User Manual

Type II ADSL 2 + CPE / IAD

T2-B-Gawv1.4U10Y-BI

V1.00

Contents

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1　Introduction

The T2-B-Gawv1.4U10Y.BI is an ADSL2+ access device that supports multiple line modes. It supports ADSL2/ADSL2+ and is backward compatible to ADSL. It also offers auto-negotiation capability for different standards (e.g., G.dmt, T1.413 Issue 2) according to the settings of digital subscriber line access multiplexer (DSLAM) in the central office. It provides four 10/100Base-T Ethernet interfaces and one USB interface at the user end. By utilizing the high-speed ADSL connection, the T2-B-Gawv1.4U10Y.BI can provide broadband connectivity to the Internet, downstream up to 24 Mbps and upstream up to 1 Mbps.

The device supports WLAN access, such as WLAN AP or WLAN device, to the Internet. It complies with IEEE 802.11, 802.11b/g specifications, WEP, WPA, and WPA2 security specifications.

1.1　Packing List

- 1 x T2-B-Gawv1.4U10Y.BI
- 1 x External Splitter
- 1 x Power Adapter
- 2 x Telephone Cables (RJ-11)
- 1 x Ethernet Cables (RJ-45)
- 1 x Quick Start Guide
- 1 x Driver and Utility Software CD (With Motive Client Software)

1.2　Safety Cautions

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

- Use volume labels to mark the type of power.
- Use the power adapter packed within the device package.
- Pay attention to the power load of the outlet or prolonged lines. An overburden power outlet or damaged lines and plugs may cause electric shock or fire accident. Check the power cords regularly. If you find any damage, replace it at once.
- Proper space left for heat dissipation is necessary to avoid damage caused by overheating to the device. The long and thin holes on the device are

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designed for heat dissipation to ensure that the device works normally. Do not cover these heat dissipation holes.

● Do not put this device close to a place where a heat source exits or high temperature occurs. Avoid the device from direct sunshine.

● Do not put this device close to a place where it is over damp or watery. Do not spill any fluid on this device.

● Do not connect this device to any PCs or electronic products, unless our customer engineer or your broadband provider instructs you to do this, because any wrong connection may cause power or fire risk.

● Do not place this device on an unstable surface or support.

1.3 LEDs and Interfaces

Front panel
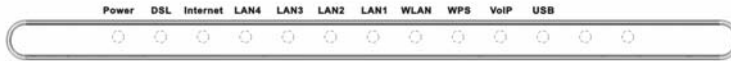
The following table describes the LEDs of the device.

LEDs	Color	Status	Description
Power	Green	On	The device is powered on.
		Off	The device is powered off.
	Red	On	The device is initializing.
		Blinks	The firmware is upgrading.
DSL	Green	On	The initial self-test of the unit is normal and ready.
		Blinks	The device is detecting itself.
		Off	The initial self-test is failed.
Internet	Green	On	The device has successful Internet connection.
		Blinks	Data is being transmitted on the Internet.
		Off	The Internet connection is failed or DSL has no synchronization.
	Red	On	The device is dialing up before obtaining IP address successfully by PPP.

LEDs	Color	Status	Description
LAN4/3/2/1	Green	On	The device has successful Ethernet connections.
		Blinks	Data is being transmitted through the LAN interface.
		Off	The LAN connection is not established.
WLAN	Green	On	The connection of WLAN interface is normal.
		Blinks	Data is being transmitted through the WLAN interface.
		Off	No WLAN connection.
WPS	Green	On	The WPS is active.
		Blinks	The WPS is active, waiting for the remote client to establish connection.
		Off	The WPS is inactive.
VoIP1	Green	On	The VoIP phone is registered.
		Blinks	The phone is off-hook.
		Off	The VoIP phone is not registered.
USB_H1	Green	On	The USB connection is normal.
		Blinks	Data is being transmitted through the USB interface.
		Off	The USB connection is failed.

Rear panel
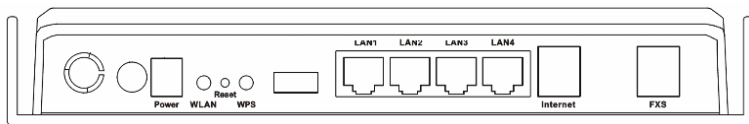
The following table describes the interfaces of the device.

Interface	Description
◯	Power switch, power on or power off the device.
Power	Power interface, for connecting to the power adapter of 12 V DC, 1 A.

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Interface	Description
WLAN	WLAN switch, switch on or switch off the WLAN function.
Reset	Reset to the factory defaults. Keep the device powered on and push a paper clip into the hole for over 3 seconds, then release it. The configuration is restored to the factory defaults.
WPS	WPS switch, switch on or switch off the WPS function.
USB	USB Host Port, for connecting the device those have USB Device Port (Like Pen Drive).
LAN1/2/3/4	RJ-45 interfaces, for connecting to the Ethernet interface of PC or Ethernet devices through the Ethernet cable.
Internet	RJ-11 interface for connecting to the telephone set through the telephone cable.
FXS	Connect to phones for VoIP application.

2 Hardware Installation

Step 1   Connect the **Internet** interface of the device and the **Modem** interface of the splitter through a telephone cable. Connect the phone to the **Phone** interface of the splitter through a telephone cable. Connect the incoming line 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 DSL interface of the device.
- **Phone**: Connect to a telephone set.

Step 2   Connect the **LAN** interface of the device to the network card of the PC through an Ethernet cable (MDI/MDIX).

📖 **Note:**

Use twisted-pair cables to connect with the Hub or Switch.

Step 3   Plug one end of the power adapter to the wall outlet and connect the other end to the **Power** interface of the device.

Connection 1

The following connection method is recommended.

Figure 1 displays the application diagram for the connection of the router, PC, splitter and the telephone sets, and no telephone set is placed before the splitter.

Figure 1 Connection 1 (No phone is installed before a splitter)

Connection 2

Figure 2 displays the application diagram for the connection of the router, PC, splitter and the telephone sets, and a telephone set is placed before the splitter.
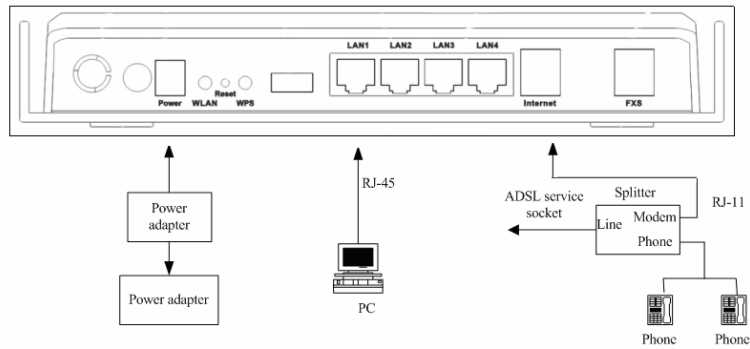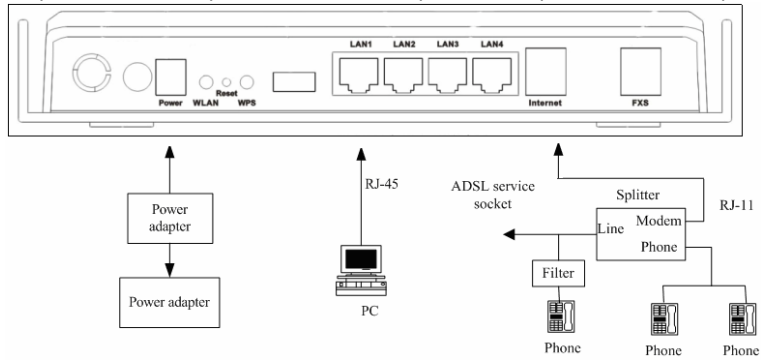

Figure 2 Connection 2 (A phone is installed closed to the splitter)

📖 **Note:**

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

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

3 Web Configuration Management

3.1 Preparation before Login

Before accessing the modem, ensure the communication between PC and the modem is normal.

3.1.1 Setup

Connecting your PC or home network with the modem is a simple procedure, varying slightly depending on the operating system (OS). This chapter helps you to seamlessly integrate modem with your PC or home network. In most cases, the setup procedure described below is unnecessary. For example, the default DHCP setting in Windows 2000 is client, requiring no further modification. However, it is advised to follow the setup procedure described below to verify that the communication parameters and the physical cable connections are valid or correct.

3.1.2 Setting up WAN and LAN connections

WAN Connection

Your PC can connect to the Internet by ADSL. Connect its Internet socket to the wall socket through a telephone cable. If it has an Ethernet socket for the wide area network (WAN), connect it to the external ADSL or to the Ethernet socket through an Ethernet cable.

LAN Connection

Your PC can connect to the gateway with the LAN interface. Use an Ethernet cable to establish the connection between an LAN interface of your modem and the network card of your PC.

3.1.3 PC Network Configuration

Each network interface on the PC should either be configured with a statically defined IP address and a DNS address, or should be instructed to automatically obtain an IP address from the network DHCP server. The modem provides a DHCP server on the LAN side and it is recommended to configure your LAN to obtain its IP address and the IP address of the DNS server automatically.

This configuration principle is identical but operations are differently on each OS.

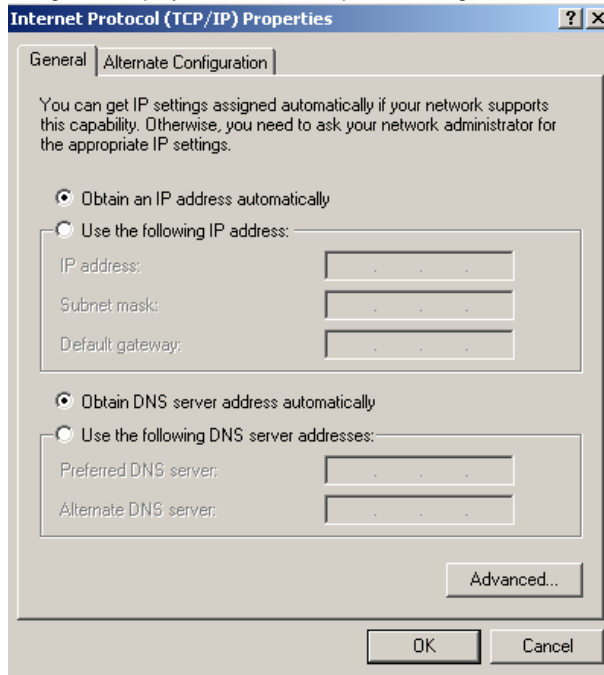Figure 3 displays the TCP/IP Properties dialog box in the Windows XP system.

Figure 3

Windows XP

(1)   Open the Control Panel and click **Network Connections**.
(2)   Right-click the Ethernet connection icon and choose **Properties** from the shortcut menu.
(3)   On the **General** tab, select the **Internet Protocol (TCP/IP)** component, and click **Properties**. The **Internet Protocol (TCP/IP) Properties** window appears.
(4)   Select **Obtain an IP address automatically**.
(5)   Select **Obtain DNS server address automatically**.
(6)   Click **OK** to save the settings.

Windows 2000/98/Me

(1)   Open the Control Panel and click **Network and Dialing Connections**.
(2)   Right-click the **Ethernet connection** icon and choose **Properties** from the shortcut menu. The **Connection Properties** window appears.

(3)   Select the **Internet Protocol (TCP/IP)** component and click **Properties**.
(4)   The **Internet Protocol (TCP/IP) Properties** window appears.
(5)   Select **Obtain an IP address automatically**.
(6)   Select **Obtain DNS server address automatically**.
(7)   Click **OK** to save the settings.

Windows NT

(1)   Open the Control Panel and click **Network**.
(2)   On the **Protocol** tab, select the **Internet Protocol (TCP/IP)** component, and click **Properties**.
(3)   On the **IP Address** tab, select the **Obtain an IP address automatically** option.
(4)   On the **DNS** tab, ensure that no DNS server is defined in the **DNS Service Search Order** box and that no suffix is defined in the **Domain Suffix Search Order** box.

Linux

(1)   Login in to the system as a super user, by entering **su** in the terminal window.
(2)   Enter **vi /etc/sysconfig/network-script/ifcfg-eth0** to modify the eth0 network devices and assign IP addresses.
(3)   Enter **ifconfig** to view the newly assigned IP addresses.

3.1.4 Connection between the Modem and PC

The procedure of checking the connection between the modem and PC is as follows:
(1)   Configure the IP address of the PC as 192.168.1.X (2~254), netmask as 255. 255.255.0, and gateway address as 192. 168.1.1 (for a customized version, configure them according to the actual version).
(2)   Enter **arp -a** in the DOS window to check whether the PC can read the MAC address of the DSL. See Figure 4.

```
C:\Documents and Settings\Administrator>arp -a

Interface: 192.168.1.56 on Interface 0x1000003
  Internet Address      Physical Address      Type
  192.168.1.1           00-1e-e3-00-2a-31     dynamic

C:\Documents and Settings\Administrator>_
```

Figure 4

(3)   Ping the management IP address (by default, 192.168.1.1) of the modem.

```
C:\Documents and Settings\Administrator>arp -a

Interface: 192.168.1.56 on Interface 0x1000003
  Internet Address      Physical Address      Type
  192.168.1.1           00-1e-e3-00-2a-31     dynamic

C:\Documents and Settings\Administrator>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<10ms TTL=128
Reply from 192.168.1.1: bytes=32 time<10ms TTL=128
Reply from 192.168.1.1: bytes=32 time<10ms TTL=128
Reply from 192.168.1.1: bytes=32 time<10ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms

C:\Documents and Settings\Administrator>
```

If the PC can read the MAC address of the device and ping the management IP address of the device successfully, the connection between the modem and PC is normal.

Note:

When you manage the device through Web, you must keep the power of the device on. Otherwise, the device may be damaged.

3.2   Login in to the Modem

(1)   Open the Internet Explorer and enter **http://192.168.1.1**.

(2)   Enter the user name and a password. See Figure 5. The default user name and password are **admin** and **admin** respectively.

Figure 5

Click **OK** and the main interface appears.

After logging in to the modem as a super user, you can check, configure, and modify all the settings. You can also diagnose the device system.

3.3 Home

Click **Home** to enter system information page. On the left page, there are three options: **Overview**, **System Log**, and **Troubleshooting**.

3.3.1 Overview

This page displays the current status and configuration of the system. It contains the status of the modem. Such as, firmware version, system uptime, downstream data rate, upstream data rate, DSL status, wirelss and voice status.

3.3.1.1   Basic

Choose **Overview** > **Basic** and the following page appears.

Overview
Basic | Advanced

System Information
Model Name   T2-B-Gawv1.4U10Y-BI
Firmware Version   10.4.3.12.12
System Up time   00:00:46s

Internet Connection
DSL Status   Not Connected
Downstream Data Rate   0 kbps
Upstream Data Rate   0 kbps
Max Att Downstream Rate   0 kbps
Max Att Upstream Rate   0 kbps

Wireless Settings
Status   Disable
SSID   BSNL_AP
Channel   1
Security   128 bit WEP

LAN Port
Mac Address   00:26:15:50:16:00
IP Address   192.168.1.1
DHCP server   On
Subnet Mask   255.255.255.0

Voice
Status   Enabled
Registration Status   Unknown
Phone Numbers-Channel 1   1

[Go To Advanced view]

The following table describes the parameters of this page.

Field	Description
System Information	
Model Name	It displays the model name of the modem.
Firmware Version	The software version of the modem.
System Up time	Uptime of the modem.
Internet Connection	

Field	Description
DSL Status	The status of the ADSL port.
Downstream Data Rate	Down line rate.
Upstream Data Rate	Up line rate.
Wireless Settings	
Status	The status of the wireless network.
SSID	Service set identification (SSID) is a unique name to identify the modem in the wireless LAN.
LAN Port	
Mac Address	The MAC address of the modem.
IP Address	The IP address of the modem.
DHCP server	The current status of the DHCP server.
Voice	
Status	The VoIP status.
Registration Status	It displays the registration status of VoIP application.

📖 **Note:**

The firmware version displayed in this page may be inconsistent with the actual software version, and is for reference only.

3.3.1.2 Advanced

Click **Advanced** in the **Overview** page and the following page appears.

User Manual for T2-B-Gawv1.4U10Y.BI

Overview
Basic **Advanced**

System Information

Model Name	T2-B-Gawv1.4U10Y-BI
Firmware Version	10.4.3.12.12
DSL Firmware Version	E.25.41.64 A
Wireless Version	1.20
System Up time	00:08:59s

Internet Connection

DSL Status	Not Connected
Last Failed	0x00000000
Downstream Data Rate	0 kbps
Upstream Data Rate	0 kbps
Max Att Downstream Rate	0 kbps
Max Att Upstream Rate	0 kbps
SNR (Downstream)	
SNR (Upstream)	
Line Attentuation(Downstream)	
Line Attentuation(Upstream)	
Connected Standard	Inactive

Wireless Settings

Status	Disable
SSID	BSNL_AP
Channel	1
Security	128 bit WEP

LAN Port

Mac Address	00:26:15:50:16:00
IP Address	192.168.1.1
DHCP server	On
Subnet Mask	255.255.255.0

Voice

Status	Enabled
Total Number of Line Support	1
Registration Status	Unknown
Phone Numbers-Channel 1	1

Status

ARP

DHCP   Traffic Stats

Wireless Connection

[Go To Basic view]

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The following table describes the parameters of this page.

Field	Description
System Information	
DSL Firmware Version	The hardware version of the modem.
Wireless version	The wireless version of the modem.
Internet Connection	
Connected Standard	The status of the line mode.
Status	It contains the configuration information about **ARP**, **DHCP Traffic Stats**, and **Wireless Connection**.

📖 **Note:**

The rate is measured under a zero-kilometer link. In the circumstances, the gateway is automatically set, and the DNS addresses are obtained from the BRAS.

3.3.2 System Log

Choose **Home** > **System Log** and the following page appears. In this page, you can consult the logs after relevant settings. You can also save the current settings to your PC.

📖 **Note:**

Set the query time consistent with the SNTP if you want to obtain the real-time of the system logs.

3.3.3 Troubleshooting

Choose **Home** > **Troubleshooting** to enter the troubleshooting page. This page is used to carry out diagnostic test. Troubleshooting allows you to carry out diagnostic tests on your local Ethernet and WAN connection by ping the web site or running the diagnostic tests. The tests results can be used to identify all the problems that are related to your DSL connection or the configuration of the modem.

Enter a well-known site (for example, IP 10.18.102.55) that you want to test. Click **Ping** and the following page appears.

If the network connects well and the IP address or the site is effective, the ping of the well-known site passes. Otherwise, it is failed to ping the well-known site.

Select the Internet connection that you want to test from the drop-down list (take bridge_8_81 for example). Click **Run Diagnostic Tests** and the following page appears. In this page, you can view the test result.

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Troubleshooting

Select Internet Connection: bridge_8_81

Ping to well known site: 10.18.102.55   Ping
(e.g. www.yahoo.com)

                         Run Diagnostic Tests

Test the connection to your local network

Test your Ethernet Connection: **PASS**

Test DSL Synchronization: **FAIL**

F4 OAM Test

Test your F4 OAM Segment :   **N/A**

Test your F4 OAM ETOE :   **N/A**

F5 OAM Test

Test your F5 OAM Segment :   **N/A**

Test your F5 OAM ETOE :   **N/A**

Ping to well known site: 10.18.102.55   **FAIL**

The information that is displayed helps you to locate the problems.

3.4   Configuration

Click **Configuration** to enter system configuration page. On the left page, there are seven options: **Wireless Network**, **Internet Connection**, **Local Network (LAN)**, **Voice Configuration**, **DHCP Server**, **DHCP Relay**, and **IPv6 Prefix**. You can modify LAN and WAN settings, such as PVC, LAN port, and DHCP.

3.4.1   Wireless Network

A wireless local area network (WLAN) provides a flexible data communications system that you can use to access various services, such as, surfing on the Internet, E-mail, and printing services, without the cable connection. You can connect to the Internet while roaming around in the converage area.

Choose **Configuration** > **Wireless Network** and the following page appears. In this page, you can configure the parameters for wireless LAN clients that may connect to the modem.

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3.4.1.1   Basic Settings

By Default WiFI is disbaled in your CPE, and its using default SSID as "BSNL_AP". please configure the WiFI if you want to us it.

Choose **Wireless Network** > **Basic Settings** and the following page appears. You must set the location where you are in order to prevent the modem from transmitting the illegal frequencies.

The following table describes the parameters of this page.

Field	Description
Select Profile	Choose the security specification. You can choose **802.11 B/G**, **802.11B only**, **802.11G only,** or **802.11 MIXED_LONG**.
Wireless Network	Enable or disable the wireless network. If you want to connect to the Internet, enable it.
Select Country	Choose the country where the modem works.
Channel Selection	You can choose **Auto** or **Manual**.
Select Channel	A channel is the radio frequency(ies) used by

Field	Description
	802.11b/g wireless device. Channels available depend on your geographical area.
Network Name(SSID)	Service set identification (SSID) is a unique name to identify the modem in the wireless LAN. All wireless devices on a WLAN must use the same SSID in order to communicate with each other. By default, the SSID of the modem is **BSNL_AP**.
Hide SSID	You can enable or disable this SSID. ● If you select **Yes**, the wireless adaptor will fail to auto-search the SSID .The auto-searching list does not display the SSID. However, if you know the SSID, you can set the connection manually. ● If you select **No**, the auto-searching list displays the SSID.
Select Security Option	It is vital to protect wireless communication between wireless stations, access points and wired network. There are six options.

3.4.1.2   Advanced Settings

Click **Advanced Settings** in the **Wireless Network** page and the following page appears. In this page, you can configure the parameters for wireless LAN clients may connect to the modem. You can also modify the Fragmentation Threshold, Rts Threshold, Nitroxm Piggyback and WMM.

Wireless Network
Basic Settings | **Advanced Settings** | MAC Address Filter

To make sure MyDslModem does not transmit on illegal frequencies, you must set where you are in the world.

Global Setting

Select Profile:	802.11B/G
Wireless Network:	⦿ Disable ○ Enable
Select Country:	INI

You may either choose a channel yourself, or allow to automatically select the best channel.

Channel Selection:	Auto
Select Channel:	1
Network Name (SSID):	BSNL_AP
Hide SSID:	⦿ No ○ Yes
Fragmentation Threshold :	2346
RTS Threshold :	2347
NitroXM PiggyBack:	○ Disable ⦿ Enable
WMM:	⦿ Disable ○ Enable

Security Settings

Select Security Option:	128 Bit Encryption
WEP Authentication Mode:	⦿ Open ○ Shared
Select Tx Key Index:	0
Select Key Method:	Pass Phrase
Key:	12345678901234567890123456
WEP Pass Phrase:	
Select Encryption Protocol:	TKIP protocol
Select Authentication Method:	PSK (Pre Shared Key)
WPA Pass Phrase:	00000000000000000000000000000000
802.1x Identity String:	T2-B-Gawv1.4U10Y-BI 00:26:15:50:1
802.1x Rekey Timeout:	600

Confirm   Cancel

The following table describes the parameters of this page.

Field	Description
Fragmentation Threshold	The fragmentation threshold is a way of limiting the size of packets (frames) transmitted over the network. If a packet exceeds the configured fragmentation threshold, the fragmentation function is

Field	Description
	enabled, and the packets are sent as multiple 802.11 frames.
RTS Threshold	Request to send (RTS) is designed to prevent collisions due to hidden node. A RTS defines the biggest size data frame you can send before a RTS handshake invoked. The RTS threshold value is between 0 and 2347. If the RTS threshold value is greater than the fragment threshold value, the RTS handshake does not occur. Because the data frames are fragmented before they reach the RTS size.
NitroXM PiggyBack	Piggyback refers to interleaving the TCP Ack return flow with the TCP data flow.

3.4.1.3   MAC Address Filter

Click **MAC Address Filter** in the **Wireless Network** page and the following page appears. In this page, you can restrict the wireless PCs that connect with the modem. You can restrict the PCs in the blacklist or whitelist way.

Select MAC Auth: There are three options: **Disabled**, **BlackList**, or **WhiteList**.
- If choose **Disabled**, all the PC are allowed to access the modem.
- If choose **BlackList**, the PC whose MAC address is listed is denied to access the modem.

● If choose **WhiteList**, only the PC whose MAC address is listed is allowed to access the modem.

3.4.1.4   Wireless Configuration Example

Before you configure the wireless network, ensure that the wireless network card is installed in the PC.

The following describes the example of wireless network configuration:

Step 1   In the **Control Panel** page, double click **Network Connections**. The following page appears.
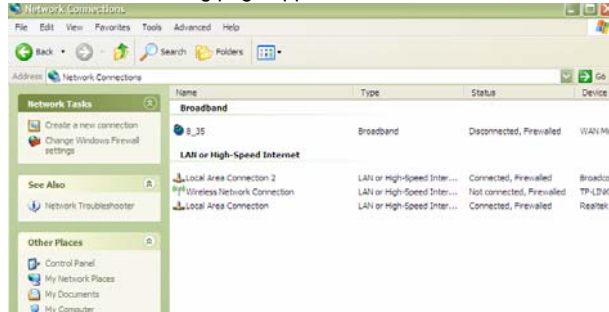
Step 2   Right click **Wireless Network Connection**, and select **View Available Wireless Networks**.
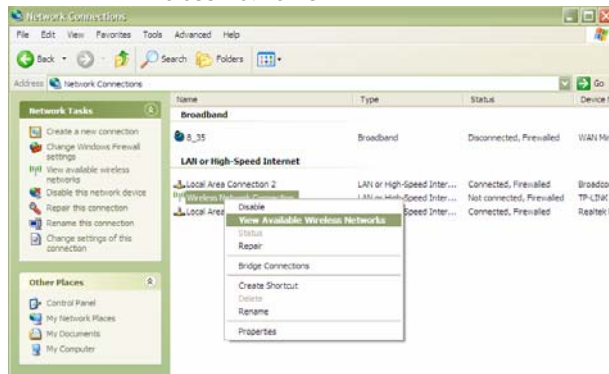
Step 3   In the **Wireless Network Connection** page, refresh the network lists and select the network name (SSID) **PRISM_WIRELESS**, which is the default SSID name. Then click **Connect**.
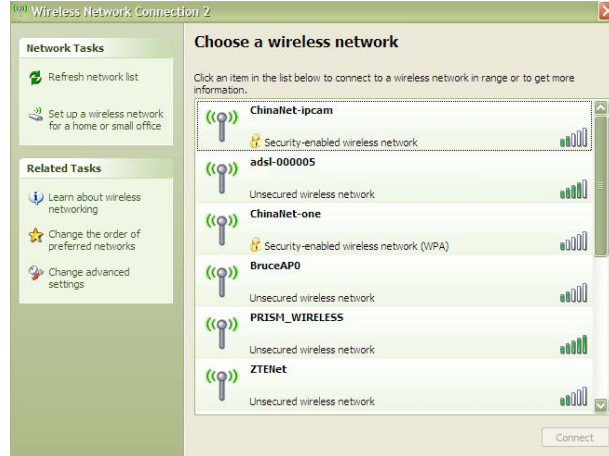
After finishing the settings, you can manage the modem through graphical user interface (GUI) or Telnet.

3.4.2 Internet Connection

This page displays the information of the PVC after some effective configuration.

3.4.2.1 Connections

Choose **Configuration** > **Internet Connection** and the following page appears. In this page, you can view the information of the PVC.
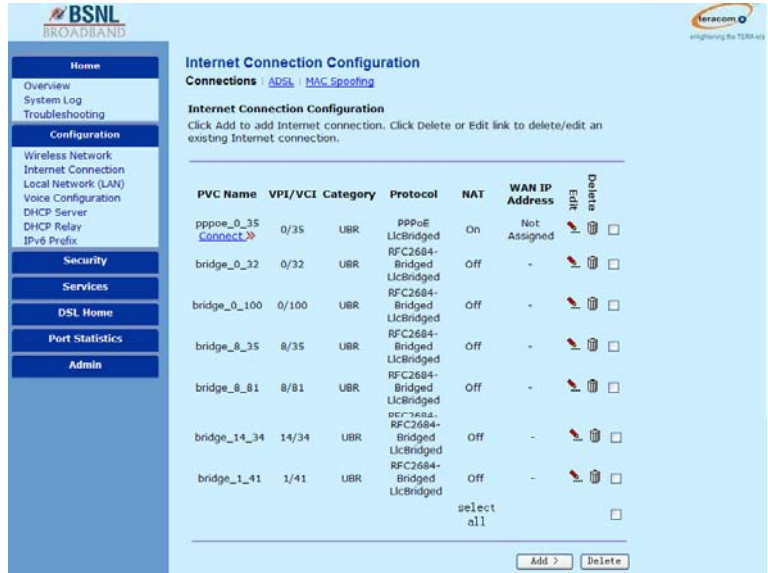
- : Delete an existing Internet connection.
- : Modify an existing Internet connection.

📖 **Note:**

In the **Connections** page, the default configuration of the modem supports six PVCs. The modem can be configured with eight PVCs at most. If you add more than eight PVCs, it refuses to add.

: Delete an existing Internet connection.

The following describes an example of deleteing bridge_0_32.

Step 1   In the following page, click 🗑 to delete bridge_0_32.

User Manual for T2-B-Gawv1.4U10Y.BI

Internet Connection Configuration
Connections ¦ ADSL ¦ MAC Spoofing

Internet Connection Configuration
Click Add to add Internet connection. Click Delete or Edit link to delete/edit an existing Internet connection.

PVC Name	VPI/VCI	Category	Protocol	NAT	WAN IP Address	Edit	Delete	
pppoe_0_35 Connect »	0/35	UBR	PPPoE LlcBridged	On	Not Assigned	🖊	🗑	☐
bridge_0_32	0/32	UBR	RFC2684-Bridged LlcBridged	Off	-	🖊	🗑	☐
bridge_0_100	0/100	UBR	RFC2684-Bridged LlcBridged	Off	-	🖊	🗑	☐
bridge_8_35	8/35	UBR	RFC2684-Bridged LlcBridged	Off	-	🖊	🗑	☐
bridge_8_81	8/81	UBR	RFC2684-Bridged LlcBridged	Off	-	🖊	🗑	☐
bridge_14_34	14/34	UBR	RFC2684-Bridged LlcBridged	Off	-	🖊	🗑	☐
bridge_1_41	1/41	UBR	RFC2684-Bridged LlcBridged	Off	-	🖊	🗑	☐
				select all				☐

Add > | Delete

Step 2 The system deletes bridge_0_32. After the deletion, the following page appears.

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Internet Connection Configuration

Connections : ADSL : MAC Spoofing

Internet Connection Configuration

Click Add to add Internet connection. Click Delete or Edit link to delete/edit an existing Internet connection.

PVC Name	VPI/VCI	Category	Protocol	NAT	WAN IP Address	Edit	Delete	
pppoe_0_35 Connect »	0/35	UBR	PPPoE LlcBridged	On	Not Assigned	✎...	🗑	☐
bridge_0_100	0/100	UBR	RFC2684-Bridged LlcBridged	Off	-	✎...	🗑	☐
bridge_8_35	8/35	UBR	RFC2684-Bridged LlcBridged	Off	-	✎...	🗑	☐
bridge_8_81	8/81	UBR	RFC2684-Bridged LlcBridged	Off	-	✎...	🗑	☐
bridge_14_34	14/34	UBR	RFC2684-Bridged LlcBridged	Off	-	✎...	🗑	☐
bridge_1_41	1/41	UBR	RFC2684-Bridged LlcBridged	Off	-	✎...	🗑	☐
				select all				☐

Add >   Delete

✎... **: Modify an existing Internet connection.**

The following describes an example of modifying bridge_8_35.

Step 1   In the following page, click ✎... to modify bridge_8_35.

Internet Connection Configuration

Connections : ADSL : MAC Spoofing

Internet Connection Configuration

Click Add to add Internet connection. Click Delete or Edit link to delete/edit an existing Internet connection.

PVC Name	VPI/VCI	Category	Protocol	NAT	WAN IP Address	Edit	Delete	
pppoe_0_35 Connect »	0/35	UBR	PPPoE LlcBridged	On	Not Assigned	✎	🗑	☐
bridge_0_32	0/32	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_0_100	0/100	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_8_35	8/35	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_8_81	8/81	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_14_34	14/34	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_1_41	1/41	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
					select all			☐

Add >   Delete

Step 2 The following page appears. In this page, you can modify VPI, VCI and service category.

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The following table describes the parameters of this page.

Field	Description
VPI	Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is from 0 to 255.
VCI	Virtual Channel Identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is from 32 to 65535.
Service Category	You can choose **UBR With PCR**, **CBR**, **Non Realtime VBR**, or **Realtime VBR**. ● **UBR with PCR**: Unspecified bite rate with peak cell rate (UBR with PCR). When the network is congested, the UBR cell is dropped and communication traffic is at a fairly low level. Its peak cell rate range is from 0 to 8000. ● **CBR**: Constant bit rate (CBR) is a coding mode. It is adapted for strict requirement to delay and quality of data packets transmission. Its peak cell rate range is from 0 to 7100.

Field	Description
	● **Non Real-time VBR**: Non real-time variable bit rate (NRT-VBR) is adapted for real time with relatively low requirement. Its peak cell rate range is from 0 to 8000. The sustainable cell rate range is from 1 to 7099, and the maximum burst size range is from 0 to 1000000. ● **Real-time VBR**: Real-time variable bit rate (Real-time VBR) is adapted for real time with high requirement. Its peak cell rate range is from 0 to 8000. The sustainable cell rate range is from 1 to 7099, and the maximum burst size range is from 0 to 1000000.
Sustainable Cell Rate	Sustainable cell rate (SCR) is an ATM parameter for traffic management. For variable bit rate (VBR) connections, SCR determines the long-term average cell rate that can be transmitted.
Maximum Burst Size	Maximum burst size (MBS) is used to specify the maximum number of cells that can be transmitted at the contracted peak cell rate (PCR).

Note:

The value of PCR should be greater than SCR, and MBS is usually less than 10. The service category merely is effective to upstream.

Step 3 After proper modifications, click **Next** and the following page appears. In the page, you can modify the configure connection type, such as encapsulation type or encapsulation mode (The mode is only adapted for RFC2684 protocol).

Add > : **Add Internet connection.**

The following describes an example of adding PVC 0/32.

Step 1   In the following page, click **Add** to add PVC 0/32.

Step 2   The following page appears. In this page, you can modify VPI, VCI, and service categories.

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Internet Connection Configuration

Configure ATM PVC

Please enter PVC Name, VPI and VCI numbers for the Internet connection which is provided by your ISP.

PVC Name:	R_0_32
VPI:	0 (0-255)
VCI:	32 (32-65535)
Service Category:	UBR With PCR
Peak Cell Rate	0 cell/s(0-8000)
Sustainable Cell Rate:	0 cell/s(1-7099)
Maximum Burst Size:	0 cells(1-1000000)

Next >   Cancel

The following table describes the parameters of this page.

Field	Description
VPI	Virtual path identifier (VPI) is the virtual path between two points in an ATM network. Its valid value is from 0 to 255.
VCI	Virtual Channel Identifier (VCI) is the virtual channel between two points in an ATM network. Its valid value is from 32 to 65535.
Service Category	You can choose **UBR With PCR**, **CBR**, **Non Realtime VBR**, or **Realtime VBR**. ● **UBR with PCR**: Unspecified bite rate with peak cell rate (UBR with PCR). When the network is congested, the UBR cell is dropped and communication traffic is at a fairly low level. Its peak cell rate range is from 0 to 8000. ● **CBR**: Constant bit rate (CBR) is a coding mode. It is adapted for strict requirement to delay and quality of data packets transmission. Its peak cell rate range is from 0 to 7100.

Field	Description
	● **Non Real-time VBR**: Non real-time variable bit rate (NRT-VBR) is adapted for real time with relatively low requirement. Its peak cell rate range is from 0 to 8000. The sustainable cell rate range is from 1 to 7099, and the maximum burst size range is from 0 to 1000000. ● **Real-time VBR**: Real-time variable bit rate (Real-time VBR) is adapted for real time with high requirement. Its peak cell rate range is from 0 to 8000. The sustainable cell rate range is from 1 to 7099, and the maximum burst size range is from 0 to 1000000.
Sustainable Cell Rate	Sustainable cell rate (SCR) is an ATM parameter for traffic management. For variable bit rate (VBR) connections, SCR determines the long-term average cell rate that can be transmitted.
Maximum Burst Size	Maximum burst size (MBS) is used to specify the maximum number of cells that can be transmitted at the contracted peak cell rate (PCR).

📖 **Note:**

The value of PCR should be greater than SCR, and MBS is usually less than 10. The service category merely is effective to upstream.

Step 3 After proper modifications, click **Next** and the following page appears. In this page, you can modify Internet connection protocol and encapsulation type.

Sample 1: PPP over ATM (PPPoA)

Step 1 Select **PPP over ATM (PPPoA)** protocol and set the encapsulation type to **VC MUX** (depending upon the uplink equipment, generally **VC MUX**). Then click **Next**.

Step 2 In this example, the modem must be configured as built-in PPPoA + NAT. Select **Obtain an IP address automatically**, **Enable NAT**, and **Add Default Route**.

Internet Connection Configuration

Configure WAN IP Settings

Enter information provided by your ISP to configure the WAN IP settings.

- ● Obtain an IP address automatically
- ○ Use the following IP address:
  - WAN IP Address: [ ] [ ] [ ] [ ]
- ☑ Enable NAT
- ☑ Add Default Route

[Next >] [Cancel]

The following table describes the parameters of this page.

Field	Description
Obtain an IP address automatically	Through PPP dial-up to obtain an IP address assigned by up-link equipment, such as BRAS.
Use the following IP address	If you want to manually enter the WAN IP address, select it and enter the IP address provided by your ISP.
Enable NAT	Select it to enable network address translation (NAT) function of the modem. If you do not enable NAT and want to the modem to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, it is required to enable NAT.
Add Default Route	Add a default route in the routing table. Normally, it must be selected. Otherwise, you have to add a default route manually.

Step 3 Enter the correct broadband user name and password. Select a proper PPP connection mode. Then click **Next**.

The following table describes the parameters of this page.

Field	Description
Broadband User Name	Enter the correct user name provided by your ISP.
Password	Enter the correct password provided by your ISP.
Confirm Password	Confirm the correct password provided by your ISP.
Session established by	Select a PPP connection mode according to your practice. ● **Always On**: After the device is powered on, the system performs PPP dial-up automatically. If the device is powered off, DSLAM or the up-link equipment is abnormal, the PPP connection will not be broken. ● **Dial on Demand**: After the device is powered on, the PPP dial-up performs automatically. If the device does not

Field	Description
	detect the flow of the user continuously within the preset minutes, the device automatically stops the PPP connection. Once the device detects the data flow (for example, accessing the web page), it restarts the PPP for dial-up. ● **Manually Connect**: Choose **Configuration** > **Internet Connection** > **Connections**. Click **Connect** in the **Internet Connection Configuration** page to start the PPP connection. If the device does not detect the data-flow of the user continuously within the preset minutes, the device automatically releases the PPP connection. The difference between manually connect and dial on demand is that you must start a PPP connection manually again if you select manually connect. Enter the waiting time in the field.

Step 4 Click **Next** and the following page appears. In this page, you can confirm the modification.

Internet Connection Configuration

Summary

Make sure that the settings below match the settings provided by your ISP.

Internet(WAN) Configuration:

VPI / VCI	0 / 32
Service Category	UBR With PCR 0 cell/s
Connection Type	PPPoA VC MUX, Always On
NAT	On
WAN IP Address	Automatically Assigned
Default Route	On

Click "Cancel" to discard these settings. Click "Apply" to make modifications.   [Apply]   [Cancel]

Check the configuration according to the requirements. When you ensure that the configuration is correct, click **Apply**. The following page appears.

Internet Connection Configuration

Connections : ADSL : MAC Spoofing

Internet Connection Configuration

Click Add to add Internet connection. Click Delete or Edit link to delete/edit an existing Internet connection.

PVC Name	VPI/VCI	Category	Protocol	NAT	WAN IP Address	Edit	Delete
pppoe_0_35 Connect »	0/35	UBR	PPPoE LlcBridged	On	Not Assigned	✎ 🗑	☐
bridge_0_100	0/100	UBR	RFC2684- Bridged LlcBridged	Off	-	✎ 🗑	☐
bridge_8_35	8/35	UBR	RFC2684- Bridged LlcBridged	Off	-	✎ 🗑	☐
bridge_8_81	8/81	UBR	RFC2684- Bridged LlcBridged	Off	-	✎ 🗑	☐
bridge_14_34	14/34	UBR	RFC2684- Bridged LlcBridged	Off	-	✎ 🗑	☐
bridge_1_41	1/41	UBR	RFC2684- Bridged LlcBridged	Off	-	✎ 🗑	☐
R_0_32 Connect »	0/32	UBR	PPPoA VC/MUX	On	Not Assigned	✎ 🗑	☐
					select all		☐

[Add >]   [Delete]

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Sample 2: PPP over ATM for IPv6 (PPPoA IPv6)

Step 1   Select **PPP over ATM for IPv6 (PPPoA IPv6)** protocol and set the encapsulation type to **VC MUX** (depending upon the uplink equipment, generally **VC MUX**). Then click **Next**.

Internet Connection Configuration

Configure Connection Type

Select the protocol and encapsulation type with the ATM PVC that your ISP has instructed you to use.

Protocol:	○ PPP over ATM (PPPoA)
	◉ PPP over ATM for IPv6 (PPPoA IPv6)
	○ PPP over Ethernet (PPPoE)
	○ PPP over Ethernet for IPv6 (PPPoE IPv6)
	○ RFC2684 (IPv4)
	○ RFC2684 (IPv6)
	○ Bridging
Encapsulation Type:	VC MUX
Encapsulation Mode:	Bridged

Next >   Cancel

Step 2   In this example, the modem must be configured as built-in PPPoA + NAT. Select **Obtain an IP address automatically**, **Enable NAT**, and **Add Default Route**.

Internet Connection Configuration

Configure WAN IP Settings

Enter information provided by your ISP to configure the WAN IP settings.

⊙ Obtain an IP address automatically
○ Use the following IP address:
   WAN IP Address:
☑ Enable NAT
☑ Add Default Route

Next >   Cancel

The following table describes the parameters of this page.

Field	Description
Obtain an IP address automatically	Through PPP dial-up to obtain an IP address assigned by up-link equipment, such as BRAS.
Use the following IP address	If you want to manually enter the WAN IP address, select it and enter the IP address provided by your ISP.
Enable NAT	Select it to enable network address translation (NAT) function of the modem. If you do not enable NAT and want to the modem to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, it is required to enable NAT.
Add Default Route	Add a default route in the routing table. Normally, it must be selected. Otherwise, you have to add a default route manually.

Step 3   Enter the correct broadband user name and password. Select a proper PPP connection mode. Then click **Next**.

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The following table describes the parameters of this page.

Field	Description
Broadband User Name	Enter the correct user name provided by your ISP.
Password	Enter the correct password provided by your ISP.
Confirm Password	Confirm the correct password provided by your ISP.
Session established by	Select a PPP connection mode according to your practice. ● **Always On**: After the device is powered on, the system performs PPP dial-up automatically. If the device is powered off, DSLAM or the up-link equipment is abnormal, the PPP connection will not be broken. ● **Dial on Demand**: After the device is powered on, the PPP dial-up performs automatically. If the device does not detect the flow of the user continuously within the preset minutes, the device automatically stops the PPP connection. Once the device detects the data flow (for example, accessing the web page), it restarts the PPP for dial-up. ● **Manually Connect**: Choose **Configuration** > **Internet Connection** > **Connections**. Click **Connect** in the **Internet Connection Configuration** page to start the PPP connection. If the device does not detect the data-flow of the user continuously within the preset minutes, the device automatically releases the PPP connection. The difference between manually connect and dial on demand is that you must start

Field	Description
	a PPP connection manually again if you select manually connect. Enter the waiting time in the field.

Step 4 Click **Next** and the following page appears. In this page, you can confirm the modification.

Sample 3: PPP over Ethernet (PPPoE)

Step 1 Select **PPP over Ethernet (PPPoE)** protocol. Set to **LLC/SNAP** encapsulation type and **Bridged** encapsulation mode. Then click **Next**.

Step 2   In this example, select **Obtain an IP address automatically**, **Enable NAT**, and **Add Default Route**.

The following table describes the parameters of this page.

Field	Description
Enable/Disable the Access Concentrator	Enable or disable the access concentrator.

Field	Description
option	
Access Concentrator	• If select **Enable**, in the PPPoE Discovery stage, the modem makes a choice according to the AC-Name value after receiving many PADO packets. • If select **Disable**, in the PPPoE Discovery stage, the modem makes a choice according other service (such as the service that PADO provides), then it sends PADR packets to each BRAS.
Obtain an IP Address automatically	Through PPP dial-up to obtain an IP address assigned by up-link equipment, such as BRAS.
Use the following IP address	If you want to manually enter the WAN IP address, select it and enter the IP address provided by your ISP.
Enable NAT	Select it to enable network address translation (NAT) function of the modem. If you do not enable NAT and want to the modem to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, it is required to enable NAT.
Add Default Route	Add a default route in the routing table. Normally, it must be selected. Otherwise, you have to add a default route manually.

Step 3 Enter the correct broadband user name, password and confirm password. Select a proper PPP connection mode. Then click **Next**.

The following table describes the parameters of this page.

Field	Description
Service Name	Enter the service name provided by the ISP. It may not fill.
Broadband User Name	Enter the correct user name provided by your ISP.
Password	Enter the correct password provided by your ISP.
Confirm Password	Confirm the correct password provided by your ISP.
Session established by	Select a PPP connection mode according to your practice. ● **Always On**: After the device is powered on, the system performs PPP dial-up automatically. If the device is powered off, DSLAM or the up-link equipment is abnormal, the PPP connection will not be broken.

Field	Description
	• **Dial on Demand**: After the device is powered on, the PPP dial-up performs automatically. If the device does not detect the flow of the user continuously within the preset minutes, the device automatically stops the PPP connection. Once the device detects the data flow (for example, accessing the web page), it restarts the PPP for dial-up. • **Manually Connect**: Choose **Configuration** > **Internet Connection** > **Connections**. Click **Connect** in the **Internet Connection Configuration** page to start the PPP connection. If the device does not detect the data-flow of the user continuously within the preset minutes, the device automatically releases the PPP connection. The difference between manually connect and dial on demand is that you must start a PPP connection manually again if you select manually connect. Enter the waiting time in the field.

Step 4 Click **Next** and the following page appears. In this page, you can confirm the modification.

Internet Connection Configuration

Summary

Make sure that the settings below match the settings provided by your ISP.

Internet(WAN) Configuration:

VPI / VCI	0 / 32
Service Category	UBR With PCR 0 cell/s
Connection Type	PPPoE LLC/SNAP, Always On
PPPOE AC	Not Configured
PPPOE Service Name	
NAT	On
WAN IP Address	Automatically Assigned
Default Route	On

Click "Cancel" to discard these settings. Click "Apply" to make modifications.   Apply   Cancel

Step 5   Check the configuration according to the requirements. When you ensure that the configuration is correct, click **Apply**. The following page appears.

Internet Connection Configuration
Connections | ADSL | MAC Spoofing

Internet Connection Configuration
Click Add to add Internet connection. Click Delete or Edit link to delete/edit an existing Internet connection.

PVC Name	VPI/VCI	Category	Protocol	NAT	WAN IP Address	Edit	Delete	
pppoe_0_35 Connect »	0/35	UBR	PPPoE LlcBridged	On	Not Assigned	✎	🗑	☐
bridge_0_100	0/100	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_8_35	8/35	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_8_81	8/81	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_14_34	14/34	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
bridge_1_41	1/41	UBR	RFC2684-Bridged LlcBridged	Off	-	✎	🗑	☐
R_0_32 Connect »	0/32	UBR	PPPoE LlcBridged	On	Not Assigned	✎	🗑	☐
				select all				☐

Add >   Delete

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Sample 4: PPP over Ethernet for IPv6 (PPPoE IPv6)

Step 1   Select **PPP over Ethernet for IPv6 (PPPoE IPv6)** protocol. Set to **LLC/SNAP** encapsulation type and **Bridged** encapsulation mode. Then click **Next**.

Internet Connection Configuration

Configure Connection Type

Select the protocol and encapsulation type with the ATM PVC that your ISP has instructed you to use.

Protocol:
- ○ PPP over ATM (PPPoA)
- ○ PPP over ATM for IPv6 (PPPoA IPv6)
- ○ PPP over Ethernet (PPPoE)
- ● PPP over Ethernet for IPv6 (PPPoE IPv6)
- ○ RFC2684 (IPv4)
- ○ RFC2684 (IPv6)
- ○ Bridging

Encapsulation Type: [LLC/SNAP ▼]
Encapsulation Mode: [Bridged ▼]

[Next >] [Cancel]

Step 2   In this example, select **Obtain an IP address automatically**, **Enable NAT**, and **Add Default Route**.

Internet Connection Configuration

Configure WAN IP Settings

Enter information provided by your ISP to configure the WAN IP settings.

- ☐ Enable/Disable the Access Concentrator option
  Access Concentrator : [_____]
- ● Obtain an IP address automatically
- ○ Use the following IP address:
  WAN IP Address: [___][___][___][___]
- ☑ Enable NAT
- ☑ Add Default Route

[Next >] [Cancel]

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The following table describes the parameters of this page.

Field	Description
Enable/Disable the Access Concentrator option	Enable or disable the access concentrator.
Access Concentrator	● If select **Enable**, in the PPPoE Discovery stage, the modem makes a choice according to the AC-Name value after receiving many PADO packets. ● If select **Disable**, in the PPPoE Discovery stage, the modem makes a choice according other service (such as the service that PADO provides), then it sends PADR packets to each BRAS.
Obtain an IP Address automatically	Through PPP dial-up to obtain an IP address assigned by up-link equipment, such as BRAS.
Use the following IP address	If you want to manually enter the WAN IP address, select it and enter the IP address provided by your ISP.
Enable NAT	Select it to enable network address translation (NAT) function of the modem. If you do not enable NAT and want to the modem to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, it is required to enable NAT.
Add Default Route	Add a default route in the routing table. Normally, it must be selected. Otherwise, you have to add a default route manually.

Step 3 Enter the correct broadband user name, password and confirm password. Select a proper PPP connection mode. Then click **Next**.

The following table describes the parameters of this page.

Field	Description
Service Name	Enter the service name provided by the ISP. It may not fill.
Broadband User Name	Enter the correct user name provided by your ISP.
Password	Enter the correct password provided by your ISP.
Confirm Password	Confirm the correct password provided by your ISP.
Session established by	Select a PPP connection mode according to your practice. ● **Always On**: After the device is powered on, the system performs PPP dial-up automatically. If the device is powered off, DSLAM or the up-link equipment is abnormal, the PPP connection will not be broken.

Field	Description
	● **Dial on Demand**: After the device is powered on, the PPP dial-up performs automatically. If the device does not detect the flow of the user continuously within the preset minutes, the device automatically stops the PPP connection. Once the device detects the data flow (for example, accessing the web page), it restarts the PPP for dial-up. ● **Manually Connect**: Choose **Configuration** > **Internet Connection** > **Connections**. Click **Connect** in the **Internet Connection Configuration** page to start the PPP connection. If the device does not detect the data-flow of the user continuously within the preset minutes, the device automatically releases the PPP connection. The difference between manually connect and dial on demand is that you must start a PPP connection manually again if you select manually connect. Enter the waiting time in the field.

Step 4 Click **Next** and the following page appears. In this page, you can confirm the modification.

Sample 5: RFC2684 (IPv4)

Step 1 Select **RFC2684 (IPv4)** protocol. Set to **LLC/SNAP** encapsulation type and **Bridged** encapsulation mode. Then click **Next**.

Step 2 In this example, select **Obtain an IP address automatically**, **Enable NAT**, and **Add Default Route**.

The following table describes the parameters of this page.

Field	Description
Obtain an IP address automatically	Through PPP dial-up to obtain an IP address assigned by up-link equipment, such as BRAS.
Use the following IP address	If you want to manually enter the WAN IP address, select it and enter the IP address provided by your ISP.
Enable NAT	Select it to enable network address translation (NAT) function of the modem. If you do not enable NAT and want to the modem to access the Internet normally, you must add a route on the uplink equipment. Otherwise, the access to the Internet fails. Normally, it is required to enable NAT.
Add Default Route	Add a default route in the routing table. Normally, it must be selected. Otherwise, you have to add a default route manually.

Step 3   Click **Next** and the following page appears. In this page, you can confirm the modification.

Sample 6: RFC2684 (IPv6)

Step 1   Select **RFC2684 (IPv6)** protocol. Set to **LLC/SNAP** encapsulation type and **Bridged** encapsulation mode. Then click **Next**.

Step 2   In this example, select **Obtain an IPv6 address automatically** and **Add Default Route**.

Internet Connection Configuration

Configure Rfc2684 IPv6 Configurations

Enter information provided by your ISP to configure the Rfc2684 (DHCPv6 Client) settings.

- ⊙ Obtain an IPv6 address automatically
- ○ Use the following IPv6 address:
  - IPv6 Address: [   ]
  - Default Gateway: [   ]
- ☐ Add Default Route

By Enabling DHCPv6 the modem can acquire prefixes from DHCP server and delegate the same on the LAN side interface. LAN side hosts can configure their IP address automatically from these advertised prefixes. The modem can also acquire temporary and non temporary IPv6 addresses for its WAN connection by DHCPv6 client.

[Next >] [Cancel]

The following table describes the parameters of this page.

Field	Description
Obtain an IPv6 address automatically	Through PPP dial-up to obtain an IPv6 address assigned by up-link equipment, such as BRAS.
Use the following IPv6 address	If you want to manually enter the WAN IPv6 address, select it and enter the IPv6 address provided by your ISP.
Add Default Route	Add a default route in the routing table. Normally, it must be selected. Otherwise, you have to add a default route manually.

Step 3　　Click **Next** and the following page appears. In this page, you can confirm the modification.

Sample 7: Bridging

Step 1   Select **Bridging** protocol. Set to **LLC/SNAP** encapsulation type and **Bridged** encapsulation mode. Then click **Next**.

Step 2   In this example, select **Obtain an IP address automatically**, **Enable NAT**, and **Add Default Route**.

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The following table describes the parameters of this page.

Field	Description
Obtain an IP Address automatically	Through PPP dial-up to obtain an IP address assigned by up-link equipment, such as BRAS.
Use the following IP address	If you want to manually enter the WAN IP address, select it and enter the IP address and subnet mask provided by your ISP.
Obtain DNS server address automatically	Select it to obtain DNS server address.
Use the following DNS server address	If you want to manually enter the DNS server address, select it and enter the primary DNS server and secondary DNS server.

Step 3   Click **Next** and the following page appears. In this page, you can confirm the modification.

Internet Connection Configuration

Summary

Make sure that the settings below match the settings provided by your ISP.

_____

Internet(WAN) Configuration:

VPI / VCI	0 / 32
Service Category	UBR With PCR 0 cell/s
Connection Type	Bridging LLC/SNAP,
NAT	Off
WAN IP Address	None
DNS Server	None

_____

Click "Cancel" to discard these settings. Click "Apply" to make
modifications.

[Apply]   [Cancel]

Step 4   Check the configuration according to the requirements. When you ensure that the configuration is correct, click **Apply**. The following page appears.

3.4.2.2   ADSL

Click **ADSL** in the **Internet Connection Configuration** page and the following page appears. In this page, you can modify ADSL parameters.

User Manual for T2-B-Gawv1.4U10Y.BI

Click **Basic Attributes** and the following page appears. It lists all specific ADSL attributes. In this page, you can configure the settings.

Defaults: There are five options. Choose one line mode you need. The default setting checks the most modulation modes. The modem negotiates the modulation mode with the DSLAM.

The following table describes the ADSL data rate standards.

Data rate standard	Uplink	Downlink

Data rate standard	Uplink	Downlink
ADSL	1 Mbps	8 Mbps
ADSL2	1 Mbps	12 Mbps
ADSL2+	1 Mbps	24 Mbps

BisA Standard contains Bis/BisPlusAuto/BisPlusOnly/READSL2, AnnexA Standard contains G.dmt/T1.413/G.lite. The difference between Annex M and Annex A is that the uplink of Annex M can reach 2 Mbps, and Annex A can only reach 1 Mbps.

If you want to take the settings effect immediately, you should select **Start** in **ActiveteLine** field.

3.4.2.3   MAC Spoofing

MAC spoofing does not support bridge PVC.

Step 1   Click **MAC Spoofing** in the **Internet Connection Configuration** page and the following page appears. Select **Enabled** (By default, MAC Spoofing is disabled) and click **Next**.

Step 2   Enter the MAC address and click **Next**.

Step 3   Check the configuration. If you ensure that your configuration is correct, click **Confirm**.

3.4.3 Local Network (LAN)

In this page, you can configure the local network.

3.4.3.1 IPv4 Address

Choose **Configuration** > **Local Network (LAN)** and the following page appears. In this page, you can set the IP address and subnet mask of LAN.

The following table describes the parameters of this page.

Field	Description
Primary IP Address	

Field	Description
IP Address	The management IP address of the LAN on the modem. By default, it is 192.168.1.1.
Subnet Mask	The subnet mask of the IP address. By default, it is 255.255.255.0.
Virtual IP Address	Select it, you can access the Internet through the virtual IP address. By default, it is not selected. After you select it, you are required to enter **IP Address** and **Subnet Mask**.
MTU	The maximum transmission unit. By default, it is 1500.

Enter the required parameters and click **Apply** to take it effect.

3.4.3.2 IPv6 Address

Click **IPv6 Address** in the **Local Network Configuration** page and the following page appears. In this page, enter the unicast IPv6 address of the LAN side, which should not begin with fe8.

3.4.3.3 DNS Client

Click **DNS Client** in the **Local Network Configuration** page and the following page appears. A DNS server is any PC registered to join the DNS. A DNS server

runs special-purpose networking software, features a public IP address, and contains a database of network names and addresses for other Internet hosts.

3.4.3.4   DNS Relay

Click **DNS Relay** in the **Local Network Configuration** page and the following page appears. The DNS relay responds to DNS requests from the LAN side. Usually it transmits DNS requests to other DNS servers to parse, the addresses of the DNS servers are obtained through the DHCP client.

 Note:

Dial-up under bridge mode, the DNS setting is inefficient. When the DNS sends the request, the DNS client parses them by itself. If the parse is failed, it is delivered to a superior DNS server. DNS client can record some domain

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information to the buffer. DNS relay does not parse them, and all the requests are transferred to a superior DNS server.

3.4.3.5 DNS LAN Host

When you enter a domain name into a browser, the PC must send a request to a DNS server to obtain the corresponding IP address immediately. The DNS server attempts to look up the domain name in its local host database immediately.

Click **DNS LAN Host** in the **Local Network Configuration** page and the following page appears.

DNS Table
IPv4 Address ┊ IPv6 Address ┊ DNS Client ┊ DNS Relay ┊ **DNS LAN Host**

Refresh

Host name	IP address	Creator	Delete

Create a New DNS hostname entry manually
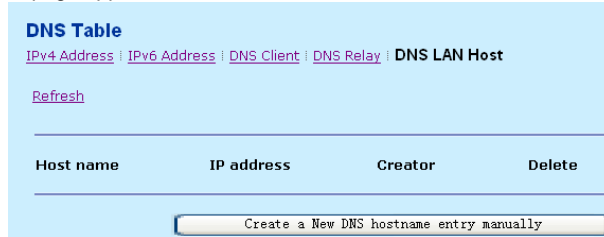
Click **Create a New DNS hostname entry manually** and the following page appears.

Local Network Configuration
IP Address ┊ DNS Client ┊ DNS Relay ┊ **DNS LAN Host**

DNS Table
Enter Host Name and IP Address and click "Apply" button to create entry into DNS table

Host Name	
IP Address	
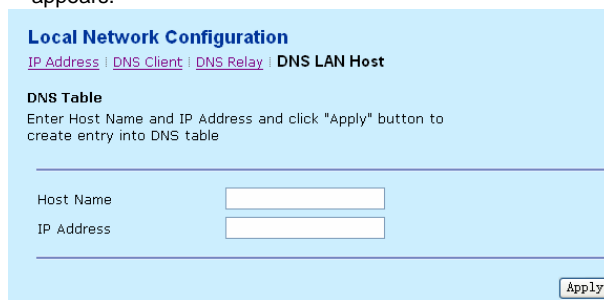
Apply

The following table describes the parameters of this page.

Field	Description
Host Name	Enter the domain name.
IP Address	Enter the valid IP address of LAN host.

Click **Apply** to add the host name and IP address as DNS server. Then other hosts can access the PC through the domain name.

3.4.4   Voice Configuration

Voice over Internet Protocol (VoIP) is a technology that allows you to make voice calls using a broadband Internet connection instead of a regular phone line.

3.4.4.1   System Settings

Choose **Voice Configuration** > **System Settings** and the following page appears. In this page, you can view and modify the settings of system wide voice.

Cid Type: Calling identity delivery (CID) supports field services kit (FSK), dual-tone multi-frequency (DTMF).

Select **Enable (SIP)** from the **VoIP Functionality** drop-down list, select the IP interface name and correct region.

Click **Go To Advanced view** and the following page appears. In this page, you can configure more settings of the VoIP parameter.

Voice Configuration
System Settings ⁞ SIP ⁞ End Points ⁞ Dialing Plan

System Settings
Status: Your VoIP service is enabled now. You can make VoIP phone calls.

[Go To Basic view]

|	
VoIP Functionality	Enable (SIP)
IP Interface Name	pppoe_0_35
Region	INDIA
Cid Type	FSK
DTMF Mode	Inband
RFC 2833 Payload Type	101
RTP DSCP	000000
SIG DSCP	000000
Active Channels	1
Local TCP Port	5060
Local UDP Port	5060

[Go To Basic view]   Apply

3.4.4.2　SIP

Click **SIP** in the **VoIP Configuration** page and the following page appears. In this page, you can view and modify the related settings of the SIP protocol.

Voice Configuration

System Settings ┆ **SIP** ┆ End Points ┆ Dialing Plan

SIP Settings

Enter values for SIP Parameters and press Apply button to save SIP settings

[Go To Advanced view]

Proxy	
Proxy Port	5060
Proxy Transport Type	UDP
Proxy Routing	⦿ Loose ○ Strict
Registrar	
Registrar Port	5060
Registrar Transport	UDP
Outbound Server	
Outbound Server Port	5060
Outbound Server Transport	UDP
User Domain	
Registration Expiration Time	3600
Silence Suppression	○ Enable ⦿ Disable
Echo Cancellation	⦿ Enable ○ Disable
Packetization Period	20

[Go To Advanced view]   Apply

Enter the proxy and the registrar in the corresponding fields. The proxy can be the IP address of the SIP server. Generally, the registrar is as same as proxy.

Click **Go To Advanced view** and the following page appears. It provides more parameters for you to modify.

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Voice Configuration
System Settings | **SIP** | End Points | Dialing Plan

SIP Settings

Enter values for SIP Parameters and press Apply button to save SIP settings

[Go To Basic view]

Proxy	
Proxy Port	5060
Proxy Transport Type	UDP
Proxy Routing	⊙ Loose ○ Strict
Registrar	
Registrar Port	5060
Registrar Transport	UDP
Outbound Server	
Outbound Server Port	5060
Outbound Server Transport	UDP
Message Summary	Disable
Subsription Server	none
Subsription Port	5060
Subscrition Transport	UDP
Subsription Duration	3600
User Domain	
Registration Expiration Time	3600
T.38 Fax Relay	disable
T.38 Fax Max Bit Rate	14400
Silence Suppression	○ Enable ⊙ Disable
Echo Cancellation	⊙ Enable ○ Disable
Packetization Period	20

[Go To Basic view]   Apply

3.4.4.3 End Points

Click **End Points** in the **VoIP Configuration** page and the following page appears. In this page, you can view and modify end point settings, such as the login name, password. You can also view the registration status.
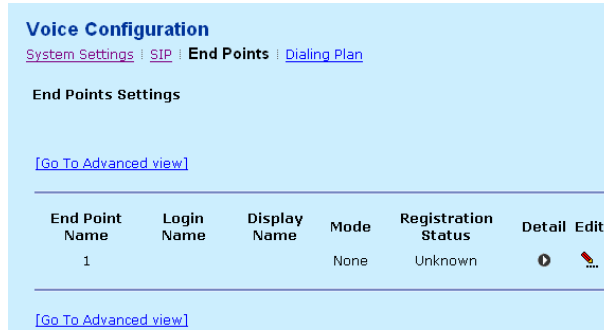
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Click **Go To Advanced view** and the following page appears. It provides more parameters for you to modify.
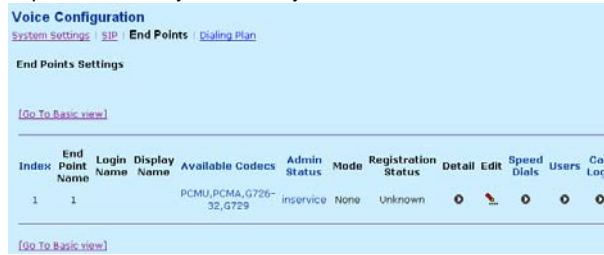
It provides valid time for forward calling, and it supports three way conferences.
Take the basic settings for example. Click [icon] and the following page appears. Enter **End Point Name** (such as 755222666, which is the called number) and other parameters. Then boot the system to take the settings effect immediately. The registration status display **Registered** if it is registered in the SIP server successfully.

Voice Configuration

System Settings ⦙ SIP ⦙ **End Points** ⦙ Dialing Plan

End Points Settings

[Go To Advanced view]

End Point Name	755222666
Login Name	test
Password	••••
Display Name	test
Admin State	inservice ▾
Registration Status	Unknown

[Go To Advanced view]   [Apply] [Cancel]

You can dial up the numbers by a call terminal, such as X-Lite or telephone. The number should have been registered in the SIP server to guarantee the conversation goes well.

3.4.4.4 Dialing Plan

Click **Dialing Plan** and the following page appears. In this page, you can view and modify digit map.

Voice Configuration

System Settings ⦙ SIP ⦙ End Points ⦙ **Dialing Plan**

Dial Plan Settings

Digit Map	(x.T|##S|*[268]xS|*74x.#S|x#S|*90x.#S|*2x

[Apply]

Digit map allows you to set the various dialing codes that are used to make VoIP calls. You can activate or deactivate certain services. It is recommended not to modify the default digit map, if you want to make VoIP call.

3.4.4.5 VoIP Configuration Example

The following describes the example of the voice configuration:

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Step 1 Choose **Configuration** > **Voice Configuration**. Select a PVC from the **IP Interface Name** drop-down list, such as iplan. Then select the region.

Step 2 Click **Apply** and the following page appears. Enter the proxy and registrar that are the IP address of the SIP server.

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Step 3   Click **Apply** to take the settings effect.

Step 4   Click **End Points** in the **Voice Configuration** page and the following page appears.

Voice Configuration
System Settings ┊ SIP ┊ **End Points** ┊ Dialing Plan

End Points Settings

[Go To Advanced view]

End Point Name	99900888
Login Name	99900888
Password	••••••••
Display Name	99900888
Admin State	inservice
Registration Status	Unknown

[Go To Advanced view]   Apply   Cancel

The following table describes the parameters of this page.

Field	Description
End Point Name	The call-up number.
Login Name	The authentication name for registering VoIP call.
Password	The authentication password for registering VoIP call.
Admin State	The service state. Usually, you should choose **inservice**.

After finishing the settings, reboot the modem to take the settings effective.
If the login number is registered successfully, you can view the status.

Voice Configuration
System Settings ┊ SIP ┊ **End Points** ┊ Dialing Plan

End Points Settings

[Go To Advanced view]

End Point Name	Login Name	Display Name	Mode	Registration Status	Detail	Edit
99900888	99900888	99900888	None	Registered	●	✎

[Go To Advanced view]

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Now, you can make a VoIP call with another effective number that is registered on the SIP server.

3.4.5　DHCP Server

As a DHCP server, the modem maintains a pool of IP address and distributes it to LAN hosts.

3.4.5.1　Global Settings

Choose **Configuration** > **DHCP Server** and the following page appears. In this page, you can set the status of the DHCP server.

DHCP Server Configuration

Global Settings ┊ Server Settings ┊ Advanced Settings

DHCP Server Configuration

This page allows you enable and disable the DHCP server. Also you can specify the interfaces that DHCP Server will operate on.

DHCP server status

DHCP server is currently ⦿ Enable ○ Disable

[Apply]

DHCP server interfaces

Use this section to edit the list of IP interfaces that the DHCP server will operate on. DHCP server status must be disabled for adding new DHCP server interface or deleting existing DHCP server interface.

Name　　　　　　　　　　**Delete**

IP interface [iplan ▾] [Add]

The following table describes the parameters of this page.

Field	Description
DHCP server is currently	Select it to enable DHCP server function. When the PC connected to the modem is set to obtain the IP address automatically, the modem takes a valid IP address from the IP address pool and assigns it to the PC. By default, DHCP server is enabled.
DHCP server interfaces	It is used to edit the list of IP address that the DHCP server operates on. DHCP server

Field	Description
	status must be disabled for adding a new DHCP server or deleting an existing DHCP server.

3.4.5.2 Server Settings

Click **Server Settings** and the following page appears. In this page, you can modify the DHCP server settings.

Click **Add Fixed Host** and the following page appears. In this page, you can set host IP and MAC mapping.

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The following table describes the parameters of this page.

Field	Description
Maximum lease time	It is the maximum value to which the default lease time can be set. The unit value is set in second. By default, it is 86400 seconds (24 hour).
Default lease time	It is the time that the DHCP server leases IP address to the DHCP client. After the preset time, the lease IP address is released. The unit value is set in second. By default, it is 43200 seconds (12 hour).

3.4.5.3   Advanced Settings

Click **Advanced Settings** and the following page appears. In this page, you can configure the advanced DHCP server classes and subnet-pools.

Click **Add** in the **DHCP Classes** page and the following page appears.

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Enter the class name and class data, and select class type. Click **Add** to show the following page.

DHCP Server Configuration

Global Settings | Server Settings | **Advanced Settings**

Advanced DHCP Server Configuration

This page allows you to configure advanced DHCP server classes and subnet-pools

DHCP Classes

Use this section to edit DHCP Classes.

Class Name	Class Type	Class Data	Edit	Delete
test	user-class		🖊...	🗑
				Delete All 🗑

[Add]

Subnet Pools

Use this section to Add/Edit Subnet Pools.

Subnet	AllowClasses	Denyclasses	PoolRanges	Edit	Delete
192.168.1.0			192.168.1.2-192.168.1.17	🖊...	🗑
					Delete All 🗑

[Add]

Shared-Networks

Use this section to Add/Edit Shared Networks.

Shared-Network Name	Subnet Value/Mask	Edit	Delete

[Add]

Click 🖊: in the **Subnet Pools** page. You can attach an existent class name, and set its attribute. Click **Apply** and the following page appears. In this page, you can view its status.

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In the **Shared-Networks** page, you can add or edit the DHCP shared networks.

3.4.6   DHCP Relay

Choose **Configuration** > **DHCP Relay** and the following page appears. In this page, you can modify the DHCP relay settings or add DHCP server adress or interfaces running DHCP relay. DHCP relay is used to send the DHCP client request to other DHCP server across several physical and logical sub-networks. For a DHCP client, the relay acts as a DHCP server, and this operation is

transparent. It is prohibited to run the DHCP server and the DHCP relay simultaneously.

The following table describes the parameters of this page.

Field	Description
DHCP Server Address	The IP address of the DHCP server to WAN
Interfaces Running DHCP Relay	DHCP request sends out through this interface.

Note:
After entering the effective server address in the DHCP server address in the **DHCP Relay Settings** page, you must list all interfaces that the DHCP relay needs to bind to, for both sending and receiving packets. For example, it is not enough to only bind to a LAN interface (iplan) to receive the requests from the DHCP clients. It is also necessary to bind a WAN interface.

3.4.7 IPv6 Prefix

Choose **Configuration** > **IPv6 Prefix** and the following page appears. In this page, the prefixes are added to the LAN side interface. Then, the modem advertises these prefixes in router advertisements on the LAN side. LAN side hosts can auto configure them using these prefixes. All prefixes are advertised as on-link and autonomous.

3.5 Security

Click **Security** to enter security configuration page. On the left page, there are three options: **IP Filtering**, **Port Forwarding**, and **Virtual Server**.

3.5.1 IP Filtering

Choose **Security** > **IP Filtering** and the following page appears. In this page, you can specify the IP packet filtering rules to prevent unsolicited access from the Internet or limit the Internet access from PCs on your network.

The IP filter feature enables you to create rules that control the forwarding of incoming and outgoing data between the LAN and WAN side. When you define an

IP filter rule and enable it, you instruct the modem to examine data packets to determine whether they meet the criteria. The criteria can include the network or Internet protocol, the packet carries, the direction in   it is traveling.

Add an IP filter rule

The procedure for adding an IP filter rule is as follows:

Step 1   Enable **IP Filtering** and click **Add**.

Step 2   Enter the filter rule name and other parameters. Click **Apply**. In this example, enter **aa** in the **Filter Rule Name** field. This rule named aa can forbid any application corresponding to port from 1 to 80.

Step 3 Click **Apply** and the following page appears. In the **IP Filter Configuration** page, you can view the result of the IP filter configuration.

3.5.2 Port Forwarding

Choose **Security** > **Port Forwarding** and the following page appears. In this page, you can create, modify, and delete port forwarding rules. These rules allow applications or software to work on your PCs if the Internet connection uses NAT.

Click **Add** and the following page appears. The IP packages of the Camerades application of Audio/Video service that come from the WAN Interface ipwan is forwarded to the host with IP address 192.168.1.2. If you select **User defined** with a self-defined name, you can configure the parameters in the page.

3.5.3　Virtual Server

Choose **Security** > **Virtual Server** and the following page appears. A virtual server is a PC on your local network that can be accessed from the Internet. All interfaces for virtual server is listed.

Virtual Server Configuration

DMZ Host
A DMZ host is a computer on your local network that can be accessed from the Internet.

Interface	DMZ Host	Edit
pppoe_0_35	N/A	

Take pppoe_0_35 for example. Click to show the **DMZ Host Configuration** page. Enter the host address, such as 192.168.1.2. Click **Apply**. Remote user can access the host 192.168.1.2 by the interface pppoe_0_35. IP filter should be disabled or add relevant rule. Otherwise, the access request can not reach the DMZ host.).

Virtual Server Configuration

DMZ Host Configuration
A DMZ host is a computer on your local network that can be accessed from the Internet.

Those IP packets from the interface **pppoe_0_35** that do NOT belong to any applications configured in the port forwarding table will be:
○ Discarded
◉ Forwarded to the DMZ host
IP address of DMZ host: 192.168.1.2

Apply

3.6   Services

Click **Services** to enter service configuration page. On the left page, there are five options: **IGMP Proxy**, **IPv4 Routing**, **IPv6 Routing**, **Quality of Service**, and **Mac Filtering**.

3.6.1   IGMP Proxy

Choose **Services** > **IGMP Proxy** and the following page appears. Internet Group Multicast Protocol (IGMP) is used by routers and hosts that support multicasting. All the systems on a physical network identify the multicast grouping of specific hosts through IGMP. The multicast routers learn this information and forward the multicast datagram to the corresponding interfaces. The IGMP proxy holds up the

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request of the terminal. After disposing, the information is transmitted to the super-level router. The system acts as a proxy for its hosts after you enable IGMP proxy.
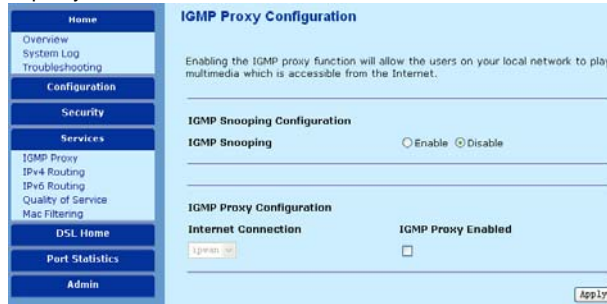
3.6.2 IPv4 Routing

3.6.2.1 Static Routing

Choose **Services** > **IPv4 Routing** and the following page appears. In this page, you can configure static route and dynamic routing. A default route is used to send IP packages of unknown destination address to the default gateway. The default route defines the IP address where all data is forwarded.

The following table describes the parameters of this page.

Field	Description
Destination	The IP address that packets are sent to.
Netmask	The subnet mask of the destination IP address.
Gateway	The gateway that the packets pass by during

Field	Description
	transmission.
WAN Interface	The WAN interface that the packets pass through on the modem.

Click **Add** in the **Static Routing** page. In this page, you can add static routing. You need to provide the destination IP address and netmask. You also need to enter the gateway IP address or the interface through which the packets are forwarded in the corresponding fields. The interface can be iplan, ipwan or you can specify the interface that the modem has.

3.6.2.2   Dynamic Routing

Click **Dynamic Routing** in the **IP Static Route Settings** page. In this page, you can configure the dynamic routing for any existing interface. You can enable or disable operation mode and RIP version for a particular interface.

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Click ![pencil icon] and the following page appears.

IP Routing Configuration
Static Routing | **Dynamic Routing**

IP Dynamic Routing Configuration
You can enable the function on several interfaces of your Router. Select the desired RIP version and operation mode, then tick the 'Enable' checkbox to enable RIP.

Interface Name:	iplan
RIP Version:	1
Operation Mode:	Active
Multicast Send Type	☐
Enable:	☐

[Apply]

The following table describes the parameters of this page.

Field	Description
RIP Version	There are 1, 2, and Both options in the drop-down list.
Operation Mode	You can choose **Provide Active**, **Passive**, and **Send only**. ● Choose **Active** for transmitting and receiving RIP interactive information. ● Choose **Passive** for only receiving information. ● Choose **Send Only** for transmitting information.

Check to enable related interfaces and then click **Apply** to take the settings effect immediately.

3.6.3   IPv6 Routing

Choose **Services** > **IPv6 Routing** and the following page appears. In this page, you can configure static route and dynamic routing.

IPv6 Routing Configuration
Static IPv6 Routing

Current routes:

Prefix   PrefixLength   Gateway   Interface   Delete

Add IPv6 Route
Prefix
PrefixLength

Forward packets to
○ Gateway address:
◉ Interface: iplan ▾

Apply

The following table describes the parameters of this page.

Field	Description
Prefix	Enter the IPV6 IP address.
PrefixLength	Enter the length of the prefix. The prefix length is not larger than 128bit.
Forward packets to	Select the packet route. You can select the packets are forwarded to the gateway or WAN interface. ● If set to gateway, you need to enter the gateway address. ● If set to WAN interface, you need to choose the WAN interface.

3.6.4　Quality of Service

Choose **Services** > **Quality of Service** and the following page appears. This page shows a summary of the QoS and scheduler settings available on the system.

Click **Add** and the following page appears. In this page, you can specify quality of service (QoS) rules to upstream traffic. All of specified conditions in the traffic rule must be satisfied for the rule to take effect.

3.6.5　Mac Filtering

May be you want to manage the MAC address to block or permit a PC on the LAN. When you enable MAC filter rules, the modem serves as a firewall that works at layer 2. The following describes the example of the Ethernet transport.

3.6.5.1　Rule

Click **Rule** in the **Mac Filter Configuration** page and the following page appears.

Click 📝 and the following page appears. In this page, you can configure filtering rules on the system.

The following table describes the parameters of this page.

Field	Description
GT	Greater than
LT	Less than
GTEQ	Greater than and equal to
LTEO	Less than and equal to
EQ	Equal to
NEQ	Not equal to
INRANGE	Include the range
EXRANGE	Exclude the range

The source MAC value is 00:1E:E3:00:2B:1C, that is the Ethernet physical address. The destination MAC value is 00:1E:E3:00:2D:BC. After finishing the settings of rule status and action, click **Apply** to take it effect.

3.6.5.2 Profile

Click **Profile** in the **Mac Filter Configuration** page. In this page, you can create and configure filtering profiles.

Mac Filter Configuration

Transport ┊ **Profile** ┊ Rule

Profile Settings

This section allows you to create and configure filtering profiles.

Profile	Rules	Edit	Delete
p1	r1		
[ ]			Add

Add a profile name as p2, and then click [icon] to edit the p2. In this page, you can attach or detach more than one filtering rules to a profile.

Mac Filter Configuration

Transport ┊ **Profile** ┊ Rule

Edit Profile

Use this page to attach and detach filtering rules to a profile

Rule Name	Detach
r1 ▾	Attach

r1
r2

[Back to profiles]

3.6.5.3   Transport

Choose **Mac Address** > **Transport** and the following page appears. In this page, you can attach or detach filtering profiles to a transport. You can also enable or disable filtering on a transport.

Before attaching the filtering profile to the specified transport, the profiles and rules should be configured. For example, click of the Ethernet transport. . You can configure p1 attach Tx Path for the Ethernet transport, and it matches the corresponding settings of rule1.

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Select **L2 Filter Enabled** and ping the IP address of the modem as 192.168.1.1 from PC. It is failed, because the tx path attaches to the rule1 and no rx path returns back. If enter the CLI commands: **transports detach ethernet l2 filter profile profile1 Rx** by serial port to detach the rx path, it succeeds to ping.

📖 **Note:**

when you configure the MAC filtering for the first time, refer to the following procedure: Firstly, adding the rules. Secondly, attaching them to the profile. Then, attaching the profiles to the specified transport.

3.7 DSL Home

Click **DSL Home** to enter DSL home page. On the left page, there are two options: **Management Server** and **CWM Parameters**.

3.7.1 Management Server

TR069 is a popular network management protocol, and its connecting way is TCP, carrier is HTTP, MIF (information format) is XML, SSL as optional encrypt method. It provides the management of software, firmware by mirrors, status and capability monitor, diagnosis, and Web supervision to the user equipment.

Choose **DSL Home** > **Management Server** and the following page appears. In this page, you can configure the parameters of the management server.

The following table describes the parameters of this page.

Field	Description
URL	URL for the modem to connect to the ACS using CPE WAN Management Protocol (CWMP). This parameter must be in the form of a valid HTTP or HTTPS URL. HTTPS URL indicates that the ACS supports SSL. The host portion of this URL is used by the modem to validate the certificate from the ACS when using the certificate-based authentication.
Username	Username is used to authenticate the modem when establishing a connection to the ACS using the CWMP. This username is used only for HTTP-based authentication of the modem.
Password	The password is used to authenticate the modem when establishing a connection to the ACS using CWMP. This password is used only for HTTP-based authentication of the modem. When read, this parameter returns an empty string, regardless of the actual value.
Periodic Inform	If you select **Enable**, the modem must periodically

Field	Description
	send the modem information to server using the inform method call.
Periodic Inform Interval	The duration in seconds of the interval for which the modem must attempt to connect with the ACS and call the inform method if periodic inform is enabled.
Periodic Inform Time	An absolute time reference in UTC to determine when the modem should initiate the inform method calls. Each inform call must occur at this reference time plus or minus an integer multiple of the periodic inform interval. A zero date time value (0000-00-00T00:00:00) indicates that no particular time reference is specified. That is, the modem may locally choose the time reference, required only to adhere to the specified periodic inform interval.
Parameter Key	The value of the parameter key argument from the most recent set parameter values, add object, or delete object method call from the server. If there do not have such calls, this value is empty.
Connection Request URL	HTTP URL for an ACS to make a connection request notification to the modem.
Connection Request Username	Username is used to authenticate an ACS. It makes a connection request to the modem.
Connection Request Password	Password is used to authenticate an ACS making a connection request to the modem. When read, this parameter returns an empty string, regardless of the actual value.
Upgrades Managed	It indicates whether or not the ACS will manage upgrades for the modem. If it is true, the modem only uses ACS to seek out available upgrades. If it is false, the modem may use other means for this purpose.
ACS Discovery	Whether or not the modem must enable ACS discovery from DHCP.

3.7.2 CWM Parameters

Choose **DSL Home** > **CWM Parameters** and the following page appears. In this page, you can modify the customer premise equipment WAN management (CWM) parameters. It displays the CWM parameters received from CWMP application.

3.8 Port Statistics

Click **Port Statistics** to enter port statistics page. On the left page, there are eight options: **Voipfex0**, **Voipcmdstat**, **DSL**, **Ethernet0**, **Ethernet1**, **Ethernet2**, **Ethernet3**, and **Wireless**.

3.8.1 Voipfxs0

This page displays the current status and configuration of the FXS port.

3.8.1.1 Basic

Choose **Port Statistics** > **Voipfxs0** and the following page appears. In this page, you can view the information of the FXS port.

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The following table describes the parameters of this page.

Field	Description
Jitter Dynamic	Provide jitter buffer adjustment if it is true.
Reset Defaults	Reset to the default values after rebooting.

3.8.1.2　　Advanced

Click **Advanced** in the **Voipfxs0 Port Configuration** page and the following page appears. In this page, you can view the information of the FXS port.

User Manual for T2-B-Gawv1.4U10Y.BI

Port Configuration
Basic | **Advanced**

Voipfxs0 Port Configuration
This page allows you to view the values of port parameters.

Dsp Id	0
Dsp Port Id	0
Dsp Version	
Port Type	fxs
Generate SID	false
Coder Type Upstream	G711U
Jitter Max Delay	200
Jitter Nominal	40
Jitter Dynamic	true
Dtmf Relay	0
Echo Control	true
Use JB	true
Packet Rate	20
Gain Ctrl Up	0
Gain Ctrl Dn	0
Out Of Service	false
Fxs Seize Time	100
Fxs Release Time	900
Fxs Hf Max Time	900
Fxs Hf Min Time	300
Fxs Min Pulse	20
Fxs Max Pulse	110
Fxs Pulse Pause	300
Cid Type	3
Ring Type	1
Default Jitter Max Delay	200
Default Jitter Nominal	40
Default Jitter Dynamic	true
Default Generate SID	false
Default Coder Type Upstream	G711U
Default Dtmf Relay	false
Default Use JB	true
Default Echo Control	true
Default Packet Rate	20
Default Gain Ctrl Up	0
Default Gain Ctrl Dn	0
Default Fxs Seize Time	100
Default Fxs Release Time	900
Default Fxs Hf Max Time	900
Default Fxs Hf Min Time	300
Default Fxs Min Pulse	20
Default Fxs Max Pulse	110
Default Fxs Pulse Pause	300
Reset Defaults	false
Port Snmp If Index	0
Port Snmp If Type	0

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The following table describes the parameters of this page.

Field	Description
Cid Type	Calling identity delivery (CID) type.
Reset Defaults	Reset to the default values after rebooting.

📖 **Note:**

Some of the attributes displayed in the **Voipfxs0 Port Configuration** page can be set from the CLI. Enter **port voipfxs0 set ?**. The attributes is displayed as the output of this command. Its function depends on the configuration of the DSLAM and the capability of the central office the modem connected to.

3.8.2 Voipcmdstat

This page displays the current status and configuration of the voipcmdstat port.

3.8.2.1 Basic

Choose **Port Statistics** > **Voipcmdstat** and the following page appears. In this page, you can view the the information of voipcmdstat port.

3.8.2.2   Advanced

Click **Advanced** in the **Voipcmdstat Port Configuration** page and the following page appears. In this page, you can view the the information of voipcmdstat port.

Port Configuration
Basic | **Advanced**

Voipcmdstat Port Configuration
This page allows you to view the values of port parameters.

Dsp Id	0
Dsp Port Id	0
Dsp Version	
Port Type	cmdstat
Generate SID	false
Coder Type Upstream	G711U
Jitter Max Delay	200
Jitter Nominal	40
Jitter Dynamic	true
Dtmf Relay	0
Echo Control	true
Use JB	true
Packet Rate	20
Gain Ctrl Up	0
Gain Ctrl Dn	0
Out Of Service	false
Fxs Seize Time	100
Fxs Release Time	900
Fxs Hf Max Time	900
Fxs Hf Min Time	300
Fxs Min Pulse	20
Fxs Max Pulse	110
Fxs Pulse Pause	300
Cid Type	3
Ring Type	1
Default Jitter Max Delay	200
Default Jitter Nominal	40
Default Jitter Dynamic	true
Default Generate SID	false
Default Coder Type Upstream	G711U
Default Dtmf Relay	false
Default Use JB	true
Default Echo Control	true
Default Packet Rate	20
Default Gain Ctrl Up	0
Default Gain Ctrl Dn	0
Default Fxs Seize Time	100
Default Fxs Release Time	900
Default Fxs Hf Max Time	900
Default Fxs Hf Min Time	300
Default Fxs Min Pulse	20
Default Fxs Max Pulse	110
Default Fxs Pulse Pause	300
Reset Defaults	false
Port Snmp If Index	0
Port Snmp If Type	0

Note:

Some of the attributes displayed in the voipcmdstat port configuration page can be set from the CLI. Enter **port voipcmdstat set ?**. The attributes is displayed as the output of this command. Its function depends on the configuration of the DSLAM and the capability of the central office the modem connected to.

3.8.3   DSL

This page displays the current status and configuration of the DSL port.

3.8.3.1   Basic

Choose **Port Statistics** > **DSL** and the following page appears. In this page, you can view the the following information. The attributes and values are displayed as the output depending on the configuration of the DSLAM that the modem is connected with.

Port Configuration

Basic | Advanced

DSL Port Configuration

This page allows you to view the values of port parameters.

Driver Version	1.75
APIVersion	GS_API_650
Firmware Version	E.25.41.57 A
Dsp Version	0x00000000
Common Handshake	Enable
Connected	false
Operational Mode	Inactive
State	HandShake
Watchdog	0x00000000
Operation Progress	0x00000018
Last Failed	0x00000000
Tx Bit Rate	0
Rx Bit Rate	0
Rx ATTNDR	
Tx ATTNDR	
Annex Type	
Tx Cell Rate	0
Rx Cell Rate	0
Overall Failure	0
Data Boost	
Local ITUCountry Code	
INPup	0.00
INPdown	0.00
PMstatus	Unknown (3182)
PSDMask Status	
Status Fail Count	0
Profile Status	
Action	Startup
Activate Line	None
Host Control	Enable
Auto Start	true
Failsafe	true
Showtime Led	3
Retrain	EnableOverallOnly
Defaults	None
Whip	Disable
Whip Active	Inactive
Whip Mode	Standalone
Dying Gasp	Enable
Utopia Interface	Level1
Physical Port	0
Clock Type	Crystal
Generic Trace	DSP
Debug	disable
Max RSMemory	32
Profile	MAIN
Detect Noise	Disable
Port Speed	20000
Reset Defaults	false

[Go To Advanced View]

The following table describes the parameters of this page.

Field	Description
Driver Version	The information of driver version.
APIVersion	Application program interface (API) version.

Field	Description
Firmware Version	The modem version.
Dsp Version	Digital signal processor (DSP) version
Operational Mode	The synchronism mode.
Watchdog	Inspect the running estate of the application program.
Reset Defaults	Reset to the default values after rebooting.

3.8.3.2   Advanced

Click **Advanced** in the **DSL Port Configuration** page and the following page appears.

The following table describes the parameters of this page.

Field	Description
CACMode	Connection admission control (CAC) mode.
Traffic Shaping	The volume of adapter communication.
Is Dsl Dma Up	Direct memory access supported high broadband.

Field	Description
Reset Defaults	Reset to the default values after rebooting.

📖 **Note:**

> Some of the attributes displayed in the **DSL Port Configuration** page can be set from the CLI. Enter **port a1 set ?**. The attributes is displayed as the output of this command. Its function depends on the configuration of the DSLAM and the capability of the central office the modem connected to.

3.8.4 Ethernet0/1/2/3

This page displays the current status and configuration of the Ethernet port. The modem has four Ehternet ports. Because they are similar, we describe the example of one Ethernet port. If the Ethernet port is working curently, the connected status desplays true. On the contrary, it displays false. the Mac value is different if the Ethernet port is not same.

3.8.4.1 Basic

Choose **Port Statistics** > **Ethernet0** and the following page appears. In this page, you can view the the information of Ethernet port.

The following table describes the parameters of this page.

Field	Description
MAC	The network adapter interface identifier with 48 bits unique global address.
Connected	It displays the connection status.

Field	Description
Reset Defaults	Reset to the default values after rebooting.

3.8.4.2   Advanced

Click **Advanced** in the **Ethernet0 Port Configuration** page and the following page appears. In this page, you can view the following information of the Etherent port.

Port Configuration
Basic | Advanced

Ethernet0 Port Configuration
This page allows you to view the values of port parameters.

MAC	00:10:20:30:40:50
Lower Port	port=raw_ethernet/promiscuousenable=true
TAG	2
Connected	true
Link Speed	100M
Map Port	raw_ethernet
Map Port Connected	PortLinkStatus
Map Port Link Speed	LinkSpeed
Map Port Link Speed Mult	1
Map Port Link Speed Div	1
Map Port Index	0
Global Port	0x00aef118
No Rx Demux	false
No Tx Tag	false
Promiscuous Enable	true
Rx Errored	0
Rx Global LUTFail	1
Rx Global No8021Q	0
Rx Too Short	0
Rx Wrong MAC	0
Reset Defaults	false
Port Snmp If Index	0
Port Snmp If Type	0

[Go To Basic View]

Note:

Some of the attributes displayed in the **Ethernet0 Port Configuration** page can be set from the CLI. Enter **ethernet set ?**. The attributes is displayed as the output of this command. Its function depends on the configuration of the DSLAM and the capability of the central office the modem connected to.

3.8.5   Wireless

This page displays the current status and configuration of the wireless port.

3.8.5.1   Basic

Choose **Port Statistics** > **Wireless** and the following page appears. In this page, you can view the the information of wireless port.

Port Configuration
Basic ⎪ Advanced

Wireless Port Configuration
This page allows you to view the values of port parameters.

Authentication	Open
Encryption	WEP128
Auto Channel	true
Connected	false
Current Country	INI
Default Channel	1
Default Tx Key	0
Disable	true
ESSID	BSNL_AP
Link Speed	0
MAC	00:15:e9:00:00:02
Mode128Key0	12-34-56-78-90-12-34-56-78-90-12-34-56
Mode128Key1	00-00-00-00-00-00-00-00-00-00-00-00-00
Mode128Key2	00-00-00-00-00-00-00-00-00-00-00-00-00
Mode128Key3	00-00-00-00-00-00-00-00-00-00-00-00-00
Mode64Key0	00-00-00-00-00
Mode64Key1	00-00-00-00-00
Mode64Key2	00-00-00-00-00
Mode64Key3	00-00-00-00-00
Profile	MIXED_G_WIFI
Transmit Rate	Automatic
WPAEnable WPA1	false
WPAEnable WPA2	false
WPA	false
Reset Defaults	false

[Go To Advanced View]

3.8.5.2   Advanced

Click **Advanced** in the **Wireless Port Configuration** page and the following page appears. In this page, you can view the following information of the wireless port.

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Port Configuration
Basic : Advanced

Wireless Port Configuration
This page allows you to view the values of port parameters.

Authentication	Open
Encryption	WEP128
Port Class802_11	true
Vap Id	0
BMACVersion	2.1.41.0
LMACVersion	2.17.36.0
UMACVersion	2.20.24.0
State	GotMac
Allowed Channels	1,2,3,4,5,6,7,8,9,10,11,12,13
Antenna Diversity	0
Authenticate STA	00:00:00:00:00:00
Auto Channel	true
Collect Stats	true
Connected	false
Current Country	INI
De Authenticate STA	00:00:00:00:00:00
Default Channel	1
Default Max Queue	32
Default Tx Key	0
Disable	true
ESSID	BSNL_AP
Fragmentation Threshold	2346
Hide SSID	false
IEEE802_11_Event Sink	/task/i802_1x
Intra BSSRelay	1
WMM	false
WMMPS	false
Link Speed	0
MAC	00:15:e9:00:00:02
Mac Address Auth	disabled
Mac Mode	AP
Max Associated Stations	32
Max Frame Burst	1500
Mode128Key0	12-34-56-78-90-12-34-56-78-90-12-34-56
Mode128Key1	00-00-00-00-00-00-00-00-00-00-00-00-00
Mode128Key2	00-00-00-00-00-00-00-00-00-00-00-00-00
Mode128Key3	00-00-00-00-00-00-00-00-00-00-00-00-00
Mode64Key0	00-00-00-00-00

📖 **Note:**

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Some of the attributes displayed in the **Wireless Port Configuration** page can be set from the CLI. Enter **port wireless set ?**. The attributes is displayed as the output of this command. Its function depends on the configuration of the DSLAM and the capability of the central office the modem connected to.

3.9   Admin

Click **Admin** to enter system admin page. On the left page, there are seven options: **Firmware Upgrade**, **Back & Restore**, **Reboot**, **Remote Access**, **Lan Access**, **Change Password**, and **Time Zone**.

3.9.1   Firmware Upgrade

Choose **Admin** > **Firmware Upgrade** and the following page appears. In this page, you can upgrade the software of the modem by TEImage.bin file.
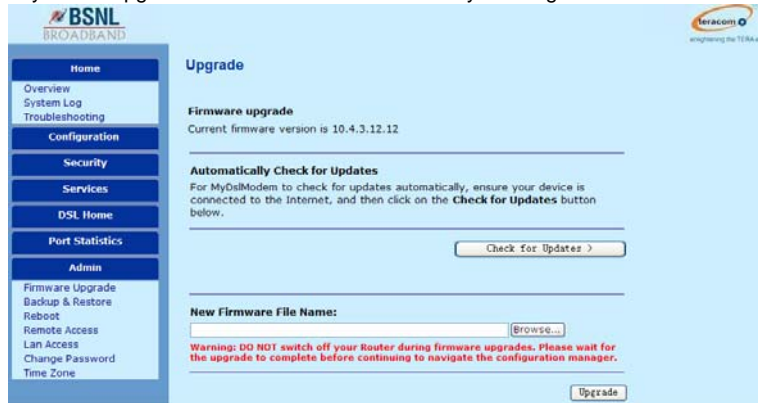
Click **Browse** to select the upgrade file. The upgrade process may take several minutes.

📖 Note:

If it is not upgraded successfully, do not restart the modem or switch off the modem. Try to upgrade the image file again until it is successful. If it is upgraded successfully, restart the modem immediately to take the new software effect.

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3.9.2   Back & Restore

Choose **Admin** > **Back & Restore** and the following page appears.
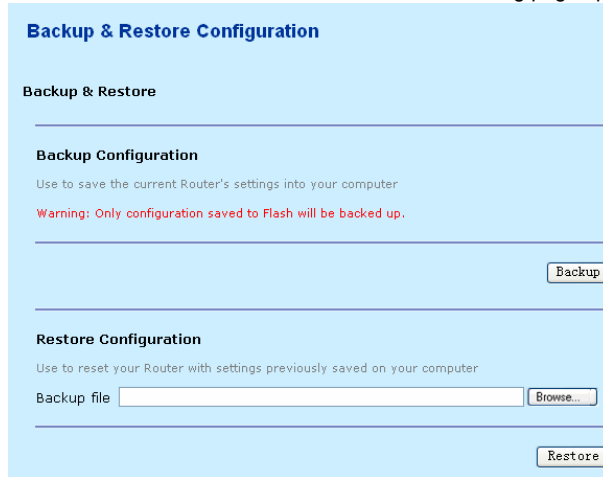
Click **Backup** to save the current system configuration. Conexant.icf is the default file.
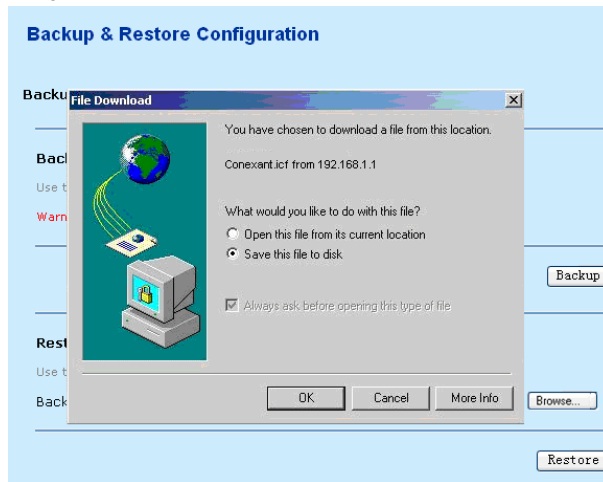
📖 **Note:**

The restore configuration file should be with "icf" format.

3.9.3   Reboot

Choose **Admin** > **Reboot** and the following page appears. In this page, you can reboot the modem in two ways.

Reboot

Reboot Page

This page allows you to reboot modem with the configuration file you wanted, simply select the configuration file and press reboot

Reboot Router

Use to Reboot Router with the listed configuration files

Reboot From   Last ▾
                                               Last
                                               Factory
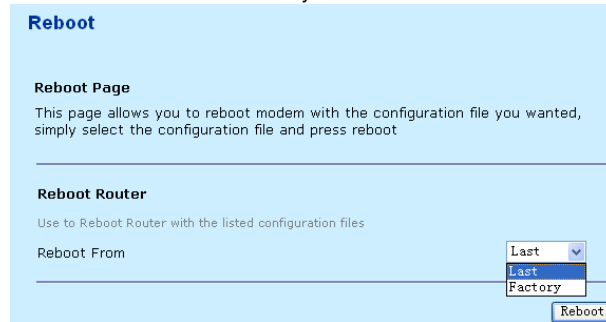
                                                      Reboot

- **Last:** Reboot from the last revisal.
- **Factory:** Reboot from the factory default configuration.

3.9.4   Remote Access

Choose **Admin** > **Remote Access** and the following page appears. you can open the remote access port for someone to login. Remote access, a management station that is a host or range of hosts that can remotely access .Once the modem has been configured to allow to remote access, the management station sends IP traffic on a specific transport or port to the external port of the device. Any NAT or firewall configuration is bypassed. This allows a network administrator access to the configuration of the device without having to visit the site.

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3.9.5   Lan Access

Choose **Admin** > **Lan Access** and the following page appears. It is used to enable or restrict LAN side management access to the modem.

3.9.6   Change Password

Choose **Admin** > **Change Password** and the following page appears. If logging in to the modem as a super user, you can modify the password of the modem. It is advisable that the password should be changed to keep the system secure. Keep the your password. If you forget the password, you need to reset the modem and reset to the factory defaults.

Administration Password

It is advisable that the password is changed to keep your system secure. Keep a copy of your password somewhere safe. If you forget your password, your Router will need to be reset and all settings will be lost.

User name:	admin ⌄
Current password for admin:	
New password:	
Confirm new password:	

Make a note of your new password somewhere safe for future reference

Apply

3.9.7   Time Zone

This page displays the current time configuration of the system.

3.9.7.1   SNTP Client

Click **SNTP Client** in the **SNTP Client Configuration** page. In this page, you can modify the SNTP client configuration. By default, the time zone is configured as UTC.

3.9.7.2   SNTP Server

Click **SNTP Server** in the **SNTP Client Configuration** page. In this page, you can modify the SNTP server settings.

You can add a server by using host name or IP address. It starts the synchronization process automatically if it exists a effective server in the association list.

Sample 1: Add a host Name of the SNTP server. (The hostname: time.nist.gov, which belongs to American time server).

SNTP Server Configuration
SNTP Server | SNTP Client

SNTP Server Settings
Allows to add a new SNTP Server or delete the existing servers.

Hostname	IP Address	Delete
time.nist.gov	N/A	🗑

⦿ Host Name: [   ]
○ IP Address: [   ]

Add

Before adding a host name, you should ping the host name of the SNTP Server. It takes effective if the ping is successful.
Click 🗑 to delete a single server association from the client list.

Sample 2: Add IP address of the SNTP server.

SNTP Server Configuration
SNTP Server | SNTP Client

SNTP Server Settings
Allows to add a new SNTP Server or delete the existing servers.

Hostname	IP Address	Delete
N/A	192.43.244.18	🗑

⦿ Host Name: [   ]
○ IP Address: [   ]

Add

Before adding IP address, you should ping the IP address of the SNTP server. It takes effective if ping successes.
Click 🗑 to delete a single server association from the client list.

4   Network Topology

Before configuring the modem, you must determine if the modem is used in the Bridging mode or Routing mode. This chapter describes some applications. For detailed configuration, refer to Chapter 3 Web Configuration Management.

4.1   PPP over ATM (PPPoA) Mode
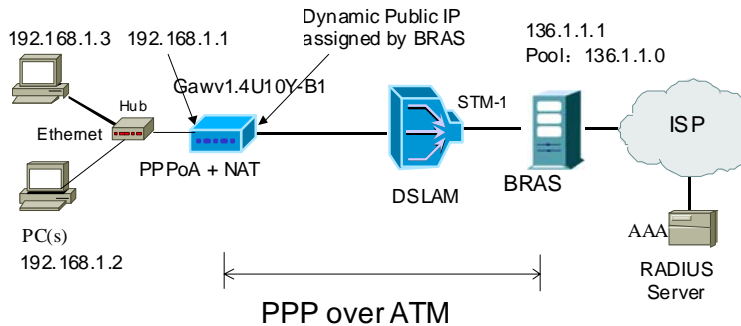
Description

In this example, the modem is connected with the DSLAM through PVC 8/81 and the access mode is the built-in PPPoA + NAT. The encapsulation of the BRAS downlink port is PPP over ATM. The authentication is CHAP PAP. The IP address is 136.1.1.1. The IP pool is 136.1.1.* and the IP address of uplink port is 10.61.92.157. The IP address of the WAN port on the modem is assigned by BRAS through the built-in PPPoA dial-up dynamically. The PC that the modem is connected with is assigned with a private IP address (in the same segment as the management IP address of the modem). The NAT function of the modem is enabled and the private PC address is translated to the public address 136.1.1.* (2 ~ 254) assigned by BRAS dynamically for access to ISP.

The IP address of the PC can be fixed (as in this example) or assigned through DHCP server of the modem. If it is assigned by DHCP server, the DHCP function of the modem must be enabled. The IP address of the DHCP address pool is

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192.168.1.* (2~254). The functions are enabled by default and the PC is configured to obtain IP and DNS addresses dynamically.

Setting

(1) Open the network browser and enter **192.168.1.1** in the address bar to log in to the modem.

(2) Choose **Configuration** > **Internet Connection** > **Connections**. Set VPI/VCI to 8/81, and click **Next**.

(3) In the **Configure Connection Type** page, select **PPP over ATM (PPPoA)** protocol and set the encapsulation type to **VC MUX**. Click **Next**.

(4) In the **Configure WAN IP Settings** page, select **Obtain an IP address automatically** and **Enable NAT**. Click **Next**.

(5) In the **Configure Broadband User Name and Password** page, enter the **Broadband User Name** and **Password** provided by your ISP. Select a **Session established by** according to your practices. In this example, select **Always on**. Then click **Next**.

(6) Check the network configuration and ensure that all the settings are consistent consistent with the data provided by your ISP. Then click **Apply**.

After the dial-up is successful, the IP address that the modem obtains at the WAN-side port R_0_32 is 136.1.1.3.

If NAT is disabled during the configuration, you must configure the modem on the BRAS. Otherwise, you cannot access your ISP. In actual applications, **Enable NAT** must be selected.

4.2   PPP over Ethernet (PPPoE) Mode
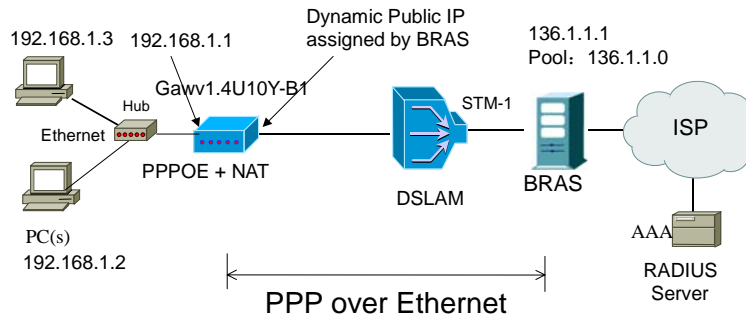
Description

In this example, the modem is connected to the DSLAM through PVC 8/81 and the access mode is the built-in PPPoE+NAT. The encapsulation of the BRAS downlink port is PPP over Ethernet. The authentication is CHAP PAP. The IP address is 136.1.1.1. The IP pool is 136.1.1.* and the IP address of uplink port is 10.61.92.157. The IP address of the WAN port on the modem is assigned by BRAS through the built-in PPPoE dial-up dynamically. The PC that the modem is   to is assigned with a private IP address (in the same segment as the management IP of the modem). The NAT function of the modem is enabled and the private PC address is translated to the public address 136.1.1.* (2 ~ 254) assigned by BRAS dynamically for access to ISP.

The IP address of the PC can be fixed (as in this example) or assigned through DHCP server of the modem. If it is assigned by DHCP server, the DHCP function of the modem must be enabled. The IP address of the DHCP address pool is 192.168.1.* (2~254). The functions are enabled by default and the PC is configured to obtain IP and DNS addresses dynamically.

Setting

(1) Open the network browser and enter **192.168.1.1** in the address bar to log in to the modem.

(2) Choose **Configuration** > **Internet Connection** > **Connections**. Set VPI/VCI to 8/81, and click **Next**.

(3) In the **Configure Connection Type** page, select **PPP over Ethernet(PPPoE)** protocol and set the encapsulation type to **LLC/SNAP**. Click **Next**.

(4) In the **Configure WAN IP Settings** page, select **Obtain an IP address automatically** and **Enable NAT**. Click **Next**.

(5) In the **Configure Broadband User Name and Password** page, enter the **Broadband User Name** and **Password** provided by your ISP. Select a **Session established by** according to your practices. In this example, select **Always on**. Then click **Next**.

(6) Check the network configuration and ensure that all the settings are consistent with the data provided by your ISP. Then click **Apply**.

After the dial-up is successful, the IP address that the modem obtains at the WAN side port R_0_32 is 136.1.1.2.

If **Enable NAT** is disabled during the configuration, you must configure the modem on the BRAS. Otherwise, you can not access your ISP. In actual applications, **Enable NAT** must be selected.

4.3 RFC2684 (Bridged) + Fixedly-Assigned IP Address Mode
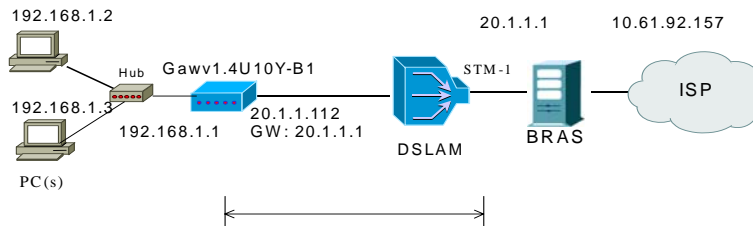
Description

In this example, the modem is connected to the DSLAM through PVC 8/81 and the access mode is the RFC2684 (bridged) +NAT. The down link port of DSLAM is encapsulated in 1483B. The IP address is 20.1.1.1. The IP address of the uplink port is 10.61.92.157. The WAN IP address of the modem is assigned as 20.1.1.112 and the gateway is 20.1.1.1. The PC to the modem is assigned with a private IP address (in the same segment as the management IP address 192.168.1.1). The NAT function of the modem is enabled and the private address of the PC is translated to the public address of 20.1.1.112 for accessing the ISP. The IP address of the PC can be fixed (as in this example) or assigned through DHCP server of the modem. If it is assigned by DHCP server, the DHCP function of the modem must be enabled. The IP address of the DHCP address pool is 192.168.1.* (2~254). The functions are enabled by default and the PC is configured to obtain IP and DNS addresses dynamically.

Setting

(1) Open the network browser and enter **192.168.1.1** in the address bar to log in to the modem.

(2) Choose **Configuration** > **Internet Connection** > **Connections**. Set VPI/VCI to 8/81, and click **Next**.

(3) In the **Configure Connection Type** page, select **RFC 1483** protocol. Set the encapsulation type to **LLC/SNAP** and the encapsulation mode to **Bridged**. Click **Next**.

(4) In the **Configure WAN IP Settings** page, enter WAN IP Address, WAN Subnet Mask, and Default Gateway provided by your ISP. Select **Enable NAT** and **Add Default Route**, and click **Next**.

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- **WAN IP Address**: 20.1.1.112
- **WAN Subnet Mask**: 255.255.255.0
- **Default Gateway**: 20.1.1.1

(5) Check the network configuration and ensure that all the settings are consistent with the data provided by your ISP. Then click **Apply**.

You can also modify the PVC 8/81 in "Internet Connetion". And the steps are the same as in "Connections".

After the configuration is done, the modem WAN-side interface is B_0_32.

If **Enable NAT** is disabled during the configuration, you must configure the modem on the BRAS. Otherwise, you can not access your ISP. In actual applications, **Enable NAT** must be selected.

4.4 RFC2684 (Bridged) + DHCP Mode
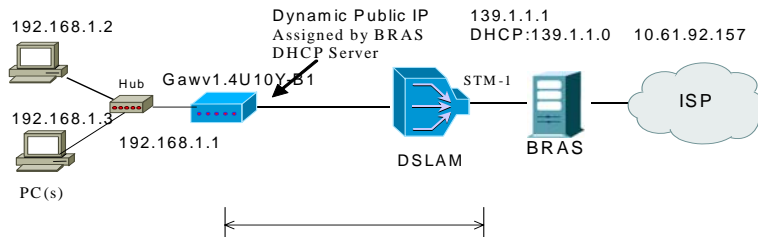
Description

In this example, the modem is connected to the DSLAM through PVC 8/81 and the access mode is the MER+NAT. The downlink port of DSLAM is encapsulated in 1483B. The IP address is 139.1.1.1 and the DHCP server is enabled. The address pool is 139.1.1.* (2~254). The IP address of the uplink port is 10.61.92.157. The WAN IP address of the modem is automatically obtained through DHCP. The PC to the modem is assigned with a private IP address (in the same segment as the management IP address 192.168.1.1). The NAT function of the modem are enabled and the private address of the PC is translated to the public address 139.1.1.* (2~254) dynamically assigned by BRAS for accessing the ISP.

The IP address of the PC can be fixed (as in this example) or assigned through DHCP server of the modem. If it is assigned by the DHCP server, the DHCP function of the modem must be enabled. The IP address of the DHCP address pool

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is 192.168.1.* (2~254). The functions are enabled by default and the PC is configured to obtain IP and DNS addresses dynamically.

Setting

(1) Open the network browser and enter **192.168.1.1** in the address bar to log in to the modem.

(2) Choose **Configuration** > **Internet Connection** > **Connections**. Set VPI/VCI to 8/81, and click **Next**.

(3) In the **Configure Connection Type** page, select **RFC 1483** protocol. Set the encapsulation type to **LLC/SNAP** and the encapsulation mode to **Bridged**. Click **Next**.

(4) In the **Configure WAN IP Settings** page, select **Obtain an IP address automatically** and **Enable NAT**. Click **Next**.

(5) Check the network configuration and ensure that all the settings are consistent with the data provided by your ISP. Then click **Apply**.

After the configuration is successful, the IP address that the modem obtains at the WAN-side port B_0_35 is "136.1.1.2.
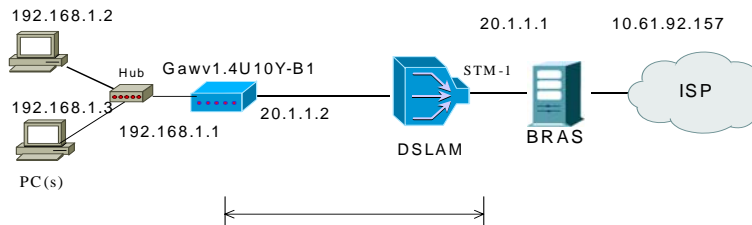
If **Enable NAT** is disabled during the configuration, you must configure the modem on the BRAS. Otherwise, you can not access your ISP. In actual applications, **Enable NAT** must be selected.

📖 **Note:**

The DNS server address can be configured manually.

4.5 RFC2684 (Routed) + NAT Mode

Description

In this example, the modem is connected to the DSLAM through PVC 8/81 and the access mode is the IPOA+NAT. The downlink port of DSLAM is encapsulated in

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1483R. The IP address is 20.1.1.1. The IP address of the uplink port is 10.61.92.157. The WAN IP address of the modem is assigned as 20.1.1.2. The PC to the modem is assigned with a private IP address (in the same segment as the management IP address 192.168.1.1). The NAT function of the modem is enabled and the private address of the PC is translated to the public address 139.1.1.* (2~254) dynamically assigned by BRAS for access to ISP.

The IP address of the PC can be fixed (as in this example) or assigned through DHCP server of the modem. If it is assigned by DHCP server, the DHCP functions of the modem must be enabled. The IP address of the DHCP address pool is 192.168.1.* (2~254). The functions are enabled by default and the PC is configured to obtain IP and DNS addresses dynamically.
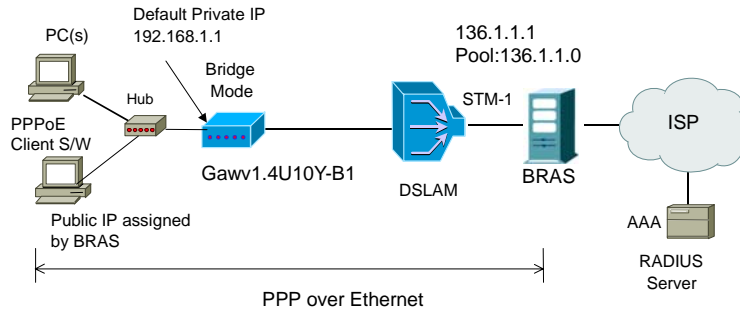
Setting

1) Open the network browser and enter **192.168.1.1** in the address bar to log in to the modem.
2) Choose **Configuration** > **Internet Connection** > **Connections**. Set VPI/VCI to 8/81, and click **Next**.
3) In the **Configure Connection Type** page, select **RFC 1483** protocol. Set the encapsulation type to **LLC/SNAP** and the encapsulation mode to **Routed**. Click **Next**.
4) In the **Configure WAN IP Settings** page, enter WAN IP Address, WAN Subnet Mask, and Default Gateway provided by your ISP. Select **Enable NAT** and **Add Default Route**, and click **Next**.

- **WAN IP Address**: 20.1.1.2
- **WAN Subnet Mask**: 255.255.255.0
- **Default Gateway**: 20.1.1.1

5) Check the network configuration and ensure that all the settings are consistent with the data provided by your ISP. Then click **Apply**.

In **Confiugre WAN IP Settings** page, besides entering WAN IP address, WAN subnet mask, DNS server addresses, and selecting enable NAT, you must select **Add Default Route**. Otherwise, you have to add the static modem manually. If you need to modify the LAN IP address and DHCP server information, you can operate in the **Local Network (LAN)** page and **DHCP Server** page.

After the configuration is done, WAN-side interface of the the modem is R_0_32.

4.6   External PPPoE Dial-up Mode

Description

In this example, the modem is connected to the DSLAM through PVC 8/81 and the access mode is pure Bridging. The encapsulation of the downlink port of BRAS is PPP over Ehernet. The authentication is CHAP PAP. The IP address is 136.1.1.1. The IP pool is 136.1.1.*. The IP address of the uplink port is 10.61.62.157. The PC to the modem obtains its public address dynamically assigned by BRAS through PPPoE dial-up.

Setting

1) Open the network browser and enter **192.168.1.1** in the address bar to log in to the modem.
2) Choose **Configuration** > **Internet Connection** > **Connections**. Set VPI/VCI to 8/81, and click **Next**.
3) In the **Configure Connection Type** page, select **Bridging** protocol. Set the encapsulation type to **LLC/SNAP**. Click **Next**.
4) Check the network configuration and ensure that all the settings are consistent with the data provided by your ISP. Then click **Apply**.

📖 **Note:**

In the pure Bridging mode, there is no interface at the WAN side of the modem.

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