

# **DATA-CONNECT**

*The Right Connection!*

## **▶ DCE 5201A**

**Bridge Modem & Modem Router**

# **User's Manual**



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**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**

To assure continued compliance, use only shielded interface cables when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device 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.

**Federal Communication 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 20 cm (8 inches) during normal operation.

**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.

### **CE Mark Warning**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

### **WEEE Regulation**



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

### **Revision**

User's Manual for Bridge Modem &  
Modem Router Router  
Model: DCE-5201A  
Rev: 6.0 (October. 2013)

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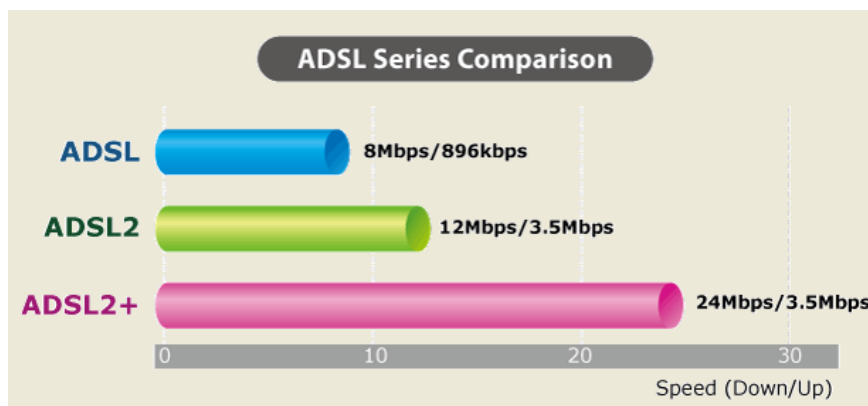
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## Chapter 1.Overview

### Improved Networking Function for Future IP Compatibility

DCE DCE-5201A is a Bridge Modem & Modem Router. The DCE-5201A is the ideal solution for office and residential users to share a high-speed ADSL 2/2+ broadband Internet connection and four-10/100Mbps Fast Ethernet backbone. It can support transmission rates up to 24Mbps downstream and 3.5Mbps upstream with ADSL 2+ support. Through integration with single chipset to reduce boot time, the DCE-5201A offers more performance to users. The DCE-5201A supports PPPoA (RFC 2364 - PPP over ATM Adaptation Layer 5), RFC 2684 encapsulation over ATM (bridged or routed), PPP over Ethernet (RFC 2516), and IPoA (RFC1483) to establish a connection with ISP.



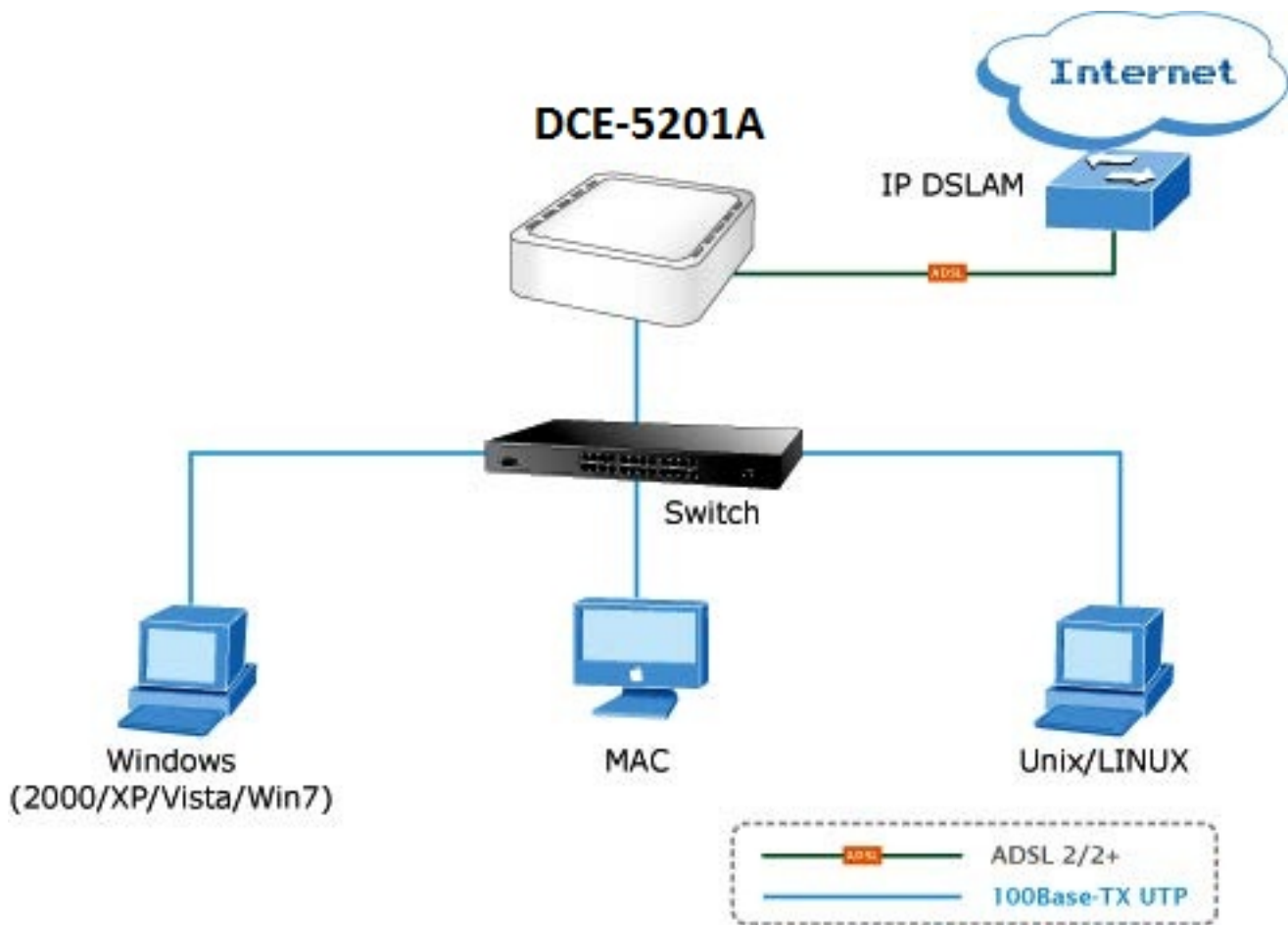
### Powerful Firewall and Complete Access Control Functions

The DCE-5201A has user-friendly management interfaces so it can be managed by workstations running standard web browsers. It provides DHCP server, NAT, Virtual Server, DMZ, Access Control, IP Filter, DDNS, and UPnP capability. The DCE-5201A also serves as an Internet firewall to protect your network from being accessed by unauthorized users. It offers the natural firewall function. All the incoming and outgoing IPs can be monitored and filtered. For the advanced application, it even can block internal users accessing to the Internet services.

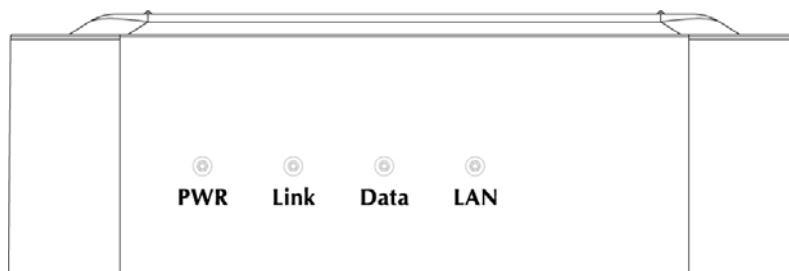
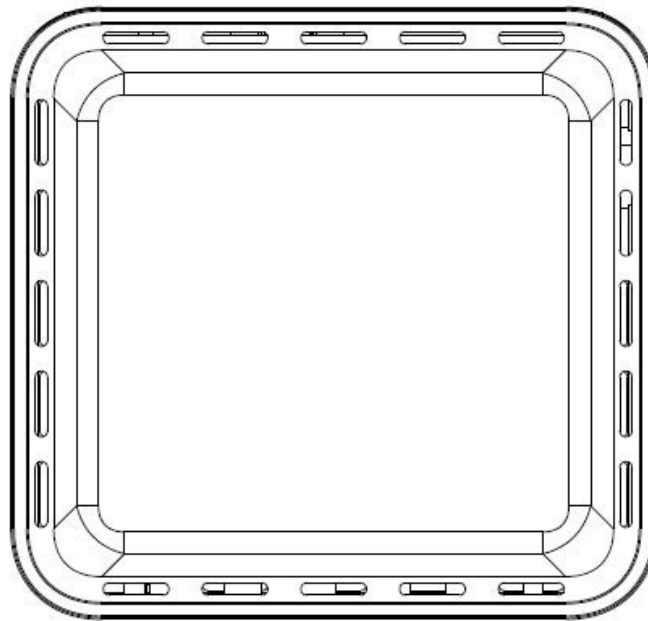
## 1.1 Application

### Wired Internet Connection

The DCE-5201A is a perfect solution for a small group of PCs connecting to a high-speed broadband Internet connection. Multi-users can access to the Internet simultaneously.



**Front Panel**

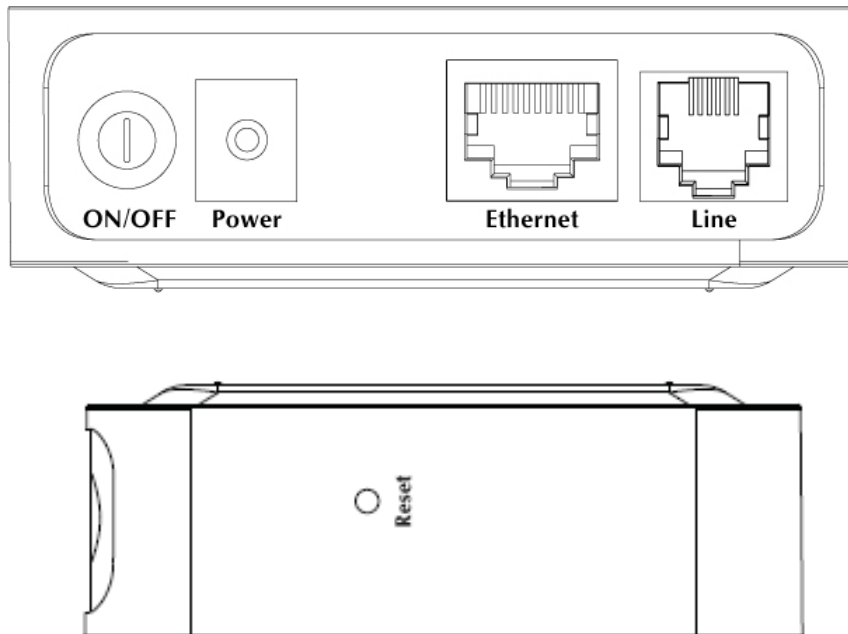


The following table describes the LEDs of the device.

LED	State	Description
<b>PWR</b>	ON	When the router is powered on and in ready state.
	Red	The device is being turned on and booting.
	OFF	When the router is powered off.
<b>Link</b>	ON	Successful connection between ADSL modem and telecom's network.
	Flashing	Modem is trying to establish a connection to telecom's network.
<b>Data</b>	Flashing	Data is transferred when Router connected network or Internet.
<b>LAN</b>	ON	Link
	Flashing	TX or RX activity.



**Rear Panel**



The following table describes the interfaces and buttons of the device.

Connector	Description
<b>POWER Button</b>	The power button is for turn on or turns off the router.
<b>Power</b>	Power connector with 5V DC, 1A
<b>Reset</b>	The reset button can restore the default settings of device. To restore factory defaults, keep the device powered on and push a paper clip into the hole. Press down the button over 5 seconds and then release.
<b>Ethernet</b>	Router is successfully connected to a device through the Ethernet port. If the LED is flashing, the Router is actively sending or receiving data over that port.
<b>Line</b>	The RJ-11 connector allows data communication between the modem and the ADSL network through a twisted-pair phone wire.

## 1.2 System Requirements

Make sure first that you have prepared these following items to guarantee the router can work normally.

- Services subscriptions.
- An 10/100Mbps Ethernet card installed on your PC.
- Hub or Switch. (Attached to several PCs through one of Ethernet interfaces on the device).
- Operating system: Windows 7, Windows 2000, or Windows XP.
- Internet Explorer V8.0 or higher, or firefox v23 or higher.

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## 1.3 Features

The device supports the following features:

### Internet Access Features

- ◆ **Internet Access Shared**

All users in the LAN can access the Internet through the DCE-5201A by just a single external IP Address. The local (invalid) IP Addresses are hidden from external sources. This process is called NAT (Network Address Translation).

- ◆ **Built-in ADSL 2/2+ Modem**

The DCE-5201A provides ADSL 2/2+ modem service and supports all common ADSL connections.

- ◆ **PPPoE, PPPoA, Direct Connection Support**

Various WAN connections are supported by the DCE-5201A.

- ◆ **Fixed or Dynamic IP Address**

On the Internet (WAN port) connection, the DCE-5201A supports both Dynamic IP Address (IP Address is allocated on connection) and Fixed IP Address.

### Advanced Internet Functions

- ◆ **Virtual Servers**

This feature allows Internet users to access Internet servers on your LAN. The required setup is quick and easy.

- ◆ **DMZ Support**

The DCE-5201A can translate public IP addresses into private IP address and allow unrestricted 2-way communication with servers or individual users on the Internet. This provides the most flexibility to run programs which could be incompatible in NAT environment.

- ◆ **Firewall**

The DCE-5201A supports simple firewall with NAT technology and provides options for access control from Internet like Telnet, FTP, TFTP, HTTP, SNMP, and ICMP services. It also supports IP/ MAC/ Application/ URL filtering.

- ◆ **Universal Plug and Play (UPnP)**

UPnP allows automatically discovering and configuration of the Broadband Router. UPnP is supported by Windows XP, Windows 7 or later.

- ◆ **Dynamic DNS Support**

The DCE-5201A supports DCE Dynamic DNS that it's free for customer.

- ◆ **Based on the Virtual Servers feature, the DCE-5201A allows users to connect a server to the LAN by using a Domain Name even if you have a dynamic IP address.**

- ◆ **RIP Routing**

It supports RIPv1/2 routing protocol for routing capability.

- ◆ **Simple Network Management Protocol (SNMP)**

It is an easy way to remotely manage the router via SNMP.

### **LAN Features**

- ◆ **DHCP Server Support**

Dynamic Host Configuration Protocol provides a dynamic IP address to PCs and other devices upon request. The DCE-5201A can act as a DHCP Server for devices on your local LAN and WLAN.

## 1.4 Specifications

Product		Bridge Modem & Modem Router
Model		DCE 5201A
<b>Hardware</b>		
Standard		Compliant with ADSL Standard - Full-rate ANSI T1.413 Issue 2 - G.dmt (ITU G.992.1) - G.lite (ITU G.992.2) - G.hs (ITU G.994.1) Capable of ADSL2 Standard - G.dmt.bis (ITU G.992.3) Annex A, L and M - G.lite.bis (ITU G.992.4) Capable of ADSL2+ Standard - G.dmt.bisplus (ITU G.992.5)
Protocol		RFC 1483 Bridge RFC 1483 Router IEEE 802.1D transparent bridging Bridge Filtering Bridged or routed Ethernet encapsulation VC and LLC based multiplexing PPP over Ethernet (PPPoE) PPP over ATM (RFC 2364)
AAL and ATM Support		Support up to 8PVCs VC and LLC Multiplexing ATM Adaptation Layer Type 5 (AAL5) Integrated ATM AAL5 support(UBR,CBR,VBR,VBR-rt, and VBR-nrt) OAM F4/F5
Ports	LAN	1 x 10Base-T/100Base-TX, Auto-Negotiation, Auto MDI/MDI-X
	WAN	1 x RJ-11, Auto-Negotiation
LED Indicators		PWR, Link, Data, LAN
Max. Concurrent Sessions		4096
<b>Software</b>		
Protocol / Feature		NAT supports PAT/NAPT and multimedia applications Static routing and RIPv1/2 Transparent Bridging SNTP DNS relay IGMP Proxy IGMP Multicast DMZ and Virtual Server

Security	<p>Built-in NAT Firewall          IP Port Filter, MAC Filter, URL Blocking, DoS Setting          PPP over PAP (Password Authentication Protocol;RFC1334)          PPP over CHAP (Challenge Authentication Protocol;RFC1994)          Access Control List (ACL)          Denial of Service (DoS)          IP-based Packet filtering          MAC filtering          URL filtering          Password protection for system management</p>
VPN	VPN Pass-Through
Management	<p>Web-based configuration          Embedded Telnet server for remote and local management          Configuration data upload and download via WEB          Firmware upgraded via WEB and TFTP          QoS          SNMP v2 MIB supported          Support DHCP server/relay          Built-in Diagnostic tool and IP Ping          TR-069</p>
Environment Specification	
Dimension (W x D x H)	78 x 74 x 26 mm
Power	5V DC, 1A (Consumption 2.1W)
Temperature: Humidity	<p>Operating temperature: 0 ~ 50 Degree C          Storage temperature: -40 ~ 70 Degree C          Humidity: 5 ~ 95% non-condensing</p>
Emission	FCC, CE

## Chapter 2. Hardware Installation

Connect the **LINE** interface of the device and the **Modem** interface of the splitter with a telephone cable. Connect the phone set to the **Phone** interface of the splitter through a telephone cable. Connect the input cable to the **Line** interface of the splitter.

The splitter has three interfaces:

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

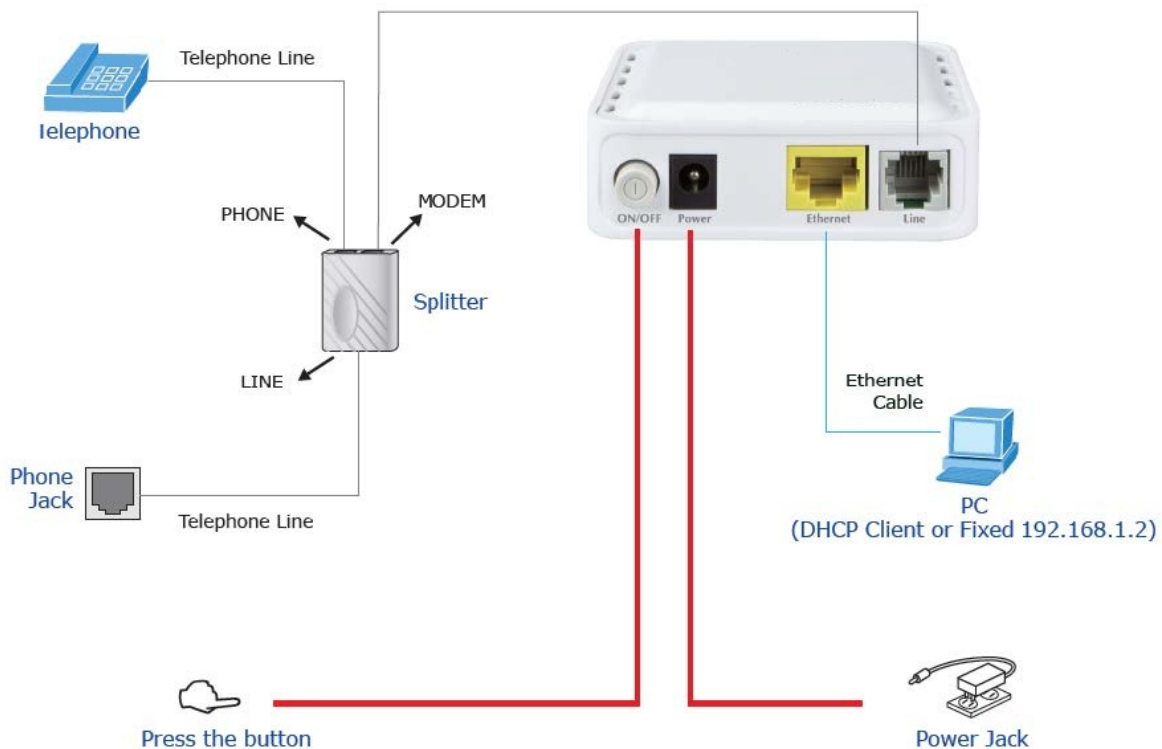
Connect the **LAN** interface of the device to the network card of the PC through an Ethernet cable (MDI/MDIX).



Use the twisted-pair cable to connect the hub or switch.

Insert one end of the power adapter to the wall outlet and connect the other end to the **POWER** interface of the device.

The following figure shows the application diagram for the connection of the router, PC, splitter and the telephone sets.



## Chapter 3. Web Configuration

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

### 3.1 Accessing the Router

The following describes how to access the device for the first time in details.


**Step 1** Open the Internet Explorer (IE) browser and enter <http://192.168.1.1> in the address bar.

**Step 2** In the **Login** page that is displayed, enter the username and password, and then click **OK**.

- The username and password of the super user are **admin** and **admin**.

After logging in, the page shown in the following figure appears. You can check, configure and modify all the settings.

System	
Alias Name	ADE-3400
Uptime	0 1:55:27
Date/Time	Sun Jan 1 9:55:27 2012
Firmware Version	RTK V2.1.1
Built Date	Sep 13 2013 13:46:44
Serial Number	00304F91CB71

 On the Web configuration page, you can click **Apply Changes** to save the settings temporarily. If you want to save the settings of this page permanently, clicks save of **Attention** that appears at the bottom of the Web page after the configuration.

## 3.2 Status

In the navigation bar, choose **Status**. On the **Status** page that is displayed contains: **Device Info**, **ADSL** and **Statistics**.

### 3.2.1 Device Information

Choose **Status > Device Info** and the page displayed shows the current status and some basic settings of the router, such as software version, DSP version, uptime, upstream speed, and downstream speed.

**ADSL Router Status**  
This page shows the current status and some basic settings of the device.

System	
Alias Name	ADE-3400
Uptime	0 0:25:33
Date/Time	Sun Jan 1 8:25:33 2012
Firmware Version	RTK V2.1.1
Built Date	Sep 13 2013 13:46:44
Serial Number	00304F91CB71

DSL	
Operational Status	G992.5
Upstream Speed	1205 kbps
Downstream Speed	26512 kbps

### 3.2.2 ADSL

Click **ADSL** in the left pane and the page shown in the following figure appears. On this page, you can view the ADSL line status, upstream rate, downstream rate and other information.

Choose **Status > LAN** and the page displayed shows some basic LAN settings of the router. On this page, you can view the LAN IP address, DHCP server status, MAC address, and DHCP client table.



**ADSL Configuration**  
This page shows the setting of the ADSL Router.

Adsl Line Status	SHOWTIME.L0
Adsl Mode	G992.5
Up Stream	1205 kbps
Down Stream	26512 kbps
Attenuation Down Stream	0
Attenuation Up Stream	0
SNR Margin Down Stream	6.6
SNR Margin Up Stream	6.0
Vendor ID	RETK
Firmware Version	4925ca26
CRC Errors	0
Up Stream BER	0e-7
Down Stream BER	0e-7

### 3.2.3 Statistics

Choose **Status > Statistics**. Click **Statistics** in the left pane and the page shown in the following figure appears. On this page, you can view the statistics of each network port.

**Statistics**  
This page shows the packet statistics for transmission and reception regarding to network interface.

Statistics:

Interface	Rx pkt	Rx err	Rx drop	Tx pkt	Tx err	Tx drop
e1	784	0	0	852	0	0
a0	0	0	0	33	0	0
a1	0	0	0	0	0	0
a2	0	0	0	0	0	0
a3	0	0	0	0	0	0
a4	0	0	0	0	0	0
a5	0	0	0	0	0	0
a6	0	0	0	0	0	0
a7	0	0	0	0	0	0

Refresh

### 3.3 Wizard

When subscribing to a broadband service, you should be aware of the method by which you are connected to the Internet. Your physical WAN device can be either PPP, ADSL, or both. The technical information about the properties of your Internet connection is provided by your Internet Service Provider (ISP). For example, your ISP should inform you whether you are connected to the Internet using a static or dynamic IP address, and the protocol that you use to communicate on the Internet.

In the navigation bar, choose **Wizard**. The page shown in the following figure appears. The **Wizard** page guides fast and accurate configuration of the Internet connection and other important parameters. The following sections describe these various configuration parameters. Whether you configure these parameters or use the default ones, click **NEXT** to enable your Internet connection.

**Fast Config**  
The wizard will help you do some basic configurations step by step.  
Step 1: WAN Connection Setting  
Step 2: Save Setting

**Step 1: WAN Connection Setting:** Please select the wan connection mode

<b>VPI/VCI:</b>	VPI: <input type="text" value="8"/> (0-255) VCI: <input type="text" value="35"/> (32-65535)
<b>Encapsulation:</b>	<input checked="" type="radio"/> LLC/SNAP <input type="radio"/> VC-Mux <input type="radio"/> 1483 Bridged <input type="radio"/> 1483 MER
<b>Connection Mode:</b>	<input checked="" type="radio"/> PPP over Ethernet(PPPoE) <input type="radio"/> PPP over ATM(PPPoA)

The following table describes the parameters on this page:

Field	Description
VPI	Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is in the range of 0 to 255. Enter the correct VPI provided by your ISP. By default, VPI is set to <b>0</b> .
VCI	Virtual channel identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is in the range of 32 to 65535. (0 to 31 is reserved for local management of ATM traffic) Enter the correct VCI provided by your ISP. By default, VCI is set to <b>0</b> .

There are five WAN connection types: **1483 Bridged**, **1483 MER**, **PPP over Ethernet (PPPoE)**, **PPP over ATM (PPPoA)**, **1483 Routed**, and. The following describes them respectively.

## Bridge

After setting, click **Next** and the page as shown in the following figure appears.

Settings as follow:	
VPI:	8
VCI:	35
Encapsulation:	LLC/SNAP
Channel Mode:	1483 bridge

## PPPoE/PPPoA

On the **Connection Type** page set the WAN connection type to **PPP over Ethernet (PPPoE)**, and the encapsulation mode to **LLC/SNAP**.

VPI/VCI:	VPI: <input type="text" value="0"/> (0-255) VCI: <input type="text" value="0"/> (32-65535)
Encapsulation:	<input checked="" type="radio"/> LLC/SNAP <input type="radio"/> VC-Mux <input type="radio"/> 1483 Bridged <input type="radio"/> 1483 MER
Connection Mode:	<input checked="" type="radio"/> PPP over Ethernet(PPPoE) <input type="radio"/> PPP over ATM(PPPoA) <input type="radio"/> 1483 Routed
PPP Settings:	Username: <input type="text"/> Password: <input type="text"/>

Field	Description
PPP Username	Enter the username for PPPoE dial-up, which is provided by your ISP.
PPP Password	Enter the password for PPPoE dial-up, which is provided by your ISP.

After setting, click **Next** and the page as shown in the following figure appears.


**Fast Config**

Step 2: Save Settings

If you need finish settings in the fast config, please click "Apply Changes", otherwise please click "Cancel" or "Prev".

Settings as follow:	
VPI:	8
VCI:	35
Encapsulation:	LLC/SNAP
Channel Mode:	pppoe
ppp username:	pppoe01
ppp password:	pppoe01
DNS Setting:	DNS Automatically

Prev Apply Changes Cancel

 Note: If the WAN connection type is set to **PPPoA**, the parameters of the WAN connection type are the same as that of **PPPoE**. For the parameters on these pages, refer to the parameter description of **PPPoE**.

**1483 MER/1483 Routed**

On the **Connection Type** page set the WAN connection type to **1483 MER**, and the encapsulation mode to **LLC/SNAP**.

Status	Wizard	Setup	Advanced	Service	Firewall	Maintenance
--------	--------	-------	----------	---------	----------	-------------

▶ Wizard
▶ Wizard

### Fast Config

The wizard will help you do some basic configurations step by step.  
 Step 1: WAN Connection Setting  
 Step 2: Save Setting

Step 1: WAN Connection Setting:
Please select the wan connection mode

VPI/VCI:	VPI: <input type="text" value="8"/> (0-255) VCI: <input type="text" value="35"/> (32-65535)
Encapsulation:	<input checked="" type="radio"/> LLC/SNAP <input type="radio"/> VC-Mux <input type="radio"/> 1483 Bridged <input checked="" type="radio"/> 1483 MER <input type="radio"/> PPP over Ethernet(PPPoE) <input type="radio"/> PPP over ATM(PPPoA) <input type="radio"/> 1483 Routed
Connection Mode:	<input checked="" type="radio"/> Attain IP Automatically <input type="radio"/> IP Manually:
IP Address:	<input type="text"/>
Netmask:	<input type="text"/>
Gateway:	<input type="text"/>
Default Route:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
DNS Settings:	<input checked="" type="radio"/> Attain DNS Automatically <input type="radio"/> Set DNS Manually :
DNS Server 1:	<input type="text"/>
DNS Server 2:	<input type="text"/>

next

After setting, click **Next** and the page as shown in the following figure appears.

The following table describes the parameters on this page:

Field	Description
Attain IP Automatically	Select it, DHCP automatically assigns the IP address for WAN connection.
IP Manually	When selecting it, you need to manually enter the IP address, subnet mask, and default gateway for WAN connection, which are provided by your ISP.
Attain DNS Automatically	Select it, DHCP automatically assigns DNS server address.
Set DNS Manually	Select it, you need to manually enter the primary DNS server address and secondary DNS server address.

For subsequent configuration, refer to the description in the above section **PPPoE/PPPoA**.

If the WAN connection type is set to **1483 Routed**, the parameters of the WAN connection type are the same as that of **1483 MER**. For the parameters on these pages, refer to the parameter description of **1483 MER**.

## 1483 Bridged

On the **Connection Type** page set the WAN connection type to **1483 Bridged**, and the encapsulation mode to **LLC/SNAP**.

**Status** | **Wizard** | **Setup** | **Advanced** | **Service** | **Firewall** | **Maintenance**

**Fast Config**  
The wizard will help you do some basic configurations step by step.  
Step 1: WAN Connection Setting  
Step 2: Save Setting

**Step 1: WAN Connection Setting:** Please select the wan connection mode

VPI/VCI:	VPI: <input type="text" value="8"/> (0-255) VCI: <input type="text" value="35"/> (32-65535)
Encapsulation:	<input checked="" type="radio"/> LLC/SNAP <input type="radio"/> VC-Mux
Connection Mode:	<input checked="" type="radio"/> 1483 Bridged
	<input type="radio"/> 1483 MER
	<input type="radio"/> PPP over Ethernet(PPPoE)
	<input type="radio"/> PPP over ATM(PPPoA)
	<input type="radio"/> 1483 Routed

**next**

After setting, click **Next** and the page as shown in the following figure appears.

**Status** | **Wizard** | **Setup** | **Advanced** | **Service** | **Firewall** | **Maintenance**

**Fast Config**

**Step 2: Save Settings** If you need finish settings in the fast config, please click "Apply Changes". otherwise please click "Cancel" or "Prev".

Settings as follow:	
VPI:	8
VCI:	35
Encapsulation:	LLC/SNAP
Channel Mode:	1483 bridge

**Prev** | **Apply Changes** | **Cancel**

## 3.4 Setup

In the navigation bar, click Setup. The Setup page that is displayed contains WAN and LAN.

### 3.4.1 WAN

Choose **Setup > WAN**. The **WAN** page that is displayed contains **WAN**, **Auto PVC**, **ATM** and **ADSL**.

#### 3.4.1.1 WAN

Click **WAN** in the left pane, the page shown in the following figure appears. In this page, you can configure WAN interface of your router.

**WAN Configuration**  
This page is used to configure the parameters for the WAN interface of your ADSL and/or Ethernet Modem/Router. Note : When connect type of PPPoE and PPPoA only is "Manual", the "Connect" and "Disconnect" button will be enable.

**Default Route Selection:**  Auto  Specified

**VPI:**  **VCI:**

**Encapsulation:**  LLC  VC-Mux

**Channel Mode:**  **Enable NAPT:**

**Enable IGMP:**

**PPP Settings:**

**User Name:**  **Password:**

**Type:**  **Idle Time (min):**

**WAN IP Settings:**

**Type:**  Fixed IP  DHCP

**Local IP Address:**  **Remote IP Address:**

**NetMask:**

**Default Route:**  Disable  Enable  Auto

**Unnumbered:**

**Connect** **Disconnect** **Add** **Modify** **Delete** **Undo** **Refresh**

**WAN Interfaces Table:**

Select	Inf	Mode	VPI	VCI	Encap	NAPT	IGMP	DRoute	IP Addr	Remote IP	NetMask	User Name	Status	Edit
--------	-----	------	-----	-----	-------	------	------	--------	---------	-----------	---------	-----------	--------	------



The following table describes the parameters on this page:

Field	Description
Default Route Selection	You can select <b>Auto</b> or <b>Specified</b> .
VPI	The virtual path between two points in an ATM network, ranging from 0 to 255.
VCI	The virtual channel between two points in an ATM network, 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 <b>1483 Bridged</b> , <b>1483 MER</b> , <b>PPPoE</b> , <b>PPPoA</b> , <b>1483 Routed</b> or <b>IPoA</b> .
Enable NAPT	Select it to enable Network Address Port Translation (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.
<b>PPP Settings</b>	
User Name	Enter the correct user name for PPP dial-up, which is provided by your ISP.
Password	Enter the correct password for PPP dial-up, which is provided by your ISP.
Type	You can choose <b>Continuous</b> , <b>Connect on Demand</b> , or <b>Manual</b> .
Idle Time (min)	If set the type to <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.
<b>WAN IP Settings</b>	
Type	You can choose <b>Fixed IP</b> or <b>DHCP</b> . <ul style="list-style-type: none"> <li>● If select <b>Fixed IP</b>, you should enter the local IP address, remote IP address and subnet mask.</li> <li>● If select <b>DHCP</b>, the router is a DHCP client, the WAN IP address is assigned by the remote DHCP server.</li> </ul>
Local IP Address	Enter the IP address of WAN interface provided by your ISP.
Netmask	Enter the subnet mask of the local IP address.
Unnumbered	Select this checkbox to enable IP unnumbered function.
Add	After configuring the parameters of this page, click it to add new PVC into the <b>Current ATM VC Table</b> .
Modify	Select PVC in the <b>Current ATM VC Table</b> , and modify the parameters of this PVC. After finishing, click it to apply the settings of this PVC.
WAN Interfaces Table	This table shows the existed PVCs. It shows the interface name, channel mode, VPI/VCI, encapsulation mode, local IP address, remote IP address and other information. The maximum item of this table is eight.

### 3.4.1.2 Auto PVC

Click **Auto PVC** in the left pane, page shown in the following figure appears. In this page, you can get a PVC automatically through detecting function, and add or delete the PVC that you do not want.

**Auto PVC Configuration**  
This page is used to configure pvc auto detect function. Here you can add/delete auto pvc search table.

Probe WAN PVC

VPI:  VCI:

**Current Auto-PVC Table:**

PVC	VPI	VCI
0	0	35
1	8	35
2	0	43
3	0	51
4	0	59
5	8	43
6	8	51
7	8	59

### 3.4.1.3 ATM

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

**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.

VPI:  VCI:  Qos:

PCR:  CDVT:  SCR:  MBS:

Adsl Retrain:

**Current ATM VC Table:**

Select	VPI	VCI	QoS	PCR	CDVT	SCR	MBS
--------	-----	-----	-----	-----	------	-----	-----

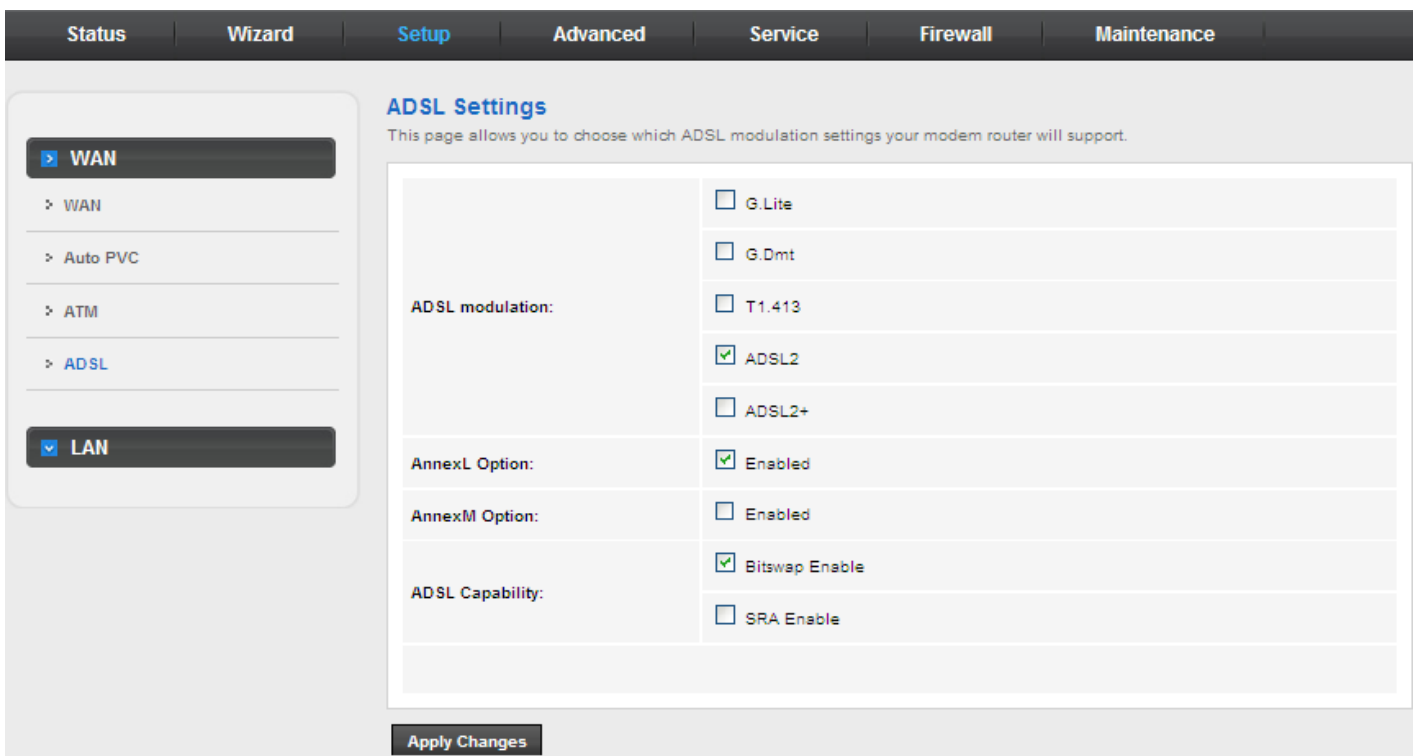
The following table describes the parameters of this page:

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 <b>UBR</b> , <b>CBR</b> , <b>nrt-VBR</b> or <b>rt-VBR</b> .
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

Field	Description
	(in microseconds). Its value ranges from 0 to 4294967295.
SCR	Sustained cell rate (SCR) is the maximum rate that traffic can pass over 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.

### 3.4.1.4 ADSL

Click **ADSL** in the left pane, the page shown in the following figure appears. In this page, you can select the DSL modulation. Mostly, you need to remain this factory default settings. The router supports these modulations: **G.Lite**, **G.Dmt**, **T1.413**, **ADSL2** and **ADSL2+**. The router negotiates the modulation modes with the DSLAM.



### 3.4.2 LAN

Choose Setup > **LAN**. The **LAN** page that is displayed contains **LAN**, **DHCP**, **DHCP Static** and **LAN IPv6**.

#### 3.4.2.1 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
--------	--------	-------	----------	---------	----------	-------------

Status
Wizard
Setup
Advanced
Service
Firewall
Maintenance

WAN

LAN

LAN

DHCP

DHCP Static

LAN IPv6

### LAN Interface Setup

This page is used to configure the LAN interface of your ADSL Router. Here you may change the setting for IP address, subnet mask, etc..

Interface Name:	Ethernet1
IP Address:	<input type="text" value="192.168.1.1"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
<input type="checkbox"/> Secondary IP	

MAC Address Control:	<input type="checkbox"/> LAN1
<input type="button" value="Apply Changes"/>	
New MAC Address:	<input type="text"/> <input type="button" value="Add"/>

⚙️ **Current Allowed MAC Address Table:**

MAC Addr	Action

The following table describes the parameters of this page:

Field	Description
IP Address	Enter the IP address of LAN interface. It is recommended to use an address from a block that is reserved for private use. This address block is <b>192.168.1.1-192.168.1.254</b> .
Subnet Mask	Enter the subnet mask of LAN interface. The range of subnet mask is from <b>255.255.0.0-255.255.255.254</b> .
Secondary IP	Select it to enable the secondary LAN IP address. The two LAN IP addresses must be in the different network.
MAC Address Control	It is the access control based on MAC address. When selecting it, the host whose MAC address is listed in the <b>Current Allowed MAC Address Table</b> can access the modem.
Add	Enter MAC address, and then click it to add a new MAC address.

### 3.4.2.2 DHCP

Dynamic Host Configuration Protocol (DHCP) allows the individual PC to obtain the TCP/IP configuration from the centralized DHCP server. You can configure this router as a DHCP server or disable it. The DHCP server can assign IP address, IP default gateway, and DNS server to DHCP clients. This router can also act as a surrogate DHCP server (DHCP Relay) where it relays IP address assignment from an actual real DHCP server to clients. You can enable or disable DHCP server.

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

**DHCP Mode**

This page can be used to config the DHCP mode:None,DHCP Relay or DHCP Server.

(1)Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.

(2)Enable the DHCP Relay if you are using the other DHCP server to assign IP address to your hosts on the LAN. You can set the DHCP server ip address.

(3)If you choose "None", then the 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 Server

Interface:  LAN

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](#)

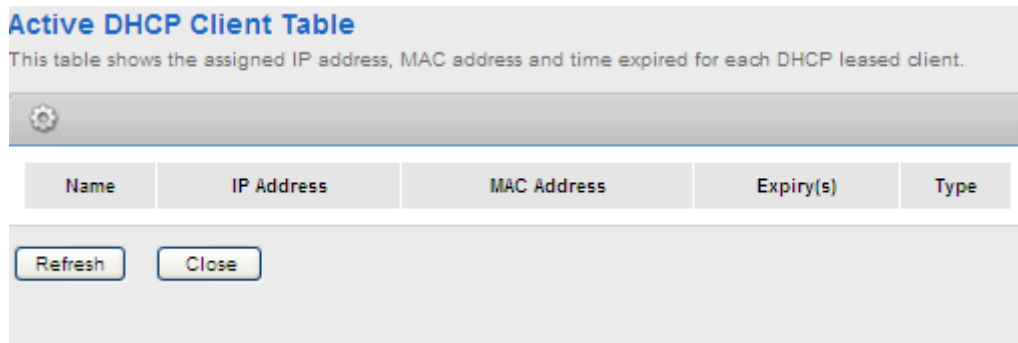
[Set VendorClass IP Range](#)

The following table describes the parameters on this page:

Field	Description
DHCP Mode	If set to <b>DHCP Server</b> , the router can assign IP addresses, IP default gateway and DNS Servers to the host in Windows95, Windows NT and other operation systems that support the DHCP client.
IP Pool Range	It specifies the first and the last IP address in the IP address pool. The router assigns IP address that is in the IP pool range to the host.
Show Client	Click it, the <b>Active DHCP Client Table</b> appears. It shows IP addresses assigned to clients.
Default Gateway	Enter the default gateway of the IP address pool.
Max Lease Time	The lease time determines the period that the host retains the assigned IP addresses before the IP addresses change.
Domain Name	Enter the domain name if you know. If you leave this blank, the domain name obtained by DHCP from the ISP is used. You must enter host name (system

Field	Description
	name) on each individual PC. The domain name can be assigned from the router through the DHCP server.
DNS Servers	You can configure the DNS server IP addresses for DNS Relay.
Set Vendor Class IP Range	Click it, the <b>Device IP Range Table</b> page appears. You can configure the IP address range based on the device type.

Click **Show Client** on the **DHCP Mode** page and the page shown in the following figure appears. You can view the IP address assigned to each DHCP client.



The following table describes the parameters and buttons on this page:

Field	Description
IP Address	It displays the IP address assigned to the DHCP client from the router.
MAC Address	It displays the MAC address of the DHCP client. Each Ethernet device has a unique MAC address. The MAC address is assigned at the factory and it consists of six pairs of hexadecimal character, for example, 00-A0-C5-00-02-12.
Expiry (s)	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.

Click **Set Vendor Class IP Range** on the **DHCP Mode** page and the page as shown in the following figure appears. On this page, you can configure the IP address range based on the device type.

**Device IP Range Table**

This page is used to configure the IP address range based on device type.

device name:	<input type="text"/>
start address:	<input type="text"/>
end address:	<input type="text"/>
Router address:	<input type="text"/>
option60	<input type="text"/>

IP Range Table:

select:	device name:	start address:	end address:	default gateway:	option60:
---------	--------------	----------------	--------------	------------------	-----------

In the **DHCP Mode** field, choose **None** and the page shown in the following figure appears.

Status    Wizard    **Setup**    Advanced    Service    Firewall    Maintenance

**WAN**    **LAN**

> LAN

> **DHCP**

> DHCP Static

> LAN IPv6

**DHCP Mode**

This page can be used to config the DHCP mode:None,DHCP Relay or DHCP Server.  
 (1)Enable the DHCP Server if you are using this device as a DHCP server. This page lists the IP address pools available to hosts on your LAN. The device distributes numbers in the pool to hosts on your network as they request Internet access.  
 (2)Enable the DHCP Relay if you are using the other DHCP server to assign IP address to your hosts on the LAN. You can set the DHCP server ip address.  
 (3)If you choose "None", then the 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	None

In the **DHCP Mode** field, choose **DHCP Relay** and the page shown in the following figure appears.

The following table describes the parameters and buttons on this page:

Field	Description
DHCP Mode	If set to <b>DHCP Relay</b> , the router acts a surrogate DHCP Server and relays the DHCP requests and responses between the remote server and the client.
Relay Server	Enter the DHCP server address provided by your ISP.
Apply Changes	Click it to save the settings of this page.
Undo	Click it to refresh this page.

### 3.4.2.3 DHCP Static IP

Click **DHCP Static IP** in the left pane and 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.

The following table describes the parameters and buttons on 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.



Field	Description
Add	After entering the IP address and MAC address, click it. A row will be added in the <b>DHCP Static IP Table</b> .
Delete Selected	Select a row in the <b>DHCP Static IP Table</b> , then click it, this row is deleted.
Undo	Click it to refresh this page.
Current ATM VC Table	It shows the assigned IP address based on the MAC address.

### 3.4.2.4 LAN IPv6

In this page, you can configure the LAN IPv6. Choose **Setup > LAN > LAN IPv6**. The **IPv6 LAN setting** page as shown in the following figure appears:

The screenshot displays the 'LAN IPv6 Setting' configuration page. At the top, there are navigation tabs: Status, Wizard, Setup (selected), Advanced, Service, Firewall, and Maintenance. On the left, a sidebar menu shows 'WAN' selected, with 'LAN' expanded to show sub-options: LAN, DHCP, DHCP Static, and LAN IPv6 (selected). The main content area is titled 'LAN IPv6 Setting' and includes a descriptive text: 'This page is used to configurate ipv6 lan setting. User can set lan RA server work mode and lan DHCPv6 server work mode.' Below this, there are two main sections: 'Lan Global Address Setting' and 'RA Setting'. The 'Lan Global Address Setting' section has a 'Global Address:' field with two input boxes separated by a slash. Below it is an 'Apply Changes' button. The 'RA Setting' section includes an 'Enable:' checkbox which is checked, and four other settings: 'M Flag' (unchecked), 'O Flag' (checked), 'Max Interval:' (600 Secs), and 'Min Interval:' (200 Secs).

## 3.5 Advanced

In the navigation bar, click **Advanced**. In the **Advanced** page that is displayed contains **Route**, **NAT**, **QoS**, **TR-069** and **Others**.

### 3.5.1 Routing

Choose **Advance > Routing**, and this page contains **Static Route** and **RIP**.

#### 3.5.1.1 Static Route

Click **Static Route** in the left pane, and the page shown in the following figure appears. This page is used to configure the routing information. You can add or delete IP routes.

The screenshot displays the 'Routing Configuration' page. The top navigation bar includes 'Status', 'Wizard', 'Setup', 'Advanced' (highlighted), 'Service', 'Firewall', and 'Maintenance'. The left sidebar shows 'Route' selected, with sub-options for 'Static Route', 'IPv6 Static Route', and 'RIP'. Below these are 'NAT', 'QoS', 'TR-069', and 'Others'. The main content area is titled 'Routing Configuration' and contains a form with the following fields: 'Enable' (checked), 'Destination' (text input), 'Subnet Mask' (text input), 'Next Hop' (text input), 'Metric' (text input with value '1'), and 'Interface' (dropdown menu). Below the form are buttons for 'Add Route', 'Update', 'Delete Selected', and 'Show Routes'. At the bottom, there is a 'Static Route Table' with columns: 'Select', 'State', 'Destination', 'Subnet Mask', 'NextHop', 'Metric', and 'Itf'.

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

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

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

Refresh
Close

### 3.5.1.2 IPv6 Static Route

Click **IPv6 Static Route** in the left pane, and 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
Maintenance

- Route
- Static Route
- IPv6 Static Route
- RIP

- NAT
- QoS
- TR-069
- Others

#### IPv6 Routing Configuration

This page is used to configure the ipv6 routing information. Here you can add/delete IPv6 routes.

Destination:	
Prefix Length:	
Next Hop:	
Interface:	<div style="background-color: #eee; padding: 2px; display: flex; align-items: center;"> <span style="font-size: small;">v</span> </div>

Add Route
Delete Selected

⚙️ IPv6 Static Route Table:

Select	Destination	NextHop	Interface

### 3.5.1.3 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.

32

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

Field	Description
RIP	You can select <b>OFF</b> or <b>ON</b> . In this example, <b>OFF</b> is selected.
Apply	Click it to save the settings of this page.
Interface	Choose the router interface that uses RIP.
Recv Version	Choose the interface version that receives RIP messages. You can choose <b>RIP1</b> , <b>RIP2</b> , or <b>Both</b> . <ul style="list-style-type: none"> <li>● Choose <b>RIP1</b>, indicates the router receives RIP v1 messages.</li> <li>● Choose <b>RIP2</b>, indicates the router receives RIP v2 messages.</li> <li>● Choose <b>Both</b>, indicates the router receives RIP v1 and RIP v2 messages.</li> </ul>
Send Version	The working mode for sending RIP messages. You can choose <b>RIP1</b> or <b>RIP2</b> . <ul style="list-style-type: none"> <li>● Choose <b>RIP1</b> indicates the router broadcasts RIP1 messages only.</li> <li>● Choose <b>RIP2</b> indicates the router multicasts RIP2 messages only.</li> </ul>
Add	Click it to add the RIP interface to the <b>Rip Config List</b> .
Delete	Select a row in the <b>Rip Config List</b> and click it to delete the row.

### 3.5.2 NAT

Choose **Advanced > NAT** and the page shown in the following figure appears. The page displayed contains **DMZ**, **Virtual Server**, **ALG**, **NAT Exclude IP**, **Port Trigger**, **FTP ALG Port**, and **NAT IP Mapping**.

#### 3.5.2.1 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 **DMZ** in the left pane, the page shown in the following figure appears.

The following describes how to configure manual DMZ.

Enter an IP address of the DMZ host.

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

The screenshot shows the 'Advanced' configuration page for DMZ. The left sidebar has 'Route' and 'NAT' expanded, with 'DMZ' selected. The main content area is titled 'DMZ' and includes a description: 'A Demilitarized Zone 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.' Below the description are two input fields: 'WAN Interface:' with a dropdown menu set to 'any', and 'DMZ Host IP Address:' with an empty text box. There are 'Apply Changes' and 'Reset' buttons. A section titled 'Current DMZ Table:' contains a table with columns 'Select', 'WAN Interface', and 'DMZ Ip'. Below the table is a 'Delete Selected' button.

### 3.5.2.2 Virtual Server

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

The screenshot shows the 'Virtual Server' configuration page. The left sidebar has 'Virtual Server' selected. The main content area is titled 'Virtual Server' and includes a description: 'This page allows you to config virtual server,so others can access the server through the Gateway.' Below the description are several configuration fields: 'Service Type:' with radio buttons for 'Usual Service Name:' (selected, dropdown set to 'AUTH') and 'User-defined Service Name:' (empty); 'Protocol:' with a dropdown set to 'TCP'; 'WAN Setting:' with a dropdown set to 'Interface'; 'WAN Interface:' with a dropdown set to 'any'; 'WAN Port:' with a text box containing '113' and '(ex. 5001:5010)'; 'LAN Open Port:' with a text box containing '113'; and 'LAN Ip Address:' with an empty text box. There is an 'Apply Changes' button. A section titled 'Current Virtual Server Forwarding Table:' contains a table with columns: 'ServerName', 'Protocol', 'Local IP Address', 'Local Port', 'WAN IP Address', 'WAN Port', 'State', and 'Action'.

The following table describes the parameters of this page.

Field	Description
Service Type	You can select the common service type, for example, <b>AUTH</b> , <b>DNS</b> or <b>FTP</b> . You can also define a service name. <ul style="list-style-type: none"> <li>● If you select <b>Usual Service Name</b>, the corresponding parameter has the default settings.</li> <li>● If you select <b>User-defined Service Name</b>, you need to enter the corresponding parameters.</li> </ul>
Protocol	Choose the transport layer protocol that the service type uses. You can choose <b>TCP</b> or <b>UDP</b> .
WAN Setting	You can choose <b>Interface</b> or <b>IP Address</b> .
WAN Interface	Choose the WAN interface that will apply virtual server.
WAN Port	Choose the access port on the WAN.
LAN Open Port	Enter the port number of the specified service type.
LAN IP Address	Enter the IP address of the virtual server. It is in the same network segment with LAN IP address of the router.

### 3.5.2.3 ALG

Click **ALG** in the left pane, and the page shown in the following figure appears. Choose the NAT ALG and Pass-Through options, and then click **Apply Changes**.

The screenshot displays the configuration page for NAT ALG and Pass-Through. The navigation tabs at the top include Status, Wizard, Setup, **Advanced**, Service, Firewall, and Maintenance. The left sidebar shows a tree view with categories like Route, NAT, QoS, TR-069, and Others. Under the NAT category, options include DMZ, Virtual Server, **ALG**, NAT Exclude IP, Port Trigger, FTP ALG Port, and Nat IP Mapping. The main content area is titled 'NAT ALG and Pass-Through' and contains a table of pass-through settings:

Pass-Through Type	Status
IPSec Pass-Through:	<input checked="" type="checkbox"/> Enable
L2TP Pass-Through:	<input checked="" type="checkbox"/> Enable
PPTP Pass-Through:	<input checked="" type="checkbox"/> Enable
FTP:	<input checked="" type="checkbox"/> Enable
H.323:	<input checked="" type="checkbox"/> Enable
SIP:	<input checked="" type="checkbox"/> Enable
RTSP:	<input checked="" type="checkbox"/> Enable
ICQ:	<input checked="" type="checkbox"/> Enable
MSN:	<input checked="" type="checkbox"/> Enable

At the bottom of the configuration area, there are two buttons: **Apply Changes** and **Reset**.

### 3.5.2.4 NAT Exclude IP

Click **NAT Exclude IP** in the left pane, and 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.

### 3.5.2.5 Port Trigger

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

**Nat Port Trigger**

Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Nat Port Trigger:  Enable  Disable

**Apply Changes**

Application Type:

Usual Application Name:

User-defined Application Name:

Start Match Port	End Match Port	Trigger Protocol	Start Relate Port	End Relate Port	Open Protocol	Nat Type
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>
<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>	UDP <input type="button" value="v"/>	outgoing <input type="button" value="v"/>

**Apply Changes**

**Current Port Trigger Table:**

ServerName	Trigger Protocol	Direction	Match Port	Open Protocol	Relate Port	Action
------------	------------------	-----------	------------	---------------	-------------	--------

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.

### 3.5.2.6 FTP ALG Port

Click **FTP ALG Port** in the left pane, the page shown in the following figure appears. The common port for FTP connection is port 21, and a common ALG monitors the TCP port 21 to ensure NAT pass-through of FTP. By enabling this function, when the FTPserver connection port is not a port 21, the FTP ALG module will be informed to monitor other TCP ports to ensure NAT pass-through of FTP.

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

Field	Description
FTP ALG port	Set an FTP ALG port.
Add Dest Ports	Add a port configuration.
Delete Selected DestPort	Delete a selected port configuration from the list.

### 3.5.2.7 NAT IP Mapping

NAT is short for Network Address Translation. The Network Address Translation Settings window allows you to share one WAN IP address for multiple computers on your LAN.

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

Entries in this table allow you to configure one IP pool for specified source IP address from LAN, so one packet whose source IP is in range of the specified address will select one IP address from the pool for NAT.



The screenshot shows the 'NAT IP MAPPING' configuration page. The top navigation bar includes 'Status', 'Wizard', 'Setup', 'Advanced' (selected), 'Service', 'Firewall', and 'Maintenance'. On the left sidebar, 'Route' and 'NAT' are expanded, with 'Nat IP Mapping' selected. The main content area has a title 'NAT IP MAPPING' and a descriptive paragraph: '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.' Below this is a configuration form with a 'Type' dropdown set to 'One-to-One'. It contains four input fields: 'Local Start IP', 'Local End IP', 'Global Start IP', and 'Global End IP'. At the bottom of the form are 'Apply Changes' and 'Reset' buttons. Below the form is a table titled 'Current NAT IP MAPPING Table:' with columns for 'Local Start IP', 'Local End IP', 'Global Start IP', 'Global End IP', and 'Action'. Below the table are 'Delete Selected' and 'Delete All' buttons.

### 3.5.3 QoS

Choose Advanced > QoS, and the page shown in the following figure appears. Entries on 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.

The screenshot shows the 'IP QoS' configuration page. The top navigation bar is the same as in the previous screenshot. On the left sidebar, 'Route', 'NAT', and 'QoS' are expanded, with 'QoS' selected. The main content area has a title 'IP QoS' and a configuration field for 'IP QoS:' with radio buttons for 'disable' and 'enable'. The 'enable' radio button is selected. Below this field is an 'Apply' button.

Enable QoS and click **Apply** to enable IP QoS function.

Click **add rule** to add a new IP QoS rule.

The page shown in the following figure appears.

[Status](#) | [Wizard](#) | [Setup](#) | **[Advanced](#)** | [Service](#) | [Firewall](#) | [Maintenance](#)

- Route
- NAT
- QoS
  - QoS
- TR-069
- Others

### IP QoS

IP QoS:  disable  enable

Schedule Mode:

**Apply**

**QoS Rule List:**

src MAC	dest MAC	src IP	sPort	dest IP	dPort	proto	phy port				
<b>QoS Rule List(Continue):</b>											
IPP	TOS	DSCP	TC	802.1p	Prior	IPP Mark	TOS Mark	DSCP Mark	TC Mark	802.1p Mark	sel

**Delete**   **Add Rule**

**Add Or Modify QoS Rule**

Source MAC:	<input type="text"/>
Destination MAC:	<input type="text"/>
Source IP:	<input type="text"/>
Source Mask:	<input type="text"/>
Destination IP:	<input type="text"/>
Destination Mask:	<input type="text"/>
Source Port:	<input type="text"/>
Destination Port:	<input type="text"/>
Protocol:	<input type="text" value=""/>
Phy Port:	<input type="text" value=""/>
IP/D/S Field:	<input type="radio"/> IPP/TOS <input checked="" type="radio"/> DSCP
IP Precedence Range:	<input type="text" value=""/> ~ <input type="text" value=""/>
Type of Service:	<input type="text" value=""/>
DSCP Range:	<input type="text" value=""/> ~ <input type="text" value=""/> (Value Range 0-63)
Traffic Class Range:	<input type="text" value=""/> ~ <input type="text" value=""/> (Value Range 0-255)
802.1p:	<input type="text" value=""/> ~ <input type="text" value=""/>
Priority:	<input type="text" value="p3(Lowest)"/>
<input type="checkbox"/> Insert or modify QoS mark	

**Apply**

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

Field	Description
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 Policy	You can choose <b>stream based</b> , <b>802.1p based</b> , or <b>DSCP based</b> .
Schedule Mode	You can choose <b>strict prior</b> or <b>WFQ (4:3:2:1)</b> .
Source IP	The IP address of the source data packet.
Source Mask	The subnet mask of the source IP address.
Destination IP	The IP address of the destination data packet.
Destination Mask	The subnet mask of the destination IP address.
Source Port	The port of the source data packet.
Destination Port	The port of the destination data packet.
Protocol	The protocol responds to the IP QoS rules. You can choose <b>TCP</b> , <b>UDP</b> , or <b>ICMP</b> .
Phy Port	The LAN interface responds to the IP QoS rules.
Set priority	The priority of the IP QoS rules. P0 is the highest priority and P3 is the lowest.
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.

### 3.5.4 TR-069

Choose **Advanced > TR-069** and the page shown in the following page appears. In this page, you can configure the TR-069 CPE.

Status
Wizard
Setup
Advanced
Service
Firewall
Maintenance

Route

NAT

QoS

TR-069

TR-069

Others

#### TR-069 Configuration

This page is used to configure the TR-069 CPE. Here you may change the setting for the ACS's parameters.

**ACS:**

Enable:

URL:

User Name:

Password:

Periodic Inform Enable:  Disable  Enable

Periodic Inform Interval:  seconds

**Connection Request:**

User Name:

Password:

Path:

Port:	<input type="text" value="7547"/>
<b>Debug:</b>	
ACS Certificates CPE:	<input checked="" type="radio"/> No <input type="radio"/> Yes
Show Message:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
CPE Sends GetRPC:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Skip MReboot:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Delay:	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Auto-Execution:	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
<input type="button" value="Apply Changes"/> <input type="button" value="Reset"/>	
<b>Certificate Management:</b>	
CPE Certificate Password:	<input type="text" value="client"/> <input type="button" value="Apply"/> <input type="button" value="Undo"/>
CPE Certificate:	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/> <input type="button" value="Delete"/>
CA Certificate:	<input type="text"/> <input type="button" value="Browse..."/> <input type="button" value="Upload"/> <input type="button" value="Delete"/>

The following table describes the parameters of this page:

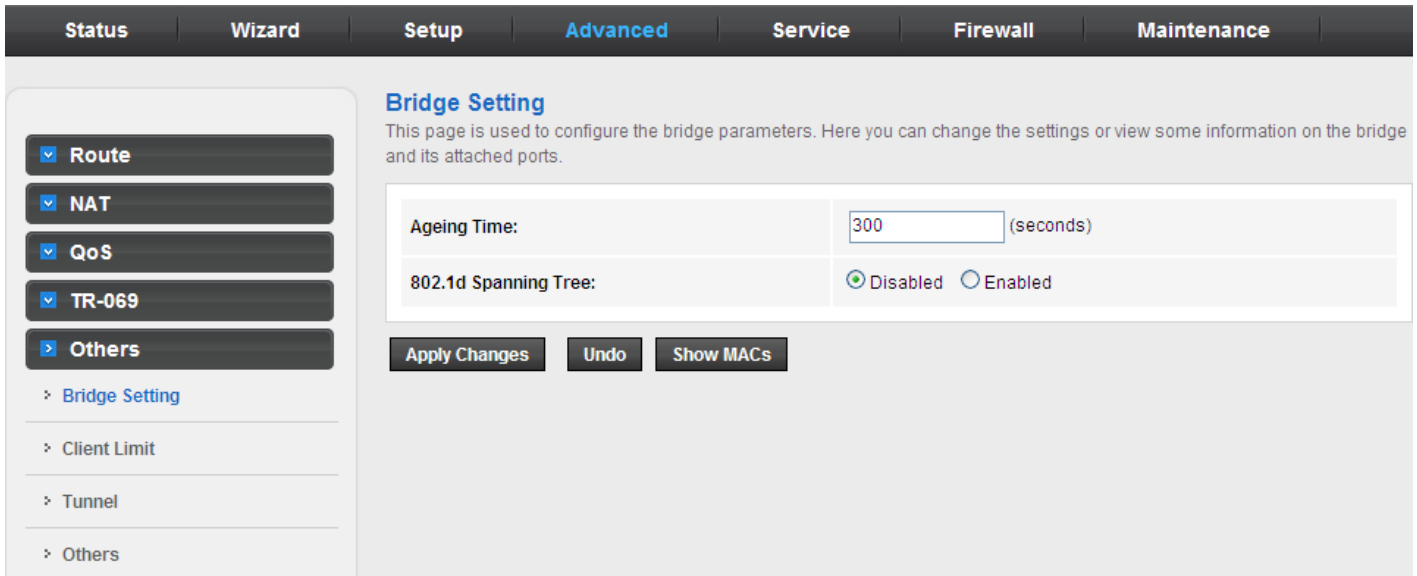
Field	Description
<b>ACS</b>	
URL	The URL of the auto-configuration server to connect to.
User Name	The user name for logging in to the ACS.
Password	The password for logging in to the ACS.
Periodic Inform Enable	Select <b>Enable</b> to periodically connect to the ACS to check whether the configuration updates.
Periodic Inform Interval	Specify the amount of time between connections to ACS.
<b>Connection Request</b>	
User Name	The connection username provided by TR-069 service.
Password	The connection password provided by TR-069 service.
<b>Debug</b>	
Show Message	Select <b>Enable</b> to display ACS SOAP messages on the serial console.
CPE sends GetRPC	Select <b>Enable</b> , the router contacts the ACS to obtain configuration 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-Execution	Specify whether to automatically start the TR-069 after the router is powered on.

### 3.5.5.Others

Choose **Advance > Others**, and the page shown in the following figure appears. The page displayed contains **Bridge Setting, Client Limit, Tunnel** and **Others**.

#### 3.5.5.1 Bridge Setting

Choose **Advance > Others > Bridge Setting**, and 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.



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

Field	Description
Aging Time	If the host is idle for 300 seconds (default value), its entry is deleted from the bridge table.
802.1d Spanning Tree	You can select <b>Disable</b> or <b>Enable</b> . Select <b>Enable</b> to provide path redundancy while preventing undesirable loops in your network.
Show MACs	Click it to show a list of the learned MAC addresses for the bridge.

Click **Show MACs**, and 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	Type	Aging Time
01:80:c2:00:00:00	0	Static	300
00:02:b3:03:03:00	1	Dynamic	270
00:30:4f:00:28:35	1	Dynamic	300
00:0e:c6:87:72:01	1	Dynamic	270
01:00:5e:00:00:09	0	Static	300
00:16:d4:ff:d2:e3	1	Dynamic	150
00:30:4f:91:dd:2b	1	Dynamic	150

### 3.5.5.2 Client Limit

Choose **Advance > Others > Client Limit**, and 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.

The screenshot shows the 'Client Limit Configuration' page. At the top, there is a navigation bar with tabs: Status, Wizard, Setup, **Advanced**, Service, Firewall, and Maintenance. On the left side, there is a sidebar menu with options: Route, NAT, QoS, TR-069, **Others** (expanded), Bridge Setting, Client Limit (selected), Tunnel, and Others. The main content area is titled 'Client Limit Configuration' and includes the text: 'This page is used to configure the capability of force how many device can access to Internet!'. Below this, there is a 'Client Limit Capability:' section with two radio buttons: 'Disable' (selected) and 'Enable'. At the bottom of this section, there is an 'Apply Changes' button.

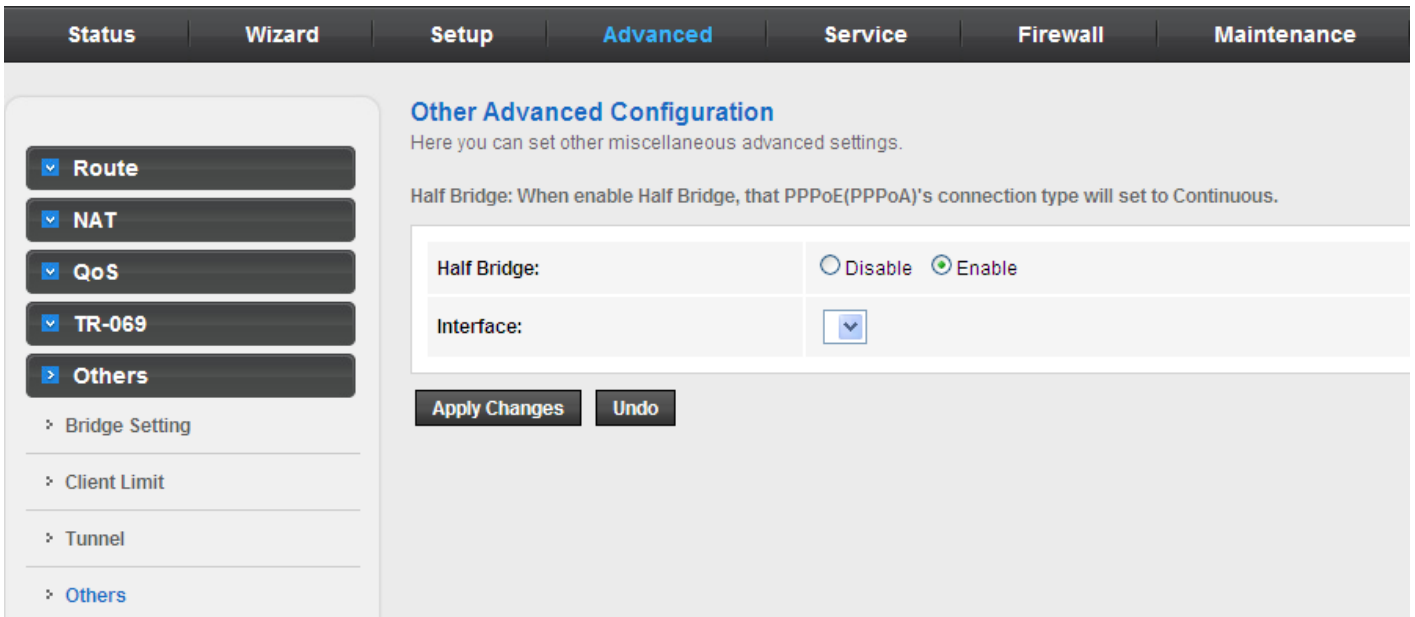
### 3.5.5.3 Tunnel

Choose **Advance > Others > Tunnel**, and the page shown in the following figure appears. This page is used to configure the IPv6 with LAN to transfer IPv4.

The screenshot shows the 'Tunnel Configuration' page. At the top, there is a navigation bar with tabs: Status, Wizard, Setup, **Advanced**, Service, Firewall, and Maintenance. On the left side, there is a sidebar menu with options: Route, NAT, QoS, TR-069, **Others** (expanded), Bridge Setting, Client Limit, **Tunnel** (selected), and Others. The main content area is titled 'Tunnel Configuration' and includes the text: 'This page is used to configure v6inv4 tunnel or v4inv6 tunnel.'. Below this, there are two configuration sections. The first is 'V6inV4 Tunnel:' with fields for 'Enable:' (checkbox), 'Interface:' (dropdown menu with '(Only support IPv4 Wan Interface)' text), and 'Mode:' (dropdown menu with '6to4 Tunnel' selected). Below this section is an 'Apply Changes' button. The second section is 'DS-Lite Tunnel:' with fields for 'Enable:' (checkbox), 'Interface:' (dropdown menu with '(Only support IPv6 Wan Interface)' text), and 'Mode:' (dropdown menu with 'Auto' selected). Below this section is another 'Apply Changes' button.

### 3.5.5.4 Others

Choose **Advanced > Others > Others** in the left pane, and the page shown in the following figure appears. You can enable half bridge so that the PPPoE or PPPoA connection will set to Continuous.



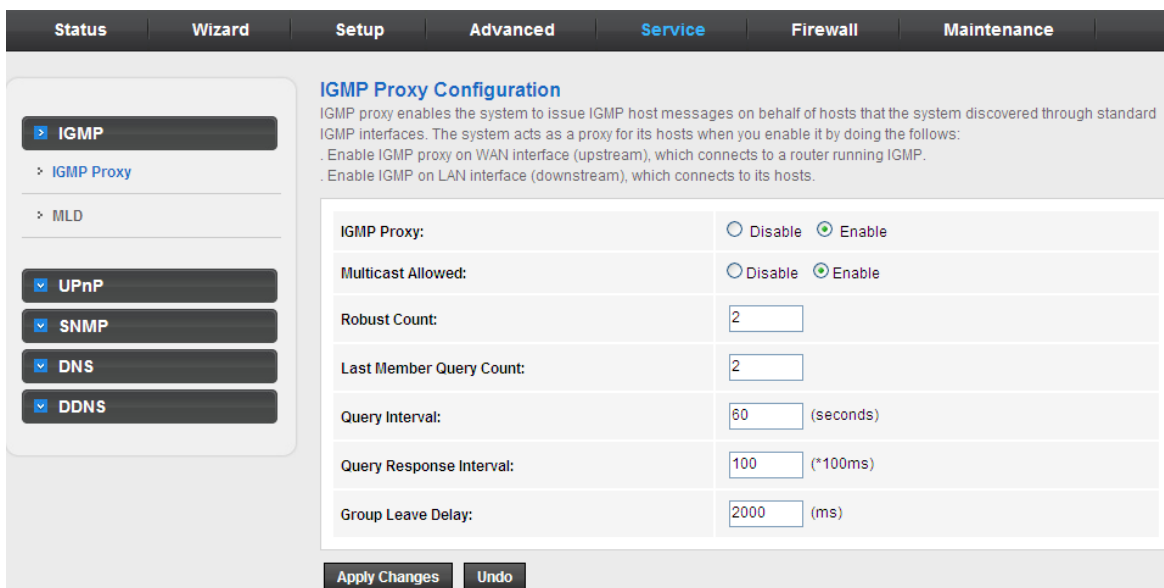
## 3.6 Service

In the navigation bar, click **Service**. On the **Service** page that is displayed contains **IGMP**, **UPnP**, **SNMP DNS**, and **DDNS**.

### 3.6.1 IGMP

#### 3.6.1.1 IGMP Proxy

Choose **Service > IGMP** and the page shown in the following figure appears. IGMP proxy enables the system to issue IGMP host messages on behalf of hosts that the system discovered through standard IGMP interfaces. The system acts as a proxy for its hosts after you enable it.



### 3.6.1.2 MLD

MLD means Multicast Listener Discovery, its component of the IPv6. MLD is used by IPv6 routers for discovering multicast listeners on a directly attached link, much like IGMP is used in IPv4.

The screenshot shows the 'Service' tab selected in the top navigation bar. On the left sidebar, 'IGMP' is expanded to show 'MLD'. The main content area is titled 'MLD Configuration' with a sub-header 'MLD Proxy and Snooping can be configured here.' Below this, there are several configuration rows:

MLD proxy:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
MLD snooping:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Robust Counter:	<input type="text" value="2"/>
Query Interval:	<input type="text" value="125"/> (Second)
Query Response Interval:	<input type="text" value="10000"/> (millisecond)
Response Interval of Last Group Member:	<input type="text" value="1"/> (Second)

At the bottom of the configuration area, there are two buttons: 'Apply Changes' and 'Cancel'.

### 3.6.2 UPnP

Choose **Service** > **UPnP** and the page shown in the following figure appears. This page is used to configure UPnP. The system acts as a daemon after you enable it.

The screenshot shows the 'Service' tab selected in the top navigation bar. On the left sidebar, 'UPnP' is selected. The main content area is titled 'UPnP Configuration' with a sub-header 'This page is used to configure UPnP. The system acts as a daemon when you enable UPnP.' Below this, there are two configuration rows:

UPnP:	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
WAN Interface:	<input type="text" value="v"/>

At the bottom of the configuration area, there is one button: 'Apply Changes'.

### 3.6.3 SNMP

Choose **Service** > **SNMP**, click **Enable SNMP**, and the page shown in the following figure appears. You can configure the SNMP parameters.



**SNMP Protocol Configuration**

This page is used to configure the SNMP protocol. Here you may change the setting for system description, trap ip address, community name, etc..

Enable SNMP

System Description	ADSL SoHo Router
System Contact	<input type="text"/>
System Name	ADSL
System Location	<input type="text"/>
Trap IP Address	<input type="text"/>
Community name (read-only)	public
Community name (read-write)	public

Apply Changes    Reset

The following table describes the parameters of this page:

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

### 3.6.4 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** and **IPv6 DNS**.

### 3.6.4.1 DNS

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

### 3.6.4.2 IPv6 DNS

The following table describes the parameters and buttons on this page:

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

### 3.6.5 DDNS

Click **DDNS** in the left pane and the page shown in the following figure appears. This page is used to configure the dynamic DNS address from DynDNS.org, TZO or Planet. You can add or remove to configure dynamic DNS. The Planet DDNS is free for customer.

The following table describes the parameters on this page:

Field	Description
DDNS provider	Choose the DDNS provider name. You can choose <b>DynDNS.org</b> , <b>TZO</b> or <b>Planet</b> .
Host Name	The DDNS identifier.
Interface	The WAN interface of the router.
Enable	Enable or disable DDNS function.
Username	The name provided by DDNS provider.
Password	The password provided by DDNS provider.
Email	The email provided by DDNS provider.
Key	The key provided by DDNS provider.

## 3.7 Firewall

Choose Service > **Firewall** and the Firewall page that is displayed contains **MAC Filter**, **IP/Port Filter**, **URL Filter**, **ACL** and **DoS**.

### 3.7.1 MAC Filter

Click **MAC Filter** in the left pane and 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 Filtering**  
Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Outgoing Default Policy:  Deny  Allow  
 Incoming Default Policy:  Deny  Allow

Apply

Direction:    
 Action:  Deny  Allow  
 Source MAC:  (ex. 00304F710502)  
 Destination MAC:  (ex. 00304F710502)

Add

Current MAC Filter Table:

Select	Direction	Source MAC	Destination MAC	Action
--------	-----------	------------	-----------------	--------

Delete Delete All

### 3.7.2 IP/Port Filter

#### 3.7.2.1 IP/Port Filter

Click **IP/Port Filter** in the left pane and 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 Advanced Service **Firewall** Maintenance

**IP/Port Filtering**  
Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Outgoing Default Policy:  Permit  Deny  
 Incoming Default Policy:  Permit  Deny

Rule Action:  Permit  Deny  
 WAN Interface:    
 Protocol:    
 Direction:    
 Source IP Address:  Mask Address:   
 Dest IP Address:  Mask Address:   
 SPort:  -  DPort:  -   
 Enable:

Apply Changes Reset Help

Current Filter Table:

Rule	WanIf	Protocol	Source IP/Mask	SPort	Dest IP/Mask	DPort	State	Direction	Action
------	-------	----------	----------------	-------	--------------	-------	-------	-----------	--------

### 3.7.2.2 IPV6/Port Filter

The screenshot shows the 'IPv6/Port Filtering' configuration page. The top navigation bar includes 'Status', 'Wizard', 'Setup', 'Advanced', 'Service', 'Firewall', and 'Maintenance'. The left sidebar contains filter categories: MAC Filter, IP/Port Filter (expanded to show 'IP/Port Filter' and 'IPv6/Port Filter'), URL Filter, ACL, and DoS. The main content area is titled 'IPv6/Port Filtering' and includes a description: 'Entries in this table are used to restrict certain types of ipv6 data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.'

Configuration options include:

- Outgoing Default Policy:  Permit  Deny
- Incoming Default Policy:  Permit  Deny
- Rule Action:  Permit  Deny
- Protocol: IPv6 (dropdown)
- Icmp6Type: PING6 (dropdown)
- Direction: Upstream (dropdown)
- Source IPv6 Address: [text input] Prefix Length: [text input]
- Dest IPv6 Address: [text input] Prefix Length: [text input]
- SPort: [text input] - [text input] DPort: [text input] - [text input]
- Enable:

Buttons: Apply Changes, Reset, Help.

Current Filter Table:

Rule	Protocol	Source IPv6/Prefix	SPort	Dest IPv6/Prefix	DPort	ICMP6Type	State	Direction	Action

### 3.7.3 URL Filter

Click **URL Filter** in the left pane and the page shown in the following figure appears. This page is used to block a fully qualified domain name, such as tw.yahoo.com and filtered keyword. You can add or delete FQDN and filtered keyword.

The screenshot shows the 'URL Blocking Configuration' page. The top navigation bar is the same as in the previous screenshot. The left sidebar shows 'URL Filter' selected under the 'IP/Port Filter' category.

The main content area is titled 'URL Blocking Configuration' and includes a description: 'This page is used to configure the filtered keyword. Here you can add/delete filtered keyword.'

Configuration options include:

- URL Blocking Capability:  Disable  Enable

Buttons: Apply Changes, AddKeyword, Delete Selected Keyword.

URL Blocking Table:

Select	Filtered Keyword

The following table describes the parameters and buttons on this page:

Field	Description
URL Blocking Capability	You can choose <b>Disable</b> or <b>Enable</b> . <ul style="list-style-type: none"> <li>● Select <b>Disable</b> to disable URL/KEYWORD blocking function and keyword filtering function.</li> <li>● Select <b>Enable</b> to block access to the URLs and keywords specified in the <b>URL Blocking Table</b>.</li> </ul>
Keyword	Enter the keyword to block.
Add Keyword	Click it to add a URL/keyword to the <b>URL Blocking Table</b> .
Delete selected keyword	Select a row in the <b>URL Blocking Table</b> and click it to delete the row.
URL Blocking Table	A list of the URL (s) to which access is blocked.

### 3.7.4 ACL

#### 3.7.4.1 ACL

Choose **Service > ACL**, 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.



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

Status | Wizard | Setup | Advanced | Service | Firewall | Maintenance

MAC Filter

IP/Port Filter

URL Filter

ACL

> ACL

> IPv6 ACL

DoS

### ACL Configuration

You can specify which services are accessible from LAN or WAN side.  
 Entries in this ACL table are used to permit certain types of data packets from your local network or Internet network to the Gateway.  
 Using of such access control can be helpful in securing or restricting the Gateway management.

LAN ACL Mode:  White List  Black List

WAN ACL Mode:  White List  Black List

Direction Select:  LAN  WAN

LAN ACL Switch:  Enable  Disable

IP Address:  -  (The IP 0.0.0.0 represent any IP )

Services Allowed:

any

⚙ Current 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	Select the router interface. You can select <b>LAN</b> or <b>WAN</b> . In this example, <b>LAN</b> is selected.
LAN ACL Switch	Select it to enable or disable ACL function.
IP Address	Enter the IP address of the specified interface. Only the IP address that is in the same network segment with the IP address of the specified interface can access the router.
Services Allowed	You can choose the following services from LAN: <b>Web</b> , <b>Telnet</b> , <b>SSH</b> , <b>FTP</b> , <b>TFTP</b> , <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 <b>Current ACL Table</b> .
Reset	Click it to refresh this page.

### 3.7.4.2 IPv6 ACL

- MAC Filter
- IP/Port Filter
- URL Filter
- ACL
- DoS

#### ACL Configuration

You can specify which services are accessible from LAN or WAN side.  
 Entries in this ACL table are used to permit certain types of data packets from your local network or Internet network to the Gateway.  
 Using of such access control can be helpful in securing or restricting the Gateway management.

Direction Select:  LAN  WAN

---

LAN ACL Switch:  Enable  Disable

---

IP Address:  /

Services Allowed:

Any

Current IPv6 ACL Table:

Direction	IPv6 Address/Interface	Service	Port	Action
WAN	any	ping6	--	<input type="button" value="Delete"/>



### 3.7.5 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.

Click **Anti-DoS** in the left pane and the page shown in the following figure appears. On this page, you can prevent DoS attacks.

The screenshot displays the 'DoS Setting' configuration page. At the top, there are navigation tabs: Status, Wizard, Setup, Advanced, Service, Firewall, and Maintenance. On the left, a sidebar contains a list of security features: MAC Filter, IP/Port Filter, URL Filter, ACL, DoS (selected), and a sub-item 'x DoS'. The main content area is titled 'DoS Setting' and includes a descriptive paragraph: '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.'

The configuration options are as follows:

- Enable DoS Prevention
- Whole System Flood: SYN (100 Packets/Second)
- Whole System Flood: FIN (100 Packets/Second)
- Whole System Flood: UDP (100 Packets/Second)
- Whole 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)
- TCP/UDP PortScan (Low Sensitivity)
- ICMP Smurf
- IP Land
- IP Spoof
- IP TearDrop
- PingOfDeath
- TCP Scan
- TCP SynWithData
- UDP Bomb
- UDP EchoChargen

At the bottom of the configuration area, there are 'Select ALL' and 'Clear ALL' buttons. Below this, there is an option to 'Enable Source IP Blocking' with a 'Block time (sec)' field set to 300. An 'Apply Changes' button is located at the very bottom.

## 3.8 Maintenance

In the navigation bar, click Maintenance. The Maintenance page displayed contains Update, Password, Reboot, Time Log and Diagnostics.

### 3.8.1 Update

Choose **Maintenance > Update**. The **Update** page displayed contains **Upgrade Firmware** and **Backup/Restore**.



**Caution:**

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

#### 3.8.1.1 Upgrade Firmware

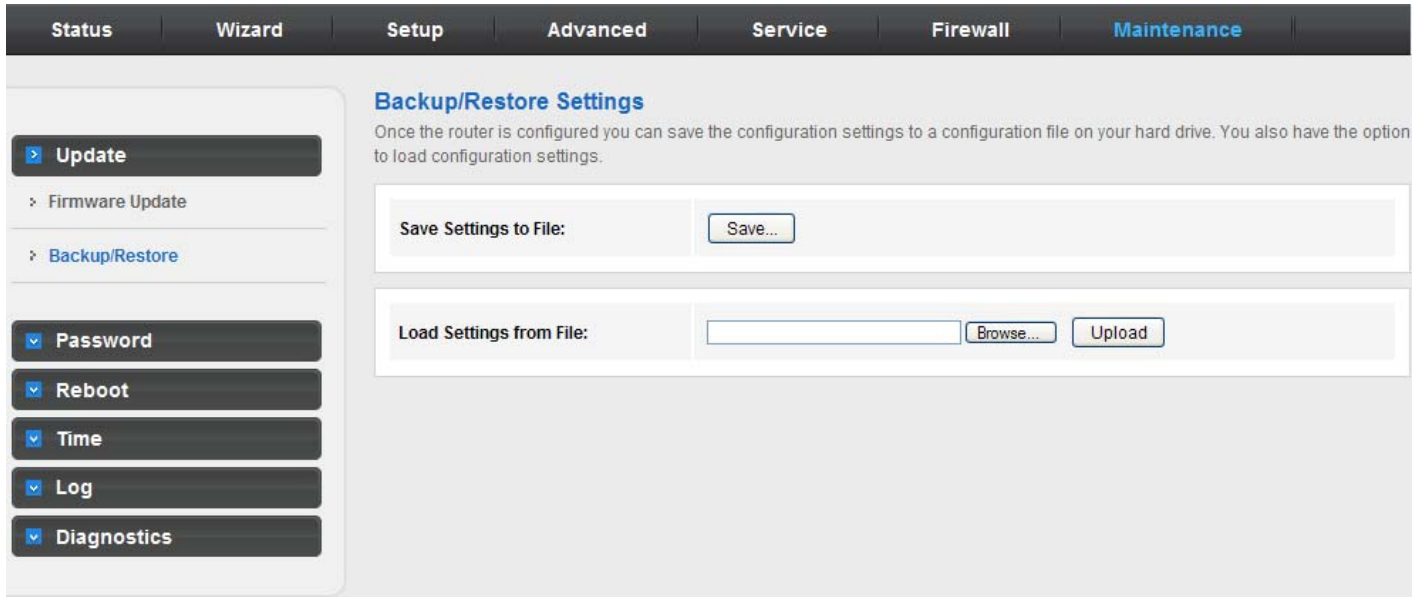
Click **Upgrade Firmware** in the left pane and the page shown in the following figure appears. On this page, you can upgrade the firmware of the router.

The following table describes the parameters and button on 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.

### 3.8.1.2 Backup/Restore

Click **Backup/Restore** in the left pane and the page shown in the following figure appears. You can back up the current settings to a file and restore the settings from the file that was saved previously.

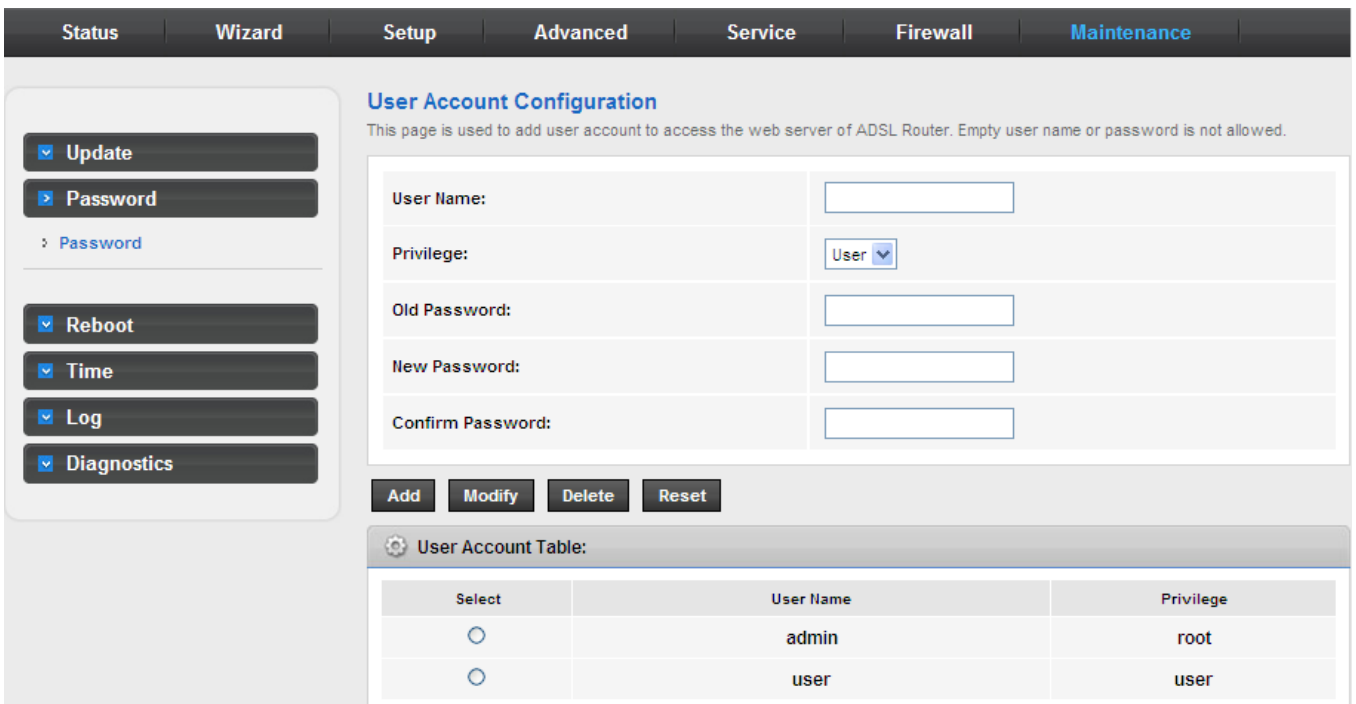


The following table describes the parameters and button of this page:

Field	Description
Save Settings to File	Click it, and select the path. Then you can save the configuration file of the router.
Load Settings from File	Click <b>Browse</b> to select the configuration file.
Upload	After selecting the configuration file of the router, click <b>Upload</b> to start uploading the configuration file of the router.

### 3.8.2 Password

Choose **Maintenance > Password** and the page shown in the following figure appears. By default, the user name and password of the administrator are **admin** and **admin** respectively. The user name and password of the common user are **user** and **user** respectively.

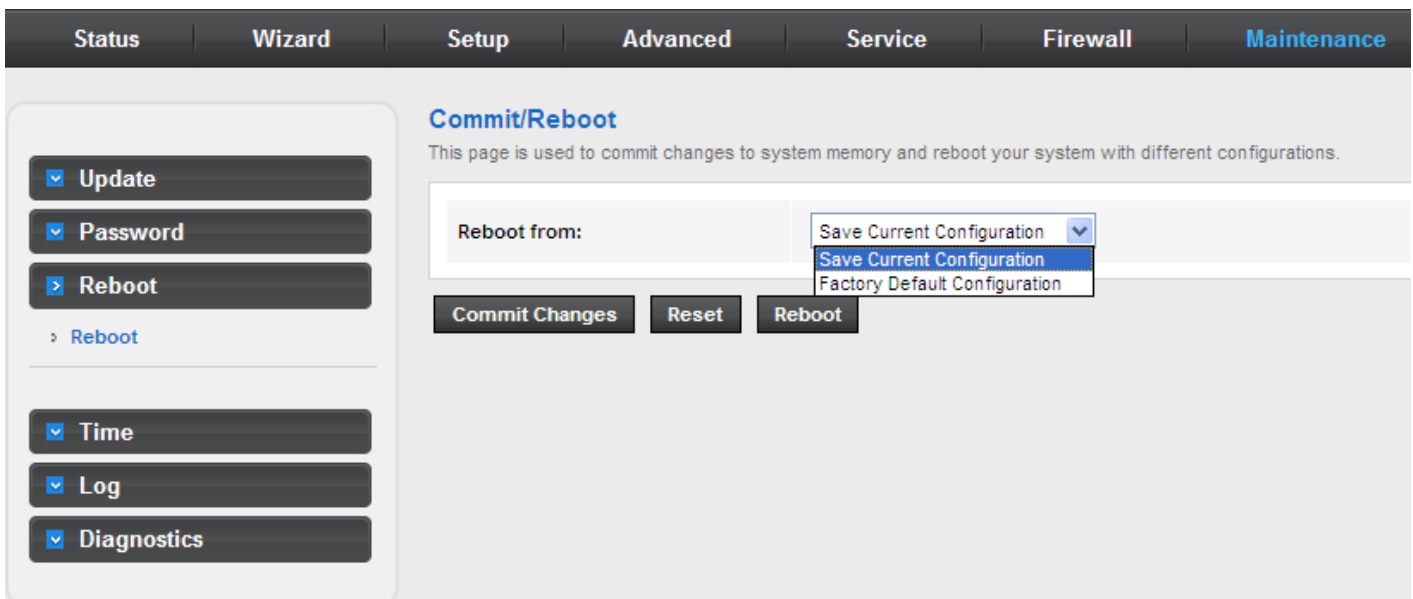


The following table describes the parameters of this page:

Field	Description
User Name	Choose the user name for accessing the router. You can choose <b>admin</b> or <b>user</b> .
Privilege	Choose the privilege for the account.
Old Password	Enter the old password

### 3.8.3 Reboot

Choose **Maintenance > Reboot** and 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.



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

Field	Description
Reboot from	You can choose <b>Save current configuration</b> or <b>Factory default configuration</b> . <ul style="list-style-type: none"> <li>● <b>Save current configuration:</b> Save the current settings, and then reboot the router.</li> <li>● <b>Factory default configuration:</b> Reset to the factory default settings and then reboot the router.</li> </ul>
Commit Changes	Perform this action
Reboot	Click it to reboot the router.

### 3.8.4. Time

Choose **Maintenance > Time** and the page shown in the following figure appears. You can configure the system time manually or get the system time from the time server.

The following table describes the parameters of this page:

Field	Description
System Time	Set the system time manually.
<b>NTP Configuration</b>	
State	Select enable or disable NTP function. You need to enable NTP if you want to configure the parameters of NTP.
Server	Set the primary NTP server manually.
Server 2	Set the secondary NTP server manually.
Time Zone	Choose the time zone in which area you are from the drop down list.

### 3.8.5 Log

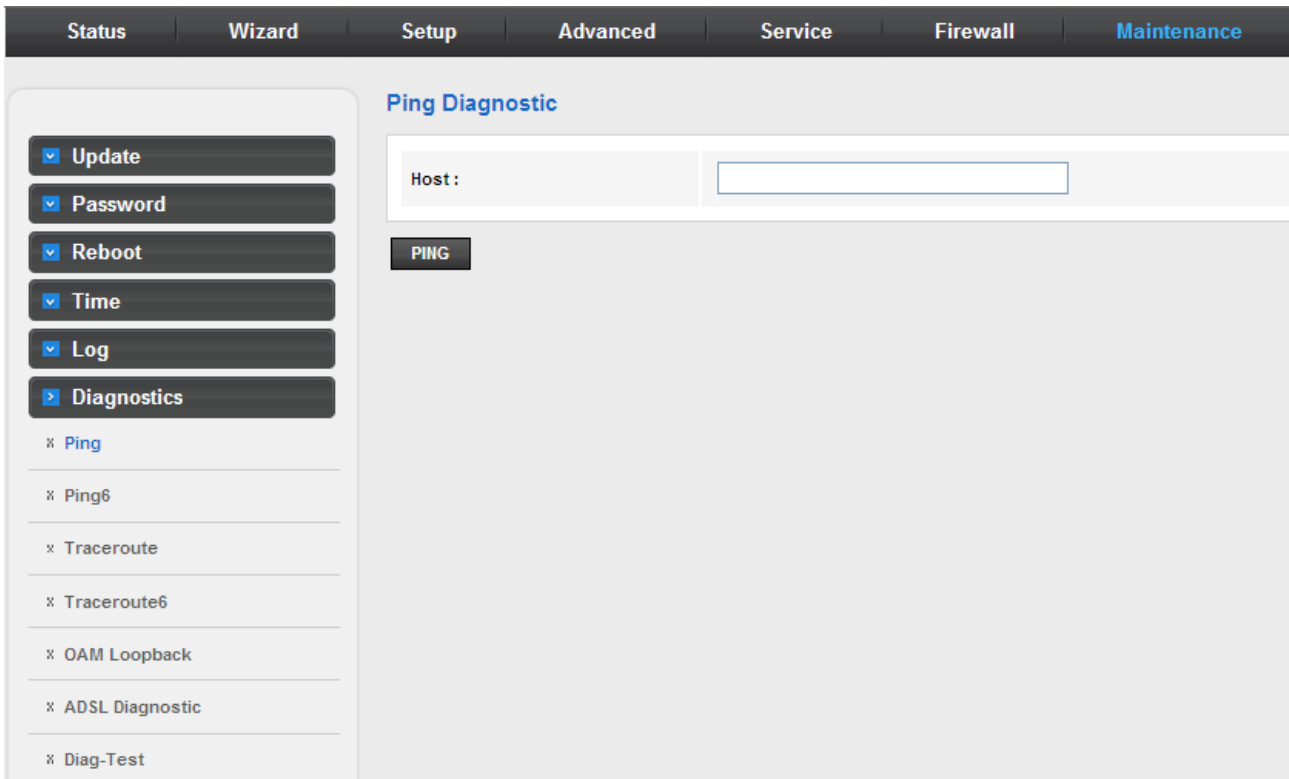
Choose **Admin > Log** and the page shown in the following figure appears. In this page, you can enable or disable system log function and view the system log.

### 3.8.6 Diagnostic

In the navigation bar, click **Diagnostic**. The **Diagnostic** page displayed contains **Ping, Ping6, Traceroute, Traceroute6, OAM Loopback, ADSL Statistics** and **Diag-Test**.

### 3.8.6.1 Ping

Choose **Diagnostic > Ping** and the page shown in the following figure appears.



The following table describes the parameter and button on this page:

Field	Description
Host	Enter the valid IP address or domain name.
Ping	Click it to start to Ping.

### 3.8.6.2 Ping6

Choose **Diagnostic** > **Ping6** and the page shown in the following figure appears.

The screenshot shows the 'Ping6 Diagnostic' configuration page. At the top, there is a navigation bar with tabs: Status, Wizard, Setup, Advanced, Service, Firewall, and Maintenance. On the left side, there is a sidebar menu with the following items: Update, Password, Reboot, Time, Log, Diagnostics (selected), Ping, Ping6, Traceroute, Traceroute6, OAM Loopback, ADSL Diagnostic, and Diag-Test. The main content area is titled 'Ping6 Diagnostic' and contains the following fields:

- Target Address:** A text input field.
- Interface:** A dropdown menu.
- PING:** A button to execute the ping test.

### 3.8.6.3 Traceroute

Choose **Diagnostic** > **Traceroute** and the following page appears. By Traceroute Diagnostic, you can track the route path through the information which is from your computer to the Internet other side host.

The screenshot shows the 'Traceroute Diagnostic' configuration page. At the top, there is a navigation bar with tabs: Status, Wizard, Setup, Advanced, Service, Firewall, and Maintenance. On the left side, there is a sidebar menu with the following items: Update, Password, Reboot, Time, Log, Diagnostics (selected), Ping, Ping6, Traceroute (selected), Traceroute6, OAM Loopback, ADSL Diagnostic, and Diag-Test. The main content area is titled 'Traceroute Diagnostic' and contains the following fields:

- Host:** A text input field.
- NumberOfTries:** A text input field with the value '3'.
- Timeout:** A text input field with the value '5000' and the unit 'ms'.
- Datasize:** A text input field with the value '38' and the unit 'Bytes'.
- DSCP:** A text input field with the value '0'.
- MaxHopCount:** A text input field with the value '30'.
- Interface:** A dropdown menu with the value 'any'.
- traceroute:** A button to execute the traceroute test.
- Show Result:** A button to display the results of the traceroute test.

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

Field	Description
Host	Enter the destination host address for diagnosis.
NumberOfTries	Number of repetitions.
Timeout	Put in the timeout value.
Datasize	Packet size.
DSCP	Differentiated Services Code Point, You should set a value between 0-63.
MaxHopCount	Maximum number of routes.
Interface	Select the interface.
Traceroute	Click start traceroute.

### 3.8.6.4 Traceroute6

Choose Diagnostic >Traceroute6 and the following page appears. By Traceroute Diagnostic, you can track the route path through the information which is from your computer to the Internet other side host.

### 3.8.6.5 OAM Loopback

Choose **Diagnostic > OAM Loopback** and the page shown in the following figure appears. On this page, you can use VCC loopback function to check the connectivity of the VCC. The ATM loopback test is useful for troubleshooting problems with the DSLAM and ATM network.



The screenshot shows the 'Maintenance' tab selected in the top navigation bar. On the left, a sidebar menu lists various diagnostic tools, with 'Diagnostics' expanded to show options like 'Ping', 'Traceroute', and 'OAM Loopback'. The main content area is titled 'OAM Fault Management - Connectivity Verification'. It includes a descriptive paragraph about OAM loopback capability. Below this, there are radio button options for 'Flow Type' (F5 Segment, F5 End-to-End, F4 Segment, F4 End-to-End) and input fields for 'VPI' and 'VCI'. A 'Go!' button is located at the bottom of the configuration area.

Click **Go!** to start testing.

### 3.8.6.6 ADSL Diagnostic

Choose **Diagnostic > ADSL Diagnostic** and the page shown in the following figure appears. It is used for ADSL tone diagnostics.

The screenshot shows the 'Maintenance' tab selected. The sidebar menu has 'Diagnostics' expanded, and 'ADSL Diagnostic' is highlighted. The main content area is titled 'Diagnostic ADSL' and 'Adsl Tone Diagnostic'. A 'Start' button is present. Below the button is a table for ADSL parameters:

	Downstream	Upstream
Hlin Scale		
Loop Attenuation(dB)		
Signal Attenuation(dB)		
SNR Margin(dB)		
Attainable Rate(Kbps)		
Output Power(dBm)		

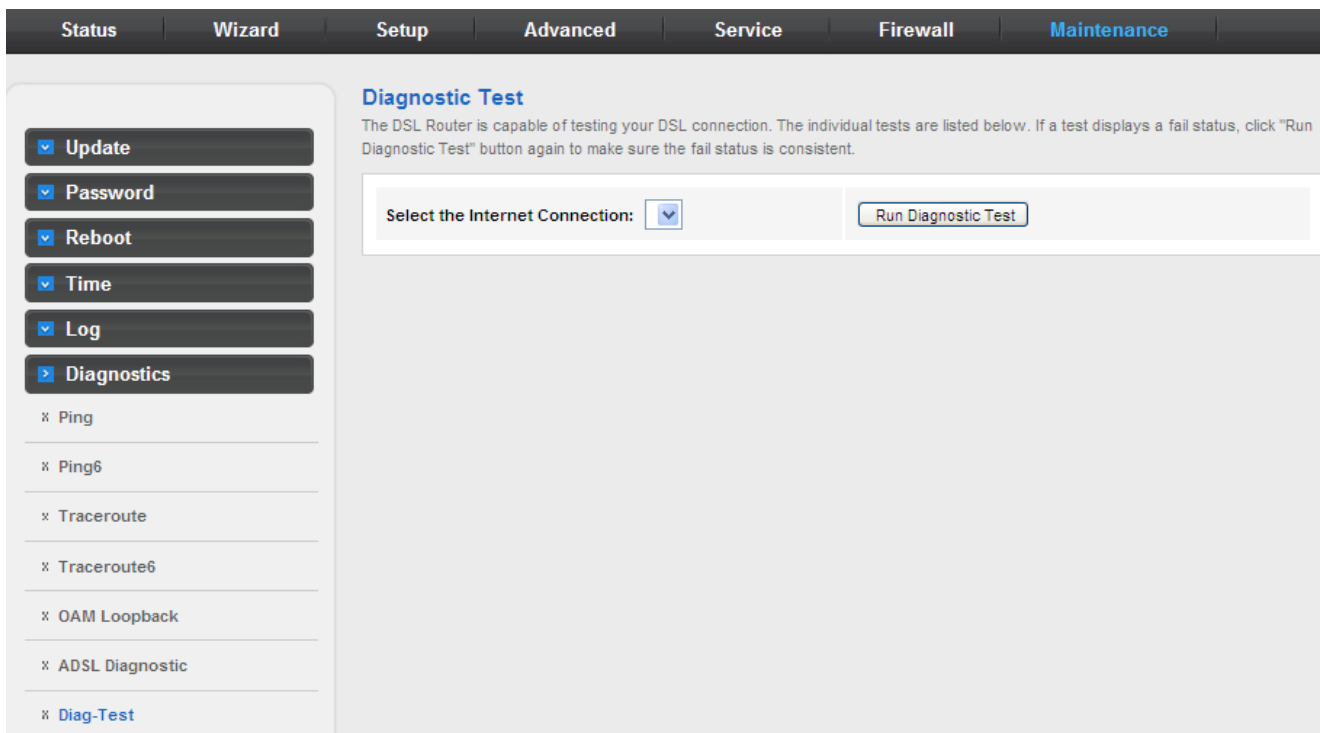
  

Tone Number	H.Real	H.Image	SNR	QLN	Hlog
0					
1					
2					

Click **Start** to start ADSL tone diagnostics.

### 3.8.6.7 Diag-Test

Choose **Diagnostics** > **Diag-Test** and the page shown in the following figure appears. On this page, you can test the DSL connection. You can also view the LAN status connection and ADSL connection.



Click **Run Diagnostic Test** to start testing.

## Chapter 4.Q&A

Question	Answer
Why are all the indicators off?	<ul style="list-style-type: none"> <li>● Check the connection between the power adapter and the power socket.</li> <li>● Check whether the power switch is turned on.</li> </ul>
Why is the <b>LAN</b> indicator not on?	<p>Check the following:</p> <ul style="list-style-type: none"> <li>● The connection between the device and the PC, the hub, or the switch</li> <li>● The running status of the computer, hub, or switch</li> <li>● The cables connecting the device and other devices. Use a cross-over cable to connect the device to a computer. Use a straight-through cable to connect the device to a hub or a switch,</li> </ul>
Why is the <b>Link</b> indicator not on?	Check the connection between the <b>Line</b> interface of the device and the socket.
Why does the Internet access fail when the <b>Link</b> indicator is on?	<p>Ensure that the following information is entered correctly.</p> <ul style="list-style-type: none"> <li>● VPI and VCI</li> <li>● User name and password</li> </ul>
Why does the web configuration page of the device fail to be accessed?	<p>Choose <b>Start &gt; Run</b> from the desktop. Enter <b>Ping 192.168.1.1</b> (the default IP address of the device) in the DOS window.</p> <p>If the web configuration page still cannot be accessed, check the following configurations.</p> <ul style="list-style-type: none"> <li>● The type of network cable</li> <li>● The connection between the device and the computer</li> <li>● The TCP/IP properties of the network card of the computer</li> </ul>
How to restore the default configuration after incorrect configuration?	<p>Keep the device powered on and press the <b>Reset</b> button for 3 seconds, then the device automatically reboots and is restored to the factory default configuration.</p> <p>The default configurations of the device are as follows:</p> <ul style="list-style-type: none"> <li>● IP address: <b>192.168.1.1</b></li> <li>● Subnet mask: <b>255.255.255.0</b>.</li> <li>● For a super user, use admin for both user name and password.</li> </ul>