This page is used to configure the rou	ting information. Here you cai	n add/delete IP route	es.	
Static Route	Enable:				
> RIP	Destination:				
NAT	Subnet Mask:				
♥ QoS	Next Hop:				
Port Mapping	Metric:	1			
▼ Others	Interface:	pppoel 🗸			
	Add Route Update	Delete Selected	Show Ro	outes	
	Static Route Table:				
	Select State D	estination Su	bnet Mask	NextHop	Metric Itf

The following table describes the parameters and buttons of this page.

Field	Description
Enable	Select it to use static IP routes.
Destinat	Enter the IP address of the destination device.
ion	
Subnet	Enter the subnet mask of the destination device.
Mask	
Next	Enter the IP address of the next hop in the IP route to the destination device.
Нор	
Metric	The metric cost for the destination.
Interfac	The interface for the specified route.
е	
Add	Click it to add the new static route to the Static Route Table.
Route	
Update	Select a row in the Static Route Table and modify the parameters. Then click
	it to save the settings temporarily.
Delete	Select a row in the Static Route Table and click it to delete the row.
Selecte	
d	
Show	Click it, the IP Route Table appears. You can view a list of destination routes
Routes	commonly accessed by your network.
Static	A list of the previously configured static IP routes.

Field	Description
Route	
Table	

Click Show Routes, the page shown in the following figure appears. The table shows a list

of destination routes commonly accessed by your network.

IP Route Table This table shows a list of destination routes commonly accessed by your network.				
Destination	Subnet Mask	NextHop	Interface	
192.168.1.1	255.255.255.255	•	e1	

### 4.2.1.2. RIP

Click **RIP** in the left pane, the page shown in the following figure appears. If you are using

this device as a RIP-enabled router to communicate with others using Routing

Information Protocol (RIP), enable RIP. This page is used to select the interfaces on your

devices that use RIP, and the version of the protocol used.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance	
Route		RIP Configura Enable the RIP if ye Protocol.	<b>ation</b> ou are using this device as	a RIP-enabled route	er to communicate with	n others using the Routing In	formation
<ul> <li>Static Route</li> <li>RIP</li> </ul>		RIP:	۲	Off 🔘 On		Apply	
M NAT		interface:	LA	N 💌			
QoS		Recv Version:	RI	P1 🗸			
CWMP	g	Send Version:	RI	P1 🗸			
☑ Others		Add	Delete				
		③ Rip Config	List:				
		Select	interface	Recv	Version	Send Version	

The following table describes the parameters and buttons of this page.

Field	Description
RIP	Select <b>On</b> , the router communicates with other RIP-enabled devices.
Apply	Click it to save the settings of this page.
Interface	Choose the router interface that uses RIP.
Recv	Choose the interface version that receives RIP messages. You can choose
Version	RIP1, RIP2, or Both.

Field	Description							
	<ul> <li>Choose RIP1 indicates the router receives RIP v1 messages.</li> </ul>							
	<ul> <li>Choose RIP2 indicates the router receives RIP v2 messages.</li> </ul>							
	• Choose <b>Both</b> indicates the router receives RIP v1 and RIP v2 messages.							
Send	The working mode for sending RIP messages. You can choose RIP1 or							
Version	RIP2.							
	<ul> <li>Choose RIP1 indicates the router broadcasts RIP1 messages only.</li> </ul>							
	<ul> <li>Choose RIP2 indicates the router multicasts RIP2 messages only.</li> </ul>							
Add	Click it to add the RIP interface to the <b>Rip Configuration List</b> .							
Delete	Select a row in the <b>Rip Configuration List</b> and click it to delete the row.							

# 4.2.2. NAT

# 4.2.2.1. DMZ

Demilitarized Zone (DMZ) is used to provide Internet services without sacrificing

unauthorized access to its local private network. Typically, the DMZ host contains devices

accessible to Internet traffic, such as web (HTTP) servers, FTP servers, SMTP (e-mail)

servers and DNS servers.

Click **NAT>DMZ** in the left pane, the page shown in the following figure appears.

The following describes how to configure manual DMZ.

Step 1Select WAN Interface.

**Step 1**Enter an IP address of the DMZ host.

Step 2Click Apply Changes to save the settings of this page temporarily.

Status Wizard	Setup Advance	d Service Firev	vall Maintenance
▼ Route	DMZ A Demilitarized Zone is used to pr Typically, the DMZ host contains d servers and DNS servers.	ovide Internet services without sacrificing u evices accessible to Internet traffic, such as	nauthorized access to its local private network. Web (HTTP ) servers, FTP servers, SMTP (e-mail)
> DMZ	WAN Interface:	pppoe1	<b>v</b>
Virtual Server	DMZ Host IP Address:	I	
> ALG			
NAT Exclude IP	Apply Changes	Reset	
Port Trigger	Ourrent DMZ Table:		
> FTP ALG Port	Select	WAN Interface	DMZ Ip
> Nat IP Mapping	۲	pppoe1	192.168.1.20
<ul> <li>✓ QoS</li> <li>✓ CWMP</li> <li>✓ Port Mapping</li> <li>✓ Others</li> </ul>	Delete Selected		

## 4.2.2.2. Virtual Server

Click **Virtual Server** in the left pane, the page shown in the following figure appears.

Status Wizard	Setup Advanced	Service Firewall Maintenance
	Virtual Server	serve as alloce and accord the case of through the Catavan
Route	This page allows you to coming virtual se	erver, so others can access the server infolgin the Gateway.
NAT	Service Type:	
> DMZ	Osual Service Name:	AUTH 💌
Virtual Server	O User-defined Service Name:	
> ALG	Drotocoli	
> NAT Exclude IP	Protocol:	
Port Trigger	WAN Setting:	Interface 💌
> FTP ALG Port	WAN Interface:	pppoel 💌
> Nat IP Mapping	WAN Port:	113 (ex. 5001:5010)
V QoS	LAN Open Port:	113
CWMP     Port Mapping	LAN Ip Address:	
V Others	Apply Changes	
	💿 Current Virtual Server Forwa	arding Table:
	ServerName Protocol Loc	cal IP Address Local Port WAN IP Address WAN Port State Action

The following table describes the parameters of this page.

Field	Description
Service	You can select the common service type, for example, AUTH, DNS, FTP or
Туре	POP3. You can also define a service name.

Field	Description					
	<ul> <li>If you select Usual Service Name, the corresponding parameter has</li> </ul>					
	the default settings.					
	<ul> <li>If you select User-defined Service Name, you need to enter the</li> </ul>					
	corresponding parameters.					
Protocol	Choose the transport layer protocol that the service type uses. You can					
PIOLOCOI	choose <b>TCP</b> or <b>UDP</b> .					
WAN	You can choose Interface or IP Address.					
Setting						
WAN	Choose the WAN interface that will apply virtual server.					
Interface						
WAN Port	Choose the access port on the WAN.					
LAN Open	Enter the port number of the specified service type.					
Port						
LAN IP	Enter the IP address of the virtual server. It is in the same network					
Address	segment with LAN IP address of the router.					

### 4.2.2.3. ALG

Click ALG in the left pane, the page shown in the following figure appears. Choose the

NAT ALG and Pass-Through options, and then click **Apply Changes**.

Status Wizard	Setup Advanced	Service	Firewall	Maintenance
▼ Route	NAT ALG and Pass-Throug Setup NAT ALG and Pass-Through co	<b>h</b> nfiguration		
▶ NAT	IPSec Pass-Through:	Enable		
> DMZ	L2TP Pass-Through:	Enable		
> Virtual Server	PPTP Pass-Through:	✓ Enable		
> ALG	FTP:	Enable		
> NAT Exclude IP	H.323:	Enable		
> Port Trigger	SIP:	Enable		
> FTP ALG Port	RTSP:	Inable		
Nat IP Mapping	ICQ:	✓ Enable		
V QoS	MSN:	Enable		
CWMP	Apply Changes Re	sof		
Port Mapping	Apply changes			
V Others				

### 4.2.2.4. NAT Exclude IP

Click **NAT Exclude IP** in the left pane, the page shown in the following figure appears.

In the page, you can configure some source IP addresses which use the purge route mode

when accessing internet through the specified interface.

Status	Wizard	Setup	Advanced	Service	Firev	vall Main	tenance
Noute		NAT EXCLUE This page is used specified interface	DE IP to config some source	e ip address which	i use the purge rou	te mode when access i	nternet through the
> NAT > DMZ		interface:		рррое1 🗸			
Virtual Server		IP Range:					
> ALG		Apply Chan	ges Rese	ət			
NAT Exclude IP		Current N/	T Evoludo ID Toble				
Port Trigger		Current NA	T EXClude IP Table	s.			
FTP ALG Port			WAN Interface		Low IP	High IP	Action
Nat IP Mapping							
QoS							
🗹 СММР							
Port Mappir	ng						
V Others							

# 4.2.2.5. Port Trigger

Click **Port Trigger** in the left pane, the page shown in the following figure appears.

AT	Net Dart Trimer		0					
Z	- Nat Port Ingger	:	O Enable (	Disable				
tual Server	Apply Chang	jes						
i	Application Type	9:						
Exclude IP		iantian Nama			Select On			
t Trigger	Usual Appl	ication Name:			ociect on	· .		
PALG Port	O User-defin	ed Application Na	ime:					
t IP Mapping								
	Start Match Port	End Match Port	Trigger Protocol	Start Relate	Port End	Relate Port Open I	Protocol	Nat Typ
oS			UDP 💌			UDP	*	outgoing
WMP			UDP 💌			UDP	~	outgoing
ort Mapping						LIDP	~	outgoing
thers								outgoing
			UDP 💌			UDP	*	outgoing
			UDP 💌			UDP	*	outgoing
			UDP 💌			UDP	*	outgoing
			UDP 💌			UDP	*	outgoing

Click the Usual Application Name drop-down menu to choose the application you want

to setup for port triggering. When you have chosen an application the default Trigger

settings will populate the table below.

If the application you want to setup isn't listed, click the User-defined Application Name

radio button and type in a name for the trigger in the Custom application field. Configure

the Start Match Port, End Match Port, Trigger Protocol, Start Relate Port, End Relate

Port, Open Protocol and Nat type settings for the port trigger you want to configure.

When you have finished click the **Apply changes** button.

#### 4.2.2.6. FTP ALG PORT

Click **FTP ALG PORT** in the left pane, the page shown in the following figure appears.

This page is used to configure FTP Server ALG and FTP Client ALG ports.

Status Wizard	Setup Ad	vanced Service	Firewall	Maintenance	
V Route	FTP ALG Configura This page is used to confi	ation gure FTP Server ALG and FTP Clier	nt ALG ports .		
NAT DMZ	FTP ALG port:				
Virtual Server	Add Dest Ports	Delete Selected Des	tPort		
> ALG	S FTP ALG ports Ta	able:			
> NAT Exclude IP	Select		Ports		
Port Trigger	0		21		
FTP ALG Port					
> Nat IP Mapping					
V QoS					
CWMP					
Port Mapping					
✓ Others					

### 4.2.2.7. Nat IP Mapping

Click **Nat IP Mapping** in the left pane, the page shown in the following figure appears.

Entries in this table allow you to config one IP pool for specified source ip address from lan, so one packet which's source ip is in range of the specified address will select one IP address from pool for NAT.

Status Wizard	Setup Advanced Service Firewall Maintenance
	NAT IP MAPPING
▼ Route	Entries in this table allow you to config one IP pool for specified source ip address from lan, so one packet which's source ip is range of the specified address will select one IP address from pool for NAT.
> NAT > DMZ	Type: One-to-One
Virtual Server	Local Start IP:
> ALG	Local End IP:
NAT Exclude IP	Giobal Start IP:
Port Trigger	
Nat IP Mapping	
	Apply Changes Reset
V QoS	Ourrent NAT IP MAPPING Table:
CWMP	Local Start IP Local End IP Global Start IP Global End IP Action
Port Mapping     Others	Delete Selected Delete All

# 4.2.3. QoS

Choose **Advanced** > **QoS**, the page shown in the following figure appears. Entries in the **QoS Rule List** are used to assign the precedence for each incoming packet based on physical LAN port, TCP/UDP port number, source IP address, destination IP address and other information.

Status Wizard	Setup 🗛	dvanced Service	Firewall	Maintenance
V Route	IP QoS Entries in this table are u Config Procedure: 1: set traffic rule. 2: assign the precedence	sed to assign the precedence for each in e or add marker for different stream.	ncoming packet based	I on specified policy.
> QoS	IP QoS:	🔿 disable 💿 enab	le	
CWMP	Apply			
Port Mapping	QoS Policy:	stream based 💌		
V Others	Schedule Mode:	strict prior		

Step 1 Enable IP QoS and click Apply to enable IP QoS function.

Step 2Click add rule to add a new IP QoS rule.

The page shown in the following figure appears.

IP QoS:	O disable 💿 enable		
Apply			
QoS Policy:	stream based 💌		
Schedule Mode:	strict prior		
QoS Rule List:			
stream r	ule	behavio	r
src IP src Port dest IP	dest Port proto phy port prior	IP Precd IP ToS	802.1p wan ltf
Add rule Delete	Delete all		
Add QoS Rule			
Src IP:			
Src Mask:			
Dest IP:			
Dest Mask:			
Src Port:			
Dest Port:			
Protocol:			
Phy Port:	<b></b>		
set priority:	p3(Lowest) 💟		
insert or modify QoS mark			

The following table describes the parameters and buttons of this page.

Field	Description
IP QoS	Select to enable or disable IP QoS function. You need to enable IP QoS if
	you want to configure the parameters of this page.
QoS	You can choose stream based, 802.1p based or DSCP based.
Policy	
Schedule	You can choose <b>strict prior</b> or <b>WFQ (4:3:2:1)</b> .
Mode	
Source IP	The IP address of the source data packet.
Source	The subnet mask of the source IP address.
Mask	
Destinati	The IP address of the destination data packet.
on IP	
Destinati	The subnet mask of the destination IP address.
on Mask	
Source	The port of the source data packet.
Port	
Destinati	The port of the destination data packet.
on Port	
Protocol	The protocol responds to the IP QoS rules. You can choose TCP, UDP, ICMP
	or <b>TCP/UDP</b> .
Physical	The LAN interface responds to the IP QoS rules.
Port	
Set	The priority of the IP QoS rules. PO is the highest priority and P3 is the
priority	lowest.
802.1p	You can choose from 0 to 7.
delete	Select a row in the <b>QoS Rule list</b> and click it to delete the row.
delete all	Select all the rows in the <b>QoS Rule list</b> and click it to delete the rows.

# 4.2.4. **CWMP**

Choose **Advanced** > **CWMP**, the page shown in the following page appears. In this page,

you can configure the TR-069 CPE.

AC S:		
Enable:		
URL:	http://172.21.70.44/ope/?pd128	
User Name:	rtk	
Password:	rtk	
Periodic Inform Enable:	O Disable 💿 Enable	
Periodic Inform Interval:	300 seconds	
Connection Request:		
User Name:	rtk	
Password:	rtk	
Path:	/tr089	
Port:	7547	
Debug:		
ACS Certificates CPE:		
Show Message:	O Disable O Enable	
CPE Sends GetRPC:	Disable     Enable	
Skip MReboot:	Oisable O Enable	
Delay:	O Disable 💿 Enable	
Auto-Execution:	O Disable 💿 Enable	
Apply Changes	leset	
Certificate Management:		
CPE Certificate Password:	Client Apply Undo	
CPE Certificate:	Upload	Delete
CA Certificate:	词说 Upload	Delete

The following table describes the parameters of this page:

Field	Description
ACS	
URL	The URL of the auto-configuration server to connect to.
User Name	The user name for logging in to the ACS.
Password	The password for logging in to the ACS.
Periodic	Select Enable to periodically connect to the ACS to check whether the
Inform Enable	configuration updates.

Field	Description
Periodic	Specify the amount of time between connections to ACS.
Inform	
Interval	
Connection Re	quest
User Name	The connection username provided by TR-069 service.
Password	The connection password provided by TR-069 service.
Debug	
Show	Select <b>Enable</b> to display ACS SOAP messages on the serial console.
Message	
CPE sends	Select Enable, the router contacts the ACS to obtain configuration
GetRPC	updates.
Skip MReboot	Specify whether to send an MReboot event code in the inform
	message.
Delay	Specify whether to start the TR-069 program after a short delay.
Auto-	Specify whether to automatically start the TR-069 after the router is
Execution	powered on.

# 4.2.5. Port Mapping

Choose **Advanced** > **Port Mapping**, the page shown in the following page appears.

#### **Port Mapping Configuration**

To manipulate a mapping group: 1. Select a group from the table.

2. Select interfaces from the available/grouped interface list and add it to the grouped/available interface list using the arrow buttons

to manipulate the required mapping of the ports. 3. Click "Apply Changes" button to save the changes.

Note that the selected interfaces will be removed from their existing groups and added to the new group.

🔿 Disable 🤇	) Enable			
WAN  pppoe1  LAN LAN3 LAN4 wlan wlan-vap0 wlan-vap2 wlan-vap3		Add> <del< th=""><th></th><th></th></del<>		
Select		Interfaces		Status
Default	LAN1,LAN2,LAN3	3,LAN4,wlan,wlan-vap0,wlan-vap1,wlar	n-vap2,wlan-vap3,pppoe1	Enabled
Group1				-
O Group2				
Group2				-

Create four rules through Group1 to Group4. The procedure is as follows:

Step 1 Select Enable to enable port mapping.

**Step 2** Select Group1. Then the interfaces are added in the WAN and LAN table.

The following page appears.

Step 3Select the interfaces that are respectively added to WAN and LAN. Press Ctrl

while selecting multiple interfaces.

**Step 4**Click Add to add the interface to the rule.

# The following page appears.

Select a group from the Select interfaces from manipulate the require Click "Apply Changes" the that the selected in the selec	he table. the available/grouped int red mapping of the ports. " button to save the change nterfaces will be removed	erface list and add it to the gro es. d from their existing groups a	uped/available interface list using	the arrow bu
🔿 Disable 💿 I	Enable			
WAN pppoe1 LAN LAN3 LAN4 wlan wlan-vap0 wlan-vap2 wlan-vap3		Add> <del< th=""><th></th><th></th></del<>		
Select		Interfaces		State
Default	LAN1,LAN2,LAN3	LAN4,wlan,wlan-vap0,wlan-vap1,w	wlan-vap2,wlan-vap3,pppoe1	Enab
Group1				
O Group2				-
O Group3				

**Step 5**Click Apply to apply the settings, and the following page appears.

Port Mapping C To manipulate a map 1. Select a group from 2. Select interfaces fro to manipulate the requ 3. Click "Apply Change Note that the selected O Disable O WAN WAN LAN2 LAN2 LAN3 LAN4 wlan-vap0 wlan-vap1 wlan-vap2	Configuration bing group: the table. m the available/grouped inter uired mapping of the ports. es" button to save the changes i interfaces will be removed Enable	face list and add it to the grou i. from their existing groups and Add> <del< th=""><th>ped/available interface list using t d added to the new group.</th><th>he arrow buttons</th></del<>	ped/available interface list using t d added to the new group.	he arrow buttons
Select		Interfaces		Status
Default	LAN2,LAN3,	LAN4,wlan,wlan-vap0,wlan-vap1,w	lan-vap2,wlan-vap3	Enabled
⊙ Group1		LAN1,pppoe1		Enabled
O Group2				-
O Group3				-
O Group4				-
Apply				

In this example, only interfaces of pppoe1 and LAN1 can communicate with each other.

That is, only LAN1 can access the Internet through pppoe1 interface.

# 4.2.6. Others

Choose Advanced > Others. The page that is displayed contains Bridge Setting, Client Limit, Tunnel and Others.

### 4.2.6.1. Bridge Setting

Choose **Bridge Setting** in the left pane, the page shown in the following figure appears.

This page is used to configure the bridge parameters. You can change the settings or view

some information on the bridge and its attached ports.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance	
		Bridge Settin	g				
Route		This page is used and its attached po	to configure the bridge p orts.	arameters. Here you ca	an change the settings	or view some information on the t	bridge
NAT		Ageing Time:		300	(cocondo)		
QoS			_		(seconds)		
CWMP		802.1d Spannir	ng Tree:	O Disa	abled 🔘 Enabled		
Port Mappir	ıg	Apply Chap	goo Undo	Show MACo			
Dithers		Apply Chan	ges Undo	SHOW MACS			
Bridge Setting							
Client Limit							
> Others							

The following table describes the parameters and button of this page:

Field	Description
Ageing	If the host is idle for 300 seconds (default value), its entry is deleted from
Time	the bridge table.
Show	Click it to show a list of the learned MAC addresses for the bridge.
MACs	

Click Show MACs, the page shown in the following figure appears. This table shows a list

of learned MAC addresses for this bridge.

Forwarding Table			
MAC Address	Port	Туре	Aging Time
01:80:c2:00:00:00	0	Static	300
00:05:1d:03:04:05	0	Static	300
01:00:5e:00:00:09	0	Static	300
54:04:a6:97:37:b9	1(3)	Dynamic	300
ff.ff.ff.ff.ff.ff	0	Static	300
refresh			

# 4.2.6.2. Client Limit

Choose **Client Limit** in the left pane, the page shown in the following figure appears. This

page is used to configure the capability of forcing how many devices can access to the

Internet.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance
		Client Limit This page is use	Configuration ad to configure the cap	ability of force how ma	any device can access to	Internet!
Route						
MAT		Client Limit C	apability:	💿 Disable (	Enable	
QoS		Apply Ch	anges			
CWMP		Арруста	anges			
🛛 Port Mappi	ing					
D Others						
Bridge Setting	I					
Client Limit						
Others						

### 4.2.6.3. Others

Status Wizard	Setup Adv	anced Service	Firewall	Maintenance	
▼ Route ▼ NAT	Other Advanced Co Here you can set other mis Half Bridge: When enable H	nfiguration cellaneous advanced settings. Half Bridge, that PPPoE(PPPoA)	's connection type will se	t to Continuous.	
V QoS	Half Bridge:	<ul> <li>Disable</li> </ul>	O Enable		
CWMP	Interface:	pppoe 1 😽			
Port Mapping	Apply Changes	Undo			
Others     Bridge Setting	Apply changes				
Client Limit					
> Others					

Choose **Others** in the left pane, the page shown in the following figure appears.

# 4.3. Service

In the navigation bar, click Service. The tab Service contains IGMP, UPnP, SNMP, DNS

and DDNS.

# 4.3.1. IGMP

Choose **Service** > **IGMP**, and the following page appears. The page that is displayed

contains IGMP Proxy.

### 4.3.1.1. IGMP Proxy

Click IGMP Proxy in the left pane, the page shown in the following figure appears. In this

page, you can enable or disable IGMP proxy. If you disable IGMP proxy, the modem will

discard all the received multicast data packets.

Status Wizard	Setup Advanced Service	Firewall Maintenance
IGMP GMP Proxy	IGMP Proxy Configuration IGMP proxy enables the system to issue IGMP host messa IGMP interfaces. The system acts as a proxy for its hosts w . Enable IGMP proxy on WAN interface (upstream), which con . Enable IGMP on LAN interface (downstream), which con	ges on behalf of hosts that the system discovered through standard hen you enable it by doing the follows: onnects to a router running IGMP. ects to its hosts.
UPnP	IGMP Proxy:	O Disable 💿 Enable
SNMP	Multicast Allowed:	🔿 Disable 💿 Enable
M DNS	Robust Count:	2
<ul> <li>DDNS</li> <li>FTP Server</li> </ul>	Last Member Query Count:	2
	Query Interval:	60 (seconds)
	Query Response Interval:	100 (*100ms)
	Group Leave Delay:	2000 (ms)
	Apply Changes Undo	

# 4.3.2. UPnP

Click **UPnP** in the left pane, the page shown in the following figure appears. The system

acts as a daemon after you enable UPnP.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance
			juration	ha avatam acta ao a daar		LID-D
		This page is used	to conligure or fir. If	ne system aus as a uaer	non when you enable	OFIIF.
D UPnP		UPnP:		O Disable	Enable	
> UPnP		WAN Interface	e:	pppoel 💌		
SNMP		Apply Cha	nges			
DNS						
DDNS						
FTP Server						

# 4.3.3. SNMP

Click **SNMP** in the left pane, the page shown in the following figure appears. You can

configure the SNMP parameters.

Status Wizard	Setup Advanced	Service Firewall Maintenance
	SNMP Protocol Configuration	need. Here you may change the setting for system description, tracile address
	community name, etc	ocor, mere you may change the setting for system description, trap ip address,
UPnP	Enable SNMP	
> SNMP		
	System Description	ADSL SoHo Router
	System Contact	
DDNS     FTP Server	System Name	ADSL
	System Location	
	Trap IP Address	0.0.0
	Community name (read-only)	public
	Community name (read-write)	public
	Apply Changes Reset	

Field	Description				
Enable	Select it to enable SNMP function. You need to enable SNMP, and then you				
SNMP	can configure the parameters of this page.				
Trap IP	Enter the trap IP address. The trap information is sent to the corresponding				
Address	host.				
Communit	The network administrators must use this password to read the				
y name	information of this router.				
(read-only)					

User	Manual
0001	manaa

Communit<br/>yThe network administrators must use this password to configure the<br/>information of the router.(read-<br/>write)

# 4.3.4. DNS

Domain Name System (DNS) is an Internet service that translates the domain name into

IP address. Because the domain name is alphabetic, it is easier to remember. The Internet,

however, is based on IP addresses. Every time you use a domain name, DNS translates

the name into the corresponding IP address. For example, the domain name

www.example.com might be translated to 198.105.232.4. The DNS has its own network.

If one DNS server does not know how to translate a particular domain name, it asks

another one, and so on, until the correct IP address is returned.

Choose **Service** > **DNS**. The **DNS** page that is displayed contains **DNS**.

### 4.3.4.1. DNS

Click **DNS** in the left pane, and the page shown in the following figure appears.

Status Wizard	Setup	Advanced	Service	Firewall	Maintenance
	DNS Configura	tion			
IGMP	This page is used to	configure the DNS ser	ver ip addresses for D	NS Relay.	
UPnP	Attain DNS A	utomatically			
SNMP	O Set DNS Man	ually			
DNS	DNS 1:	0.0.0.0			
> DNS					
	DNS 2:				
	DNS 3:				
Pip Server					
	Apply Change	s Reset	Selected		

The following table describes the parameters and buttons of this page.

Field	Description
Attain	Select it, the router accepts the first received DNS assignment from one of
Field	Description
----------	--
DNS	the PPPoA, PPPoE or MER enabled PVC(s) during the connection
Automati	establishment.
cally	
Set DNS	Select it, enter the IP addresses of the primary and secondary DNS server.
Manually	
Apply	Click it to save the settings of this page.
Changes	
Reset	Click it to start configuring the parameters in this page.
Selected	

### 4.3.5. DDNS

Choose **Service** > **DDNS**, the page shown in the following figure appears. This page is

used to configure the dynamic DNS address from DynDNS.org or TZO. You can add or

remove to configure dynamic DNS.

Status Wizard	Setup Advanced	Service Fir	ewall Mainter	nance
V IGMP	Dynamic DNS Configuration This page is used to configure the Dyn Dynamic DNS.	amic DNS address from DynDNS.or	g or TZO. Here you can Add/F	Remove to configure
VUPnP SNMP	DDNS provider:	DynDNS.org		
DNS	Hostname:			
DDNS	Interface:	pppoel 🗸		
> DDNS	Enable:			
✓ FTP Server	DynDns Settings:			
	Username:			
	Password:			
	TZO Settings:			
	Email:			
	Key:			
	Add Remove			
	Oynamic DDNS Table:			
	Select State S	Service Hostname	Username	Interface

The following table describes the parameters of this page.

Field	Description
DDNS	Choose the DDNS provider name. You can choose <b>DynDNS.org</b> or <b>TZO</b> .

Field	Description
provider	
Host	The DDNS identifier.
Name	
Interface	The WAN interface of the router.
Enable	Enable or disable DDNS function.
Usernam	The name provided by DDNS provider.
е	
Password	The password provided by DDNS provider.
Email	The email provided by DDNS provider.
Кеу	The key provided by DDNS provider.

### 4.3.6. FTP Server

Choose **Service** > **FTP Server**, the page shown in the following figure appears.

This page is used to start the FTP Server.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance	
		FTP Server					
IGMP		v start		save			
UPnP		✓ start		Save			
SNMP							
DNS							
DDNS							
FTP Server	r						
FTP Server							

## 4.4. Firewall

### 4.4.1. MAC Filter

Click **MAC Filter** in the left pane, the page shown in the following figure appears. Entries in the table are used to restrict certain types of data packets from your local network to Internet through the gateway. These filters are helpful in securing or restricting your local network.

Status Wizard	Setup Advanced	Service	Firewall Maintenance	,
MAC Filter	MAC Filtering Entries in this table are used to restrict of such filters can be helpful in securin	certain types of data packets fr g or restricting your local netwo	om your local network to internet through rk.	the Gateway. Use
MAC Filter	Outgoing Default Policy			
✓ IP/Port Filter	Incoming Default Policy	🔿 Deny 💿 Allow		
VIRL Filter	Apply			
🛛 DoS	Direction:	Outgoing 🗸		
	Action:	⊙ Deny ○ Allow		
	Source MAC:	(ex. 00E08	36710502)	
	Destination MAC:	(ex. 00E08	36710502)	
	Add			
	O Current MAC Filter Table:			
	Select Direction	Source MAC	Destination MAC	Action
	Delete Delete All			

### 4.4.2. IP/Port Filter

Choose Firewall > IP/Port Filter, the page shown in the following figure appears. The

page that is displayed contains **IP/Port Filter**.

### 4.4.2.1. IP/Port Filter

Click **IP/Port Filter** in the left pane, the page shown in the following figure appears.

Entries in the table are used to restrict certain types of data packets through the gateway.

These filters are helpful in securing or restricting your local network.

Status Wizard	Setup Advance	ed Service		Maintenance
MAC Filter	IP/Port Filtering Entries in this table are used to re of such filters can be helpful in se	estrict certain types of data packets ecuring or restricting your local netw	from your local network vork.	to Internet through the Gateway. Use
IP/Port Filter     IP/Port Filter	Outgoing Default Policy	ermit O Deny		
	Incoming Default Policy	🔿 Permit 💿 Deny		
VRL Filter				
ACL	Rule Action:	● Permit ○ Deny		
✓ DoS	WAN Interface:	pppoel 🖌		
	Protocol:	IP 💌		
	Direction:	Upstream 🔽		
	Source IP Address:		Mask Address:	255.255.255.255
	Dest IP Address:		Mask Address:	255.255.255.255
	SPort:		DPort:	-
	Enable:			
	Apply Changes	Reset	Help	
	Ourrent Filter Table:			
	Rule Wanltf Protocol	Source IP/Mask SPort	Dest IP/Mask DPo	ort State Direction Action

### 4.4.3. URL Filter

Choose Firewall > URL Filter, the page shown in the following figure appears. This page is

used to configure the filtered keyword. Here you can add/delete filtered keyword

Status Wizard	Setup Ad	vanced Service		Maintenance
	URL Blocking Con This page is used to confi	<b>figuration</b> gure the filtered keyword. Here you	ı can add/delete filtered keywo	rd.
MAC Filter				
IP/Port Filter	URL Blocking Capabilit	ty: O Disable 💿	Enable	
<ul> <li>URL Filter</li> <li>URL Filter</li> </ul>	Apply Changes			
M ACL	Keyword:			
💆 DoS	AddKeyword	Delete Selected Keywo	rd	
	💿 URL Blocking Tal	ble:		
	Select		Filtered Keyword	
	0		123456	
<ul> <li>IP/Port Filter</li> <li>URL Filter</li> <li>URL Filter</li> <li>ACL</li> <li>DoS</li> </ul>	URL Blocking Capabilit Apply Changes Keyword:	by: Disable  Disable Delete Selected Keywo	Enable rd Filtered Keyword 123456	

### 4.4.4. ACL

Choose **Firewall** > **ACL**, the page shown in the following figure appears. The page that is displayed contains **ACL**.

4.4.4.1. ACL

Click **ACL** in the left pane, the page shown in the following figure appears. In this page, you can permit the data packets from LAN or WAN to access the router. You can configure the IP address for Access Control List (ACL). If ACL is enabled, only the effective IP address in the ACL can access the router.

ONOTE:

If you select **Enable** in ACL capability, ensure that your host IP address is in ACL list before it takes effect.

CL Configuration bu can specify which services are a ntries in this ACL table are used to sing of such access control can be	eccessable form LAN or WAN side. permit certain types of data packets from helpful in securing or restricting the Gate	n your local network or Internet network to the Gateway eway managment.
LAN ACL Mode:	<ul> <li>White List</li> </ul>	O Black List
WAN ACL Mode:	<ul> <li>White List</li> </ul>	O Black List
Apply		
Direction Select:	● LAN ○ WAN	
LAN ACL Switch:	Inable	O Disable
Apply		
IP Address:		(The IP 0.0.0.0 represent any IP )
Services Allowed:		
any any		
web		
teinet		
ssh 🗌		
🗌 ftp		
🗌 tftp		
snmp		
ping		

The following table describes the parameters and buttons of this page.

Field	Description
Direction	Select the router interface. You can select LAN or WAN. In this example,
Select	LAN is selected.
LAN ACL	Select it to enable or disable ACL function.
Switch	
	Enter the IP address of the specified interface. Only the IP address that is
IP Address	in the same network segment with the IP address of the specified
	interface can access the router.
Services	You can choose the following services from LAN: Web, Telnet, FTP, TFTP,

Field	Description
Allowed	<b>SNMP</b> or <b>PING</b> . You can also choose all the services.
Add	After setting the parameters, click it to add an entry to the Current ACL
Add	Table.
Reset	Click it to refresh this page.

### Set direction of the data packets to **WAN**, the page shown in the following figure appears.

ACL Configuration You can specify which services are access Entries in this ACL table are used to perm Using of such access control can be helpfi	able form LAN or WAN side. it certain types of data packets from your local ul in securing or restricting the Gateway mana	network or Internet gment.	network to	the Gateway.
LAN ACL Mode:	White List	O Black List		
WAN ACL Mode:	White List	O Black List		
Apply				
Direction Select:	O LAN 💽 WAN			
WAN Setting:	Interface 🗸			
WAN Interface:	pppoe1 V			
Services Allowed:				
web				
telnet				
ssh 🗌				
ftp				
tftp				
snmp				
D ping				
Add Reset				
Ourrent ACL Table:				
Select Direction	IP Address/Interface	Service	Port	Action

The following table describes the parameters and buttons of this page.

Field	Description
Direction	Select the router interface. You can select LAN or WAN. In this example,
Select	WAN is selected.
WAN	You can choose Interface or IP Address.
Setting	
WAN	Choose the interface that permits data packets from WAN to access the
Interface	router.
ID Addross	Enter the IP address on the WAN. Only the IP address that is in the same
IP AUULESS	network segment with the IP address on the WAN can access the router.
Services	You can choose the following services from WAN: Web, Telnet, FTP, TFTP,
Allowed	<b>SNMP</b> , or <b>PING</b> . You can also choose all the services.
۸dd	After setting the parameters, click it to add an entry to the Current ACL
Auu	Table.
Reset	Click it to refresh this page.

### 4.4.5. DoS

Denial-of-Service Attack (DoS attack) is a type of attack on a network that is designed to

bring the network to its knees by flooding it with useless traffic.

Choose **Firewall** > **DoS**, the page shown in the following figure appears. In this page, you

can prevent DoS attacks.

DoS Setting A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

Enable Do S Prevention	
VVhole System Flood: SYN	100 Packets/Second
VVhole System Flood: FIN	100 Packets/Second
VVhole System Flood: UDP	100 Packets/Second
VVhole System Flood: ICMP	100 Packets/Second
Per-Source IP Flood: SYN	100 Packets/Second
Per-Source IP Flood: FIN	100 Packets/Second
Per-Source IP Flood: UDP	100 Packets/Second
Per-Source IP Flood: ICMP	100 Packets/Second
CP/UDP PortScan	Low Sensitivity
CMP Smurf	
IP Land	
IP Spoof	
IP TearDrop	
PingOfDeath	
TCP Scan	
CP SynVVIthData	
UDP Bomb	
UDP EchoChargen	
Select ALL Clear ALL	
Enable Source IP Blocking	300 Block time (sec)
Apply Changes	

### 4.5. Maintenance

In the navigation bar, click Maintenance. The Maintenance page that is displayed

contains Update, Password, Reboot, Time, Log and Diagnostics.

### 4.5.1. Update

Choose Maintenance > Update. The Update page that is displayed contains Firmware

Update and Backup/Restore.



Do not turn off the router or press the Reset button while the procedure is in progress.

### 4.5.1.1. Firmware Update

Click **Upgrade Firmware** in the left pane, the page shown in the following figure appears.

In this page, you can upgrade the firmware of the router.

Status	Wizard	Setup	Advanced	Service	Firewall		
Update     Firmware Update		Upgrade Firi This page allows upload because Note:System will	mware you upgrade the ADSL it may crash the system. I reboot after file is uplo	Router firmware to new v vaded.	version. Please note, do	not power off the device dur	ing the
> Backup/Resto	re	Select File:			Browse	]	
<ul> <li>Password</li> <li>Reboot</li> <li>Time</li> </ul>		Upload	Reset				
<ul><li>✓ Log</li><li>✓ Diagnostic</li></ul>	5						

The following table describes the parameters and button of this page.

Field	Description
Select File	Click <b>Browse</b> to select the firmware file.
Upload	After selecting the firmware file, click <b>Upload</b> to starting upgrading the
	firmware file.
Reset	Click it to starting selecting the firmware file.

#### 4.5.1.2. Backup/Restore

Click **Backup/Restore** in the left pane, the page shown in the following figure appears.

You can backup the current settings to a file and restore the settings from the file that

was saved previously.

Status Wizard	Setup Advanced	Service Firewall Maintenance
D Update	Backup/Restore Settings Once the router is configured you can s option to load configuration settings.	save the configuration settings to a configuration file on your hard drive. You also have the
Firmware Update     Backup/Restore	Save Settings to File:	Save
Password	Load Settings from File:	Browse Upload
<ul> <li>▼ Reboot</li> <li>▼ Time</li> </ul>		
<ul> <li>✓ Log</li> <li>✓ Diagnostics</li> </ul>		

### 4.5.2. Password

Choose Maintenance > Password, the page shown in the following figure appears. By

default, the user name and password are **admin** and **admin** respectively. The common user name and password are **user** and **user** respectively.

Status Wizard	Setup Adva	nced Service	Firewall	Naintenance
	User Account Config	uration		
☑ Update	This page is used to add us	er account to access the web	server of ADSL Router. Empty use	er name or password is not allowed.
Password	User Name:			
Password	Privilege:		User 💌	
Reboot	Old Password:			
v Time V Log	New Password:			
Diagnostics	Confirm Password:			
	Add Modify Delete Reset			
	🛞 User Account Table:			
	Select	Use	r Name	Privilege
	0	a	dmin	root
	0	ι	iser	user

The following table describes the parameters of this page.

Field	Description
Licor Nomo	Choose the user name for accessing the router. You can choose
User Marine	admin or user.
Privilege	Choose the privilege for the account.
Old Password	Enter the old password
New Password	Enter the password to which you want to change the old password.
Confirm	Enter the new password again.
Password	

### 4.5.3. Reboot

Choose Maintenance > Reboot, the page shown in the following figure appears. You can

set the router reset to the default settings or set the router to commit the current

settings.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance	
		Commit/Reb This page is used	<b>pot</b> I to commit changes t	to system memory and rel	boot your system with	different configurations.	
Password		Reboot from:		Save Current Configu	uration 💌		
Reboot Reboot		Commit	Changes	Reset Reboot			
▼ Time							
<ul><li>✓ Log</li><li>✓ Diagnostics</li></ul>							

The following table describes the parameters and button of this page.

Field	Description				
	You can choose Save Current Configuration or Factory Default				
	<b>Configuration</b> . Click <b>Reboot</b> to reboot the router.				
Doboot from	• Save Current Configuration: Save the current settings, and then				
Rebool from	reboot the router.				
	• Factory Default Configuration: Reset to the factory default				
	settings, and then reboot the the router.				

### 4.5.4. Time

Choose Maintenance > Time, the page shown in the following figure appears. You can

configure the system time manually or get the system time from the time server.

Status Wizard	Setup Adv	vanced Service	Firewall	Maintenance	
V Update	System Time Config This page is used to confi some information on the s	guration gure the system time and Network Time system time and NTP parameters.	e Protocol(NTP) server	. Here you can change the	settings or view
Password     Reboot	System Time:	2012 Year Jan V Month	1 Day 1	Hour 30 min 45	sec
> Time > Time	DayLight: Apply Changes	Reset			
<ul> <li>Log</li> <li>Diagnostics</li> </ul>	NTP Configuration:	Disable     O Epable			
	Server:				
	Server2:	_ 1 .			
Time Zone:     [GMT] Gambia, Liberia, Morocco, England		V			
	GMT time:	Sun Jan 1 1:30:45 2012			
	NTP Start:	Get GMT Time			

The following table describes the parameters of this page.

Field	Description	
System	Set the system time manually	
Time		
NTP Configura	ation	
Chata	Select enable or disable NTP function. You need to enable NTP if you	
State	want to configure the parameters of NTP.	
Server	Set the primary NTP server manually.	
Server2	Set the secondary NTP server manually.	
Time Zone	Choose the time zone in which area you are from the drop down list.	

### 4.5.5. Log

Choose **Maintenance** > **Log**, the page shown in the following figure appears. In this page,

you can enable or disable system log function and view the system log.

Status Wizard	Setup Advanced Service	Firewall Maintenance
V Update	Log Setting This page is used to display the system event log table. If ">> ", it will display the newest log information below.	By checking Error or Notice ( or both)will set the log flag. By clicking the
<ul> <li>Password</li> <li>Reboot</li> </ul>	Error:	Notice:
▼ Time	Apply Changes Reset	
<ul> <li>Log</li> <li>Log</li> </ul>	Event log Table:	
☑ Diagnostics	Save Log to File Clean Log Tabl	e New
	Time Index Type	Log Information
	Page: 1/1	

### 4.5.6. Diagnostics

Choose Maintenance > Diagnostics, the page shown in the following page appears. The

page that is displayed contains Ping, Tracert, OAM Loopback, ADSL Diagnostic and Diag-

test. Select the option that you want to run diagnostics.

Status Wizard	Setup Advanced	Service Firewall Waintemance
	Ping Diagnostic	
⊻ Update	Host :	
✓ Reboot	PING	
<ul> <li>▼ Time</li> <li>▼ Log</li> </ul>		
> Diagnostics		
> Ping		
Traceroute		
OAM Loopback		
ADSL Diagnostic		
> Diag-Test		

# 5. Trouble Shooting

Question	Answer
Why are all the indicators	<ul> <li>Check the connection between the power</li> </ul>
off?	adapter and the power socket.
	<ul> <li>Check whether the power switch is turned on.</li> </ul>
	<ul> <li>Check the connection between the device and</li> </ul>
Why is the <b>LAN</b> indicator	your PC, hub or switch.
off?	<ul> <li>Check the running status of the computer, hub,</li> </ul>
	or switch.
Why is the <b>ADSL</b>	Check the connection between the Line port of the
indicator off?	device and the wall jack.
Why does Internet access	Check whether the VDL VCL week name and
fail while the ADSL	check whether the VPI, VCI, user name and
indicator is on?	password are correctly entered.
	Choose <b>Start &gt; Run</b> from the desktop, and ping
Why can I not accoss the	<b>192.168.2.1</b> (IP address of the DSL router). If the
wob configuration page	DSL router is not reachable, check the type of
of the DSL router?	network cable, the connection between the DSL
of the DSL fouter:	router and the PC, and the TCP/IP configuration of
	the PC.
	To restore the factory default settings, turn on the
	device, and press the reset button for about 3
How to load the default	seconds, and then release it. The default IP address
settings after incorrect	and the subnet mask of the DSL router are
configuration?	192.168.2.1 and 255.255.255.0, respectively.
	<ul> <li>User/password of super user: admin/1234</li> </ul>
	<ul> <li>User/password of common user: user/user</li> </ul>

#### Federal Communication Commission Interference Statement

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

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

#### **FCC** Caution

This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

#### Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 2.5cm (1 inch) during normal operation.

#### Federal Communications Commission (FCC) RF Exposure Requirements

SAR compliance has been established in the laptop computer(s) configurations with PCMCIA slot on the side near the center, as tested in the application for certification, and can be used in laptop computer(s) with substantially similar physical dimensions, construction, and electrical and RF characteristics. Use in other devices such as PDAs or lap pads is not authorized. This transmitter is restricted for use with the specific antenna tested in the application for certification. The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

#### **RED Compliance Statement**

#### Compliance with 2014/53/EU Radio Equipment Directive (RED)

In accordance with Article 10.8(a) and 10.8(b) of the RED, the following table provides information on the frequency bands used and the maximum RF transmit power of the product

for sale in the EU:

Frequency range (MHz)	Max. Transmit Power
	(dBm/mW)
WLAN Wi-FI 802.11b/g/n; 2, 4 GHz	100 <b>mW</b>

A simplified DoC shall be provided as follows: Article 10(9)

Hereby, Edimax Technology Co., Ltd. declares that the radio equipment type N300 Wireless

**ADSL2/2+ Modem router** is in compliance with Directive 2014/53/EU The full text of the EU declaration of conformity is available at the following internet address: <u>http://www.edimax.com/edimax/global/</u>

#### Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

#### **EU** Countries Intended for Use

The ETSI version of this device is intended for home and office use in Austria, Belgium, Bulgaria, Cyprus, Czech, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, and United Kingdom. The ETSI version of this device is also authorized for use in EFTA member states: Iceland, Liechtenstein, Norway, and Switzerland.

#### **EU** Countries Not Intended for Use

None

### **EU Declaration of Conformity**

English: This equipment is in compliance with the essential requirements and other relevant provisions of Directive 2006/95/EC, 2011/65/EC. Francais: Cet équipement est conforme aux exigences essentielles et autres dispositions de la directive 2006/95/CE, 2011/65/CE. Čeština: Toto zařízení je v souladu se základními požadavky a ostatními příslušnými ustanoveními směrnic 2006/95/ES, 2011/65/ES. Polski: Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE 2006/95/EC, 2011/65/EC.. Română: Acest echipament este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 2006/95/CE, 2011/65/CE. Русский: Это оборудование соответствует основным требованиям и положениям Директивы 2006/95/EC, 2011/65/EC. Ez a berendezés megfelel az alapvető követelményeknek és más vonatkozó Magyar: irányelveknek (2006/95/EK, 2011/65/EK). Bu cihaz 2006/95/EC, 2011/65/EC direktifleri zorunlu istekler ve diğer hükümlerle ile Türkçe: uvumludur. Обладнання відповідає вимогам і умовам директиви 2006/95/ЕС, Українська: 2011/65/EC. Slovenčina: Toto zariadenie spĺňa základné požiadavky a ďalšie príslušné ustanovenia smerníc 2006/95/ES, 2011/65/ES. Deutsch: Dieses Gerät erfüllt die Voraussetzungen gemäß den Richtlinien 2006/95/EC, 2011/65/EC. El presente equipo cumple los requisitos esenciales de la Directiva 2006/95/EC, Español: 2011/65/EC. Italiano: Questo apparecchio è conforme ai requisiti essenziali e alle altre disposizioni applicabili della Direttiva 2006/95/CE, 2011/65/CE. Dit apparaat voldoet aan de essentiële eisen en andere van toepassing Nederlands: zijnde bepalingen van richtlijn 2006/95/EC, 2011/65/EC.. Português: Este equipamento cumpre os requesitos essênciais da Directiva 2006/95/EC, 2011/65/EC. Norsk: Dette utstyret er i samsvar med de viktigste kravene og andre relevante regler i Direktiv 2006/95/EC, 2011/65/EC. Denna utrustning är i överensstämmelse med de väsentliga kraven och övriga Svenska: relevanta bestämmelser i direktiv 2006/95/EG, 2011/65/EG. Dansk: Dette udstyr er i overensstemmelse med de væsentligste krav og andre relevante forordninger i direktiv 2006/95/EC, 2011/65/EC. Tämä laite täyttää direktiivien 2006/95/EY, 2011/65/EY oleelliset suomen kieli: vaatimukset ja muut asiaankuuluvat määräykset.

FOR USE IN AT BE CY CZ OK EE FI FR DE GR HU (E (T) (V) (T) (U) (M) (N) (P) (PT (SK) (S) (E) (SE (GB (S) (U) (N) (C) (BG (R) (R) (TR) (UA)

#### WEEE Directive & Product Disposal



At the end of its serviceable life, this product should not be treated as household or general waste. It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment, or returned to the supplier for disposal.

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### **Declaration of Conformity**

We, Edimax Technology Co., LTD., declare under our sole responsibility, that the equipment described below complies with the requirements of the European Council directive (2014/53/EU).

Equipment :	N300 Wireless ADSL2/2+ Modem router
Model No. :	AR-7287WnA

The following European standards for essential requirements have been followed:

Spectrum :	ETSI EN 300 328 : V2.1.1(2016-11)
EMC :	EN 301 489-1 V2.1.1(2017-02)
	EN 301 489-17 V3.1.1(2017-02)
EMF:	EN 62311:2008
Safety :	IEC 60950-1 :
(LVD)	2005+A1 :2009+A2:2013
	EN 60950-1 :
	2006+A11:2009+A1:2010+A12:2011+A2:2013
	Edimax Technology Co., Ltd.
	No. 3, Wu Chuan 3rd Road,
	Wu-Ku Industrial Park.
	New Taipei City, Taiwan
	· · ·

Date of Signature: Signature:

April, 2017

Printed Name: Title:

CE

Albert ChangDirectorEdimax Technology Co., Ltd.



**Edimax Technology Co., Ltd.** No.3, Wu-Chuan 3rd Road, Wu-Gu, New Taipei City 24891, Taiwan **Edimax Technology Europe B.V.** Nijverheidsweg 25 5683 CJ Best The Netherlands

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