

4 PORTS ADSL MODEM

User manual

Ver: **1.00**

Contents

Chapter 1 Introduction	1
Features.....	1
ADSL standard supports.....	1
Encapsulation supports	2
System requirements	2
LED status description	3
Rear panel layout	4
Chapter 2 Hardware Installation.....	5
Chapter 3 Modem Parameters Setting.....	6
Configuring computer network card IP address	6
Web setting interface.....	6
Ethernet over ATM (RFC1483 Bridge) setting.....	7
PPP over Ethernet (RFC2516) setting	10
PVC Configuration	14
Chapter 4 Questions & Answers	19

Chapter 1 Introduction

The device is a well-designed high-speed ADSL modem/router.

Features

- Full rate ADSL router, support Bridge/Router
- Provides 24Mbps downstream and 1Mbps upstream
- Maximum transmission range: 5.4 Kilometers
- Four Ethernet ports, 10/100 Mbps Auto-MDI/MDIX
- Friendly GUI for web configuration
- Configurable as a DHCP Server on Your Network
- Compatible with all standard Internet applications
- Industry standard and interoperable DSL interface
- Simple web-based status page displays a snapshot of your configuration, and links to the configuration pages.
- Downloadable flash software upgrades
- Support up to 8 Permanent Virtual Circuits (PVC)
- Support up to 8 PPPoE sessions

ADSL standard supports

- ITU G.992.1 (G.dmt)
- ANSI T1.413 Issue 2
- ITU G.992.2 (G.lite)
- ITU G.992.3 ADSL2(G.dmt)

- ITU G.992.4 ADSL2 (G.lite)
- ITU G.992.5 ADSL2+

Encapsulation supports

- RFC 1483 bridge/Router
- Classical IP over ATM (RFC 1577)
- PPP over ATM (RFC 2364)
- PPP over Ethernet (RFC 2516)

System requirements

Recommended system requirements are:

- Pentium 233MHZ or above
- Memory: 64MB or above
- 10M Base-T Ethernet or above
- Win9X, Win2000, WinXP, WinMe, WinNT
- Ethernet Network Card

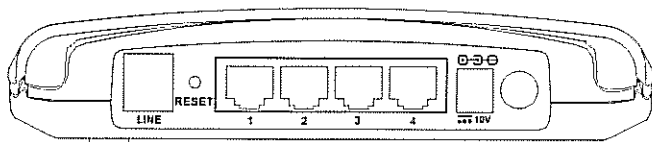
Please collect the following information from your ADSL service provider. This information will be very helpful for your ADSL configuration. To keep a record for reference, you can fill in the column as follow:

VPI	
VCI	
Encapsulation: VCMUX or LLC	
Protocol	
Standard	
User name	
Password	
Password protocol	

LED status description

INDICATOR	STATUS	Description
Power	Off	No power
	ON	Power supplied
LAN(1-4)	ON	Ethernet connection is OK
	Blink	Ethernet data transferring
DSL	Quick Blink	DSL line is training
	ON	DSL line is connected
DATA	Blink	DSL data transferring

Rear panel layout

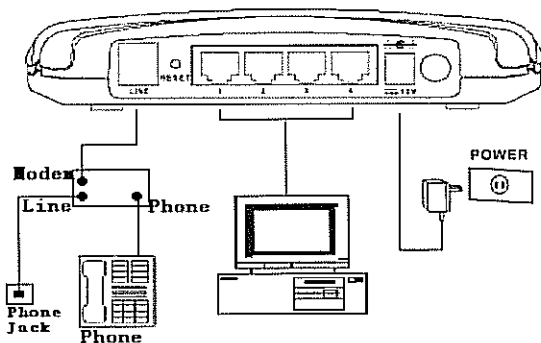


Interface	Description
SWITCH	Power on/off switch
POWER	Plug in for power adaptor
RESET	Modem Reset button Switch off then press "reset" button and switch on 7s to reset the hardware. The modem will auto restart. This action will recover the modem's default configuration.
LAN(1-4)	LAN interface for connecting to computer or Switch
LINE	ADSL connector for connecting to ADSL telephone line

Chapter 2 Hardware Installation

Please connect the device to you computer as follow:

- If connecting to the splitter, connect the "Line" port of the splitter to wall jack using one telephone cable
- Use the other telephone cable to connect "MODEM" port of the splitter and "LINE" port of the modem. The "phone" port of the splitter can be use to connect the telephone by a telephone cable.
- Use Ethernet cable to connect "LAN" port of the modem and "LAN" port of your computer.



If do not need to connect to the splitter,

- Connect the modem to wall jack with a telephone cable
- Use Ethernet cable to connect "LAN" port of the modem and network adaptor of your computer

Chapter3 Modem Parameters Setting

Configuring computer network card IP address

Configure your network card's TCP/IP properties to Obtain an IP address automatically to obtain an IP address from modem, or set the computer's IP with the same network mask of the modem.(For example: modem's IP is 192.168.1.1/255.255.255.0)

Then you can set computer's IP to:

192.168.1.x/255.255.255.0.

The range for x is from 3 to 253

Web setting interface

Open IE or Netscape Web browser, Input <http://192.168.1.1> (MODEM default IP address) in the address column, then click <ENTER> button, access the following setting interface:

Input user name and password, then click Login key to enter WEB setting interface.

Default setting:

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Username/Password: admin/admin

Main interface

After type right user name and password, the following window will pop up:

The screenshot shows a web-based configuration interface for a Broadcom DSL device. The interface has a dark header with the 'BROADCOM' logo. On the left is a vertical navigation menu with the following items: 'Device Info', 'Advanced Setup', 'Diagnostics', and 'Management'. The main content area is titled 'Device Info' and contains a table with the following data:

Board ID:	9639L-114-8M
Software Version:	3.0L.01.Aq.017i.d15h_m
Bootloader (CFE) Version:	1.0.37-5.1a

Below the table, a text line reads: 'This information reflects the current status of your DSL connection.' Underneath this is another table showing DSL connection parameters:

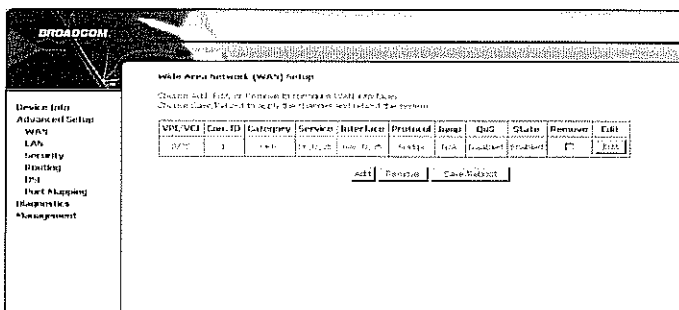
Line Rate - Upstream (Kbps):	640
Line Rate - Downstream (Kbps):	5576
LAN IP Address:	192.168.1.1
Default Gateway:	
Primary DNS Server:	192.168.1.1
Secondary DNS Server:	192.168.1.1

At the bottom of the interface, a small footer reads: '©2004 Broadcom Corporation. All rights reserved.'

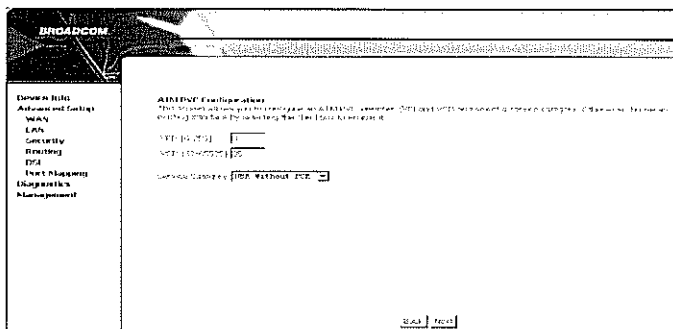
Here provide the most common RFC1483 Bridge and PPP over Ethernet (RFC2516) setting for reference. If you want to know more about other protocol, please contact your ADSL service provider for details.

Ethernet over ATM (RFC1483 Bridge) setting

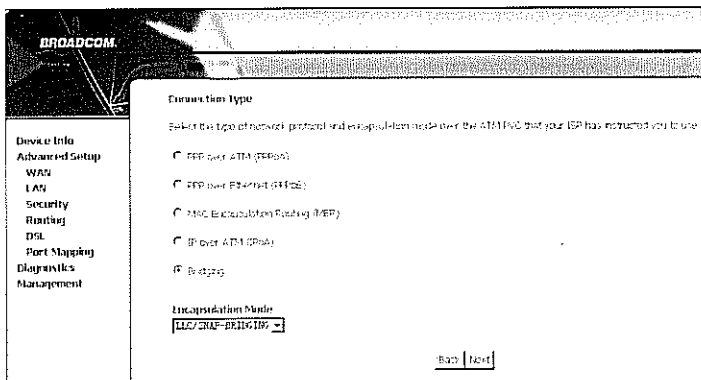
1. From the Home page, click on "Advanced Setup ", See the following:



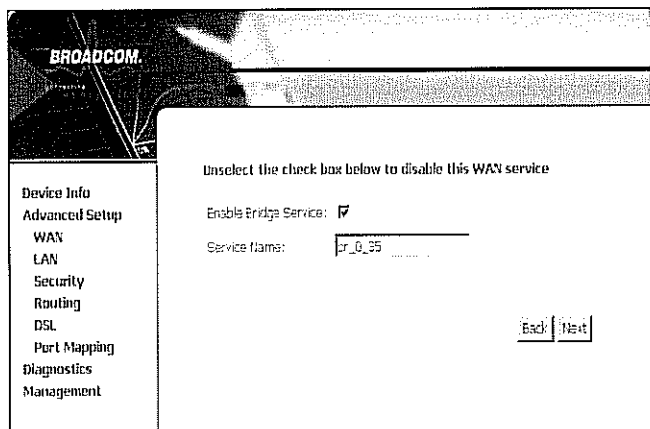
2. Click the "Edit" button to configure an ATM PVC identifier, see the following:



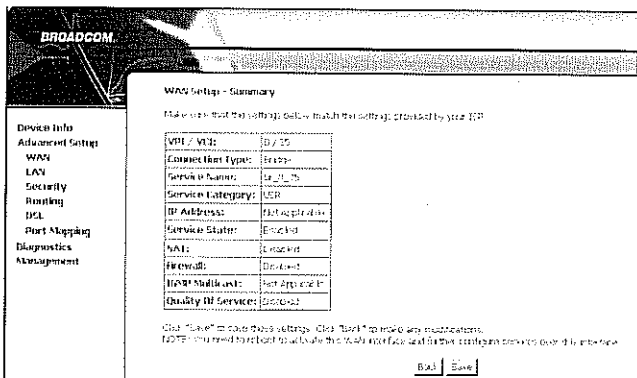
3. Click the "Next" button, and you can set the encapsulation which get from your ADSL service provider, see the following:



- Click the "Next" button, needn't change any parameter, see the following:



- Click the "Next" button, make sure that the settings below match the settings provided by your ISP, see the following:



6. Click on the "Save" button, save your configurations, then click the "Save/Reboot" to save it permanently.

NOTICE:

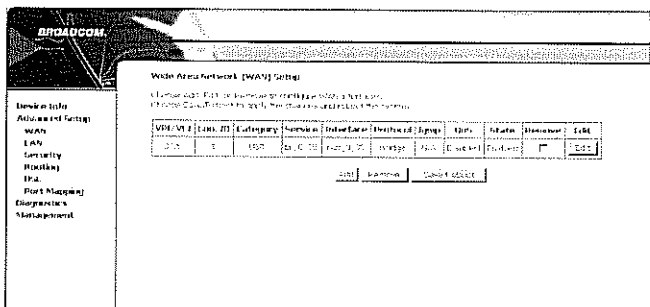
If you select Dial-UP link, after configuring your ADSL modem, please install the third-party dial up program to access Internet (For example: Ethernet 300/Ethernet 500/WinPoet). If your system is WinXP, you can use its own Internet access program without any other additional programs.

PPP over Ethernet (RFC2516) setting

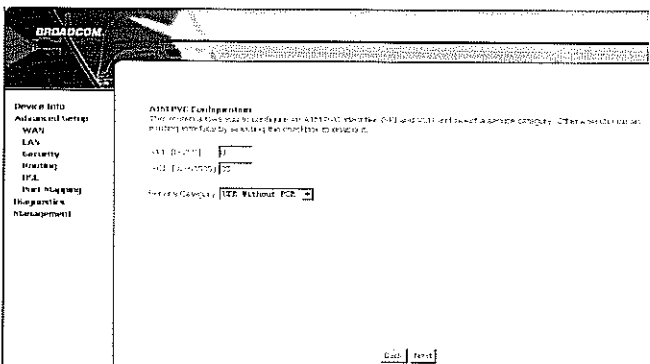
PPPoE is also named as RFC 2516. It is a method of encapsulating PPP packets over Ethernet. PPP or Point-to-Point protocol is a method of establishing a network connection/session between network hosts. It usually provides a mechanism of authenticating users.

To configure the MODEM for PPPoE:

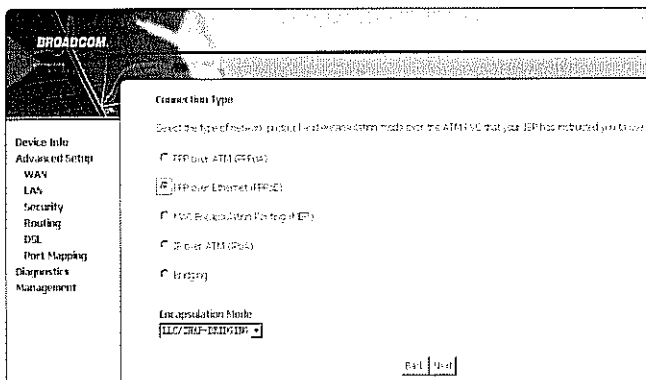
1. From the Home page, click on "Advanced Setup ", see the following:



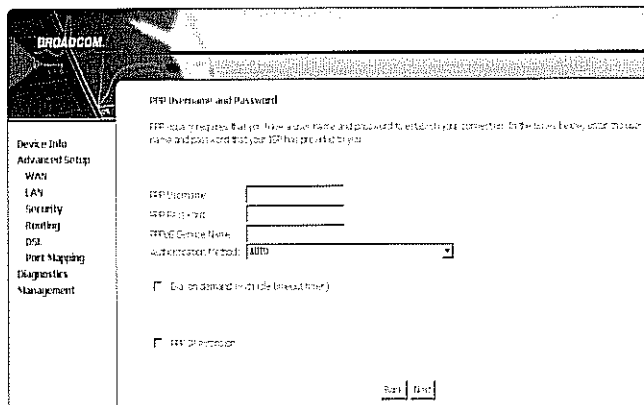
2. Click the "Edit" button to configure an ATM PVC identifier, set any PVC channel, see the following:



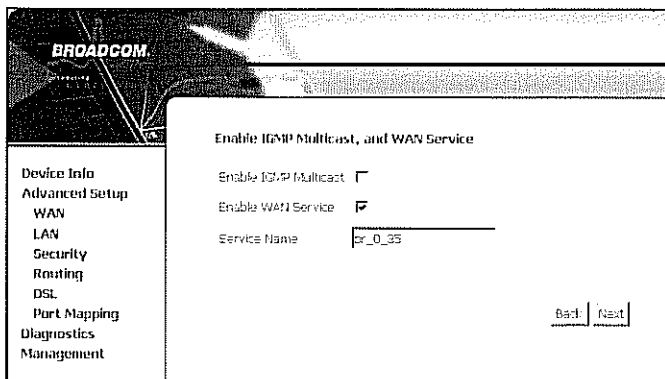
3. Click the "Next" button , select the type of network protocol and encapsulation mode PPP over Ethernet that your ISP has instructed you to use, see the following:



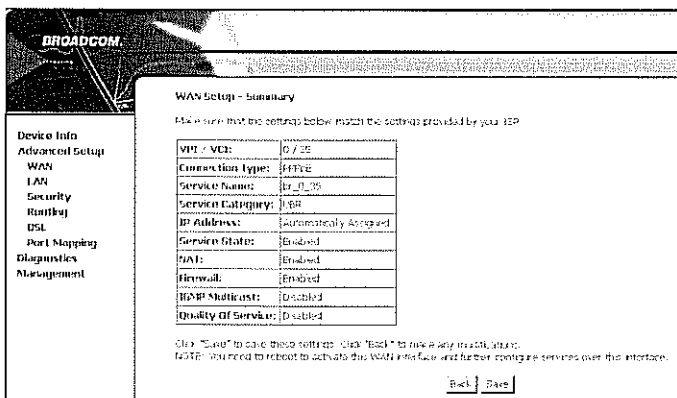
4. Click the "Next" button ,type the PPP Username and Password which get from your ISP, see the following:



5. Click the "Next" button , select the check box below to enable this WAN service, see the following:



6. Click the "Next" button, make sure that the settings below match the settings provided by your ISP. see the following:



7. Click on the "Save" button, save your configurations, then click the "Save/Reboot" to save it permanent and finish the Setting for PPPoE.

PVC Configuration

Open IE or Netscape Web browser, Input `http://192.168.1.1` (MODEM default IP address) in the address column, then click <ENTER> button, access the following setting interface:

Input user name and password, then click **Login** key to enter WEB setting interface.

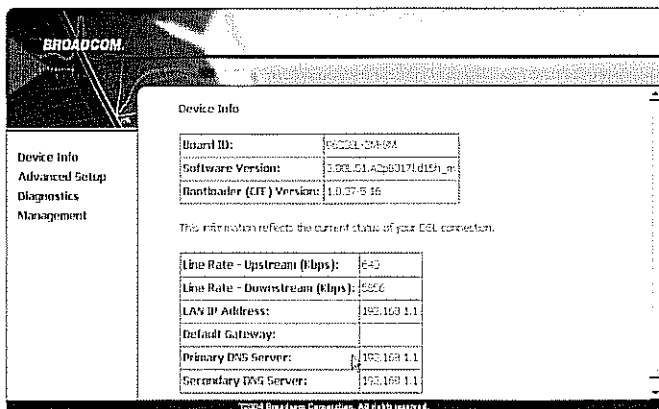
Default setting:

IP Address: **192.168.1.1**

Subnet Mask: **255.255.255.0**

User name/Password: **admin/admin**

1. After type right user name and password, the following window will display:



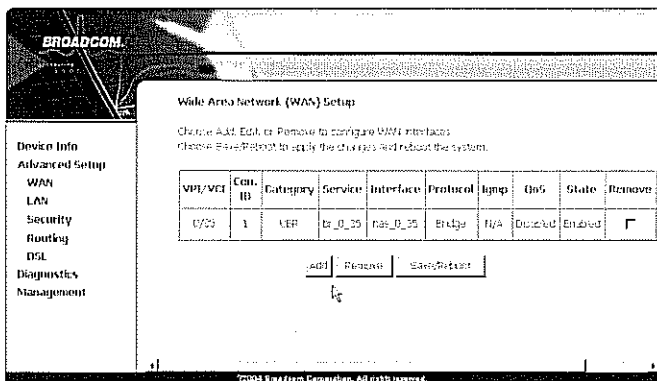
The screenshot shows the Broadcom modem web interface. On the left is a navigation menu with options: Device Info, Advanced Setup, Diagnostics, and Management. The main content area is titled "Device Info" and contains two tables. The first table lists hardware and software details, and the second table lists connection parameters. Below the tables is a note: "This information reflects the current status of your DSL connection." At the bottom of the interface, it says "©2004 Broadcom Corporation. All rights reserved."

Board ID:	86020L-02A-00M
Software Version:	3.09L.01.A260171d15h_m
Flashloader (JIT) Version:	1.0.07.5.16

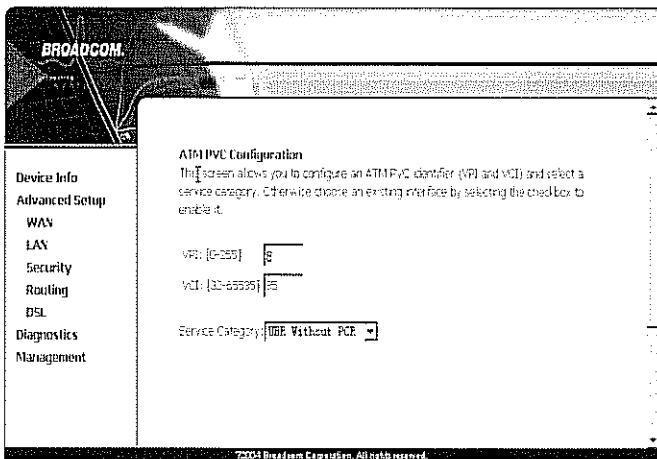
This information reflects the current status of your DSL connection.

Line Rate - Upstream (Kbps):	640
Line Rate - Downstream (Kbps):	6556
LAN IP Address:	192.168.1.1
Default Gateway:	
Primary DNS Server:	192.168.1.1
Secondary DNS Server:	192.168.1.1

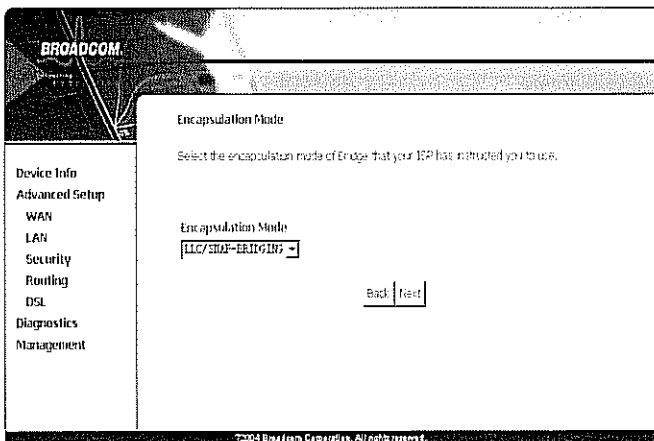
2. Click "Advanced Setup" button, and see the following:



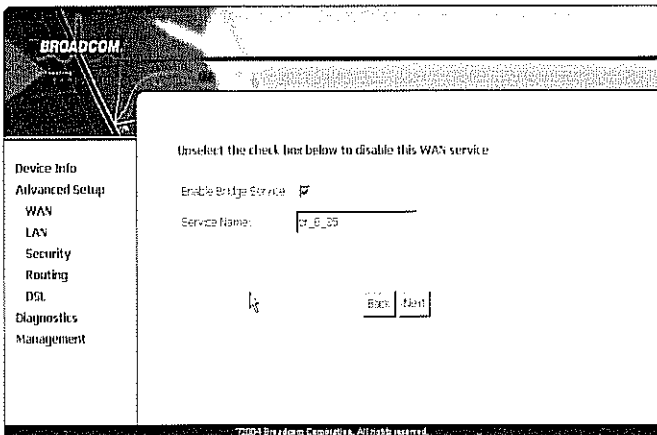
3. If the PVC which provide by your ISP vendor doesn't match with VPI/VCI :0/35, you can set another PVC , click on "Add" button, see the following, and type the PVC(For example, VPI/VCI:8/35) which get from your ISP vendor:



4. Click on "Next" button, and see the following:



5. Don't change anything, and click on "Next" button:



6. Then, click on "Next" button, and see the following:

BROADCOM

WAN Setup - Summary

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

VPI / VCI:	8 / 35
Connection Type:	Bridge
Service Name:	br_8_35
Service Category:	USB
IP Address:	Not Applicable
Service State:	Enabled
NAT:	Disabled
Firewall:	Disabled
IGMP Multicast:	Not Applicable
Quality Of Service:	Disabled

© 2004 Broadcom Corporation. All rights reserved.

7. Click on the "Save" button, and see the following:

BROADCOM

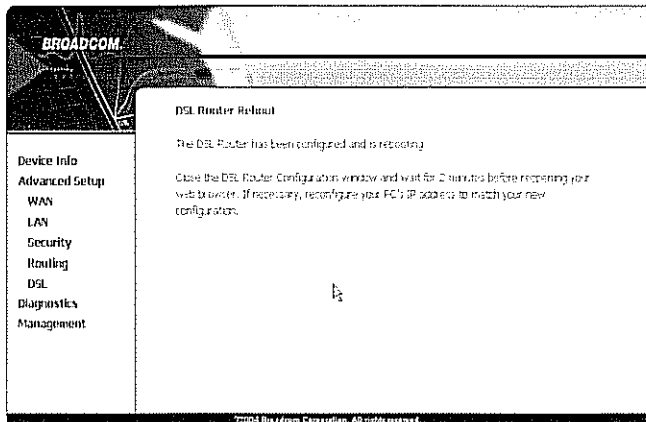
Wide Area Network (WAN) Setup

Choose Add, Edit, or Remove to configure WAN interfaces.
Choose Save/Reboot to apply the changes and reboot the system.

VPI / VCI	Con. ID	Category	Service	Interface	Protocol	Igmp	QoS	State	Remove
0/35	1	USB	br_0_35	nas_0_35	Bridge	N/A	Disabled	Enabled	<input type="checkbox"/>
8/35	1	USB	br_8_35	nas_8_35	Bridge	N/A	Disabled	Enabled	<input type="checkbox"/>

© 2004 Broadcom Corporation. All rights reserved.

8. Now you will see another PVC in the list, then click on "Save/Reboot", and see the following, you have added another PVC successfully.



Chapter 4 Questions & Answers

1. Question: Why all LED indicators are off?

Answer:

- Check the connection between the power adaptor and the power socket
- Check the power switch is on or not

2. Question: Why LAN LED is not lighting?

Answer:

- Check the connection between the ADSL modem and your computer or Hub/Switch;
- Check your PC or Hub/Switch running status and make sure them are working normally.

3. Question: Why DSL LED is not lighting?

Answer: Check the connection between the ADSL "line" port and the wall jack.

4. Question: Why cannot visit Internet with DSL LED is on?

Answer: Make sure following information has been input correctly:

VPI/VCI

User/password.

5. Question: Why cannot open the Modem configuring web page?

Answer:

Follow below steps to check the communication between the computer and Modem:

Click start -> run (input ping demands)-> Ping 192.168.1.1 (MODEM IP ADDRESS)

If cannot reach the modem, please check following configuration:

- The connection between the modem and computer
- You computer's TCP/IP configuration

6. Question: How to load the default setting after incorrect configuration?

Answer:

Switch off then press "reset" button and switch on 7s to reset the hardware. The modem will auto restart. This action will recover the modem's default configuration. The modem's default IP address: 192.168.1.1/255.255.255.0

Username/password: admin/admin