



**VDSL2 Modem**

**ALL126AM2 (CO) / ALL126AS2 (CPE) USER'S MANUAL**

Best viewed at full screen.

## VDSL2 Point to Point Solution

**VDSL2** (Very-High-Bit-Rate Digital Subscriber Line 2, ITU-T G.993.2 Standard) is an access technology that exploits the existing infrastructure of copper wires that were originally deployed for [POTS](#) services. It can be deployed from central offices, from fibre-fed cabinets located near the customer premises, or within buildings.

ITU-T G.993.2 VDSL2 is the newest and most advanced standard of [DSL](#) broadband wireline communications. Designed to support the wide deployment of Triple Play services such as voice, video, data, high definition television (HDTV) and interactive gaming, VDSL2 enables operators and carriers to gradually, flexibly, and cost efficiently upgrade existing xDSL-infrastructure.

ITU-T G.993.2 (VDSL2) is an enhancement to G.993.1 [VDSL](#) that permits the transmission of asymmetric and symmetric (Full-Duplex) aggregate data rates up to 200 Mbit/s on twisted pairs using a bandwidth up to 30 MHz.

VDSL2 deteriorates quickly from a theoretical maximum of 200 Mbit/s (Full-Duplex) at 'source' to 100 Mbit/s at 0.3 km (symmetric).

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## **1.Unpacking Information**

### **Check List**

Carefully unpack the package and check its contents against the checklist.

#### Package Contents

- VDSL2 Modem (ALL126AM2 (CO) / ALL126AS2 (CPE))
- Two plastic feet
- User's Manual
- AC to DC 12V Power Adapter
- RJ-45 cable
- RJ-11 cable

Please inform your dealer immediately for any missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use them to repack the unit in case there is a need to return for repair.

## **2. Installation**

### **Hardware Installation**

This chapter describes how to install the ALL126AM2/AS2 and establishes network connections. You may install the ALL126AM2/AS2 on any level surface (e.g, a table or shelf). However, please take note of the following minimum site requirements before you begin.

#### **2.1 Pre-installation Requirements**

Before you start actual hardware installation, make sure you can provide the right operating environment, including power requirements, sufficient physical space, and proximity to other network devices that are to be connected. Verify the following installation requirement:

- Power requirements: DC12V/1A or above.
- The ALL126AM2/AS2 should be located in a cool dry place, with at least 10cm/4in of space at the front and back for ventilation.
- Place the ALL126AM2/AS2 out of direct sunlight, and away from heat sources or areas with a high amount of electromagnetic interference.
- Check if network cables and connectors needed for installation are available

## General Rules

Before making any connections to the ALL126AM2/AS2, note the following rules:

- Ethernet Port (RJ-45)

All network connections to the Modem Ethernet port must be made using Category 5 UTP for 100Mbps;

Category 3,4 UTP for 10Mbps.

No more than 100 meters of cabling may be use between the MUX or HUB and an end node.

- Phone Port (RJ-11)

All Phone set connections to the RJ-11 Port made using 24~26 Gauge phone wiring.

## Connecting the ALL126AM2/AS2

The ALL126AM2/AS2 can be controlled by a PC, henceforth, called the "Control PC". For this purpose, you need a PC with an Ethernet network interface and a DB-9 RS232 serial interface. Two programs are required: A Web browser is mandatory and a terminal program should be available optionally.

The board has several connectors.

- 4 Ethernet RJ45 jacks (connect LAN devices to route); the Auto MDIX feature of the ports switches automatically between MDI and MDI-X (MDI = Media Dependant Interface), therefore straight Ethernet cables can be used.
- 2 x RJ11 jack (LINE Port is for connects VDSL client side to Line Interface, Phone port is for connects phone set or FAX machine)
- 1 x Console port (monitoring, access to operating system via shell for firmware downloads, starting drivers and web etc.,)
- 1 Power Supply (as described above)

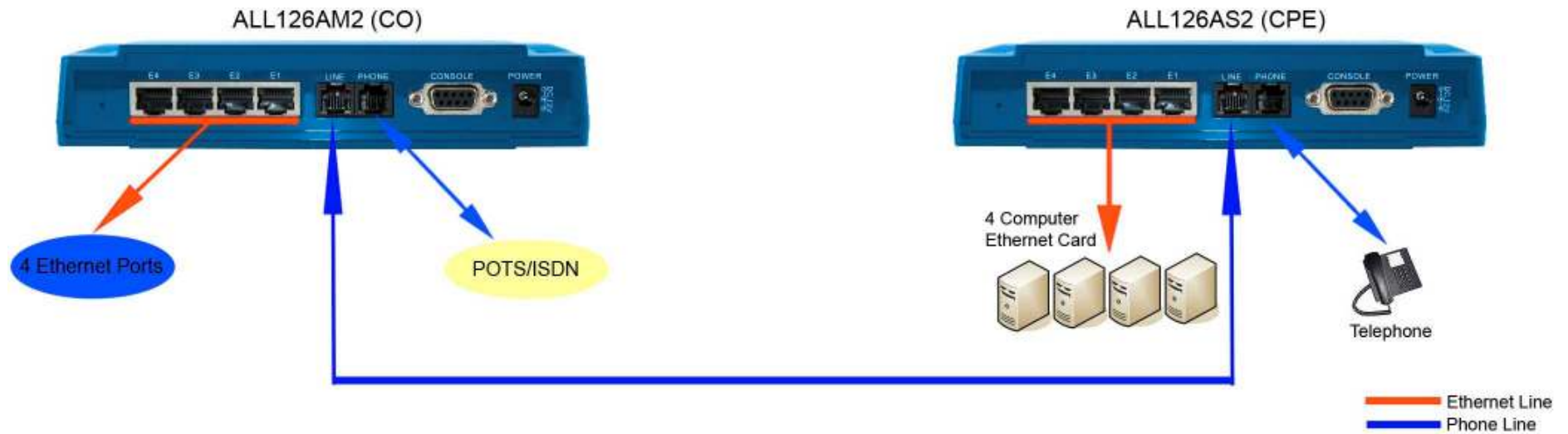


Figure 2.1 VDSL2 Point to Point application

### 3. Hardware Description

This section describes the important parts of the ALL126AM2/AS2. It features the front indicators and rear connectors.

#### Front Indicators

The following figure shows the front panel.

Figure Chapter 3.1 ALL126AM2



Figure Chapter 3.2 ALL126AS2



Six LED indicators.

At a quick glance of the front panel, it will be easy to tell if the modem has power, signal from its Ethernet RJ-45 port or there is phone line signal RJ-11port



## **Front Indicators**

LED Description and Operation

The Modem has three LED indicators.

<b>LEDs</b>	<b>Status</b>	<b>Descriptions</b>
PWR (Ready LED)	Steady Green	It will light up (ON) to show that the product is power good, and system reset OK.
E1~E4 (Ethernet LED)	Steady Green Flashing (LINK/ACT)	Each RJ-45 station port on the Ethernet is assigned an LED light for monitoring port "Good Linkage". LED is normally OFF after the power on operation, but will light up steadily to show good linkage and flashing to show data transmission.
Link (VDSL LED)	Steady Green	RJ11 station port on the VDSL is assigned an LED light for monitoring port "Good Linkage". LED is normally OFF after the power on operation, but will light up steadily to show good linkage.

## **Rear Panel**

The following figure shows the rear connectors

**Figure Chapter 3.3 Rear Connectors**



### **ALL126AM2/AS2 Rear Connectors**

<u>Connectors</u>	<u>Description</u>	<u>Type</u>
Line	For connecting to the VDSL Modem Using a RJ-11 cable	RJ-11
Phone	For connecting to the telephone or Fax/ISDN modem	RJ-11
E1~E4	For connecting to a Ethernet equipped device	RJ-45
Console port	For connecting to PC with RS-232 serial port over a D-SUB Cable	RS-232

## **Power On**

1. Check the adapter is properly connected.
2. Verify the power LED is steadily on.

## **4. Setup the ALL126AM2/AS2 by Web Browser**

The ALL126AM2/AS2 provides a built-in web browser. You can use Web browser to configure the ALL126AM2/AS2. First please input the IP address [192.168.16.249](#) (ALL126AM2 (CO)) and [192.168.16.250](#) (ALL126AS2 (CPE)) in the Web page.

### **4.1 Login.**

The password is "admin".

A screenshot of a web browser login dialog box. The dialog has a black title bar with the text "LOGIN PASSWORD" in white. Below the title bar, the word "Password:" is displayed in blue text next to a white text input field. At the bottom of the dialog, there are two buttons: "LOGIN" and "CANCEL", both with a light beige background and black text.

Figure 4.1 Login

## 4.2 Setup Wizard

There is a simple Setup Wizard for end users and an Advanced Setup Menu.

You have to run the Setup Wizard on both VDSL2 Modems to configure the VDSL2 Connection

### 4.2.1 Host & Domain Name

Configure Host Name and Domain Name on the ALL126AM2 and the ALL126AS2

The screenshot shows the 'Setup Wizard' interface for a Mastermodem. At the top, a navigation bar includes links for SYSTEM, WAN, LAN, NAT, FIREWALL, ROUTE, UPNP, VDSL2, SUPPORT, and Setup Wizard. On the left, a sidebar lists system management options: Administrator Setting, Firmware Upgrade, Device Mode, System Status, System Log, Reboot, and Reset System. The main content area is titled '1. Host Settings' and features four radio buttons: '1. Host Settings' (selected), '2. WAN Type', '3. WAN Settings', and '4. DNS'. Below these, there are two input fields: 'Host Name' with the value 'VDSL2\_CO\_master' and 'Domain Name' with the value 'allnet.de'. A note at the bottom states: 'Enter the unique host name for the , and the domain name of your organization.'

Figure 4.2.1 Mastermodem configuration

The screenshot shows the 'Setup Wizard' interface for a Clientmodem. It has the same navigation bar and sidebar as the Mastermodem configuration. The main content area is also titled '1. Host Settings' with the same four radio buttons, where '1. Host Settings' is selected. The 'Host Name' input field contains 'VDSL2\_CPE\_client' and the 'Domain Name' input field contains 'allnet.de'. The same note at the bottom is present: 'Enter the unique host name for the , and the domain name of your organization.'

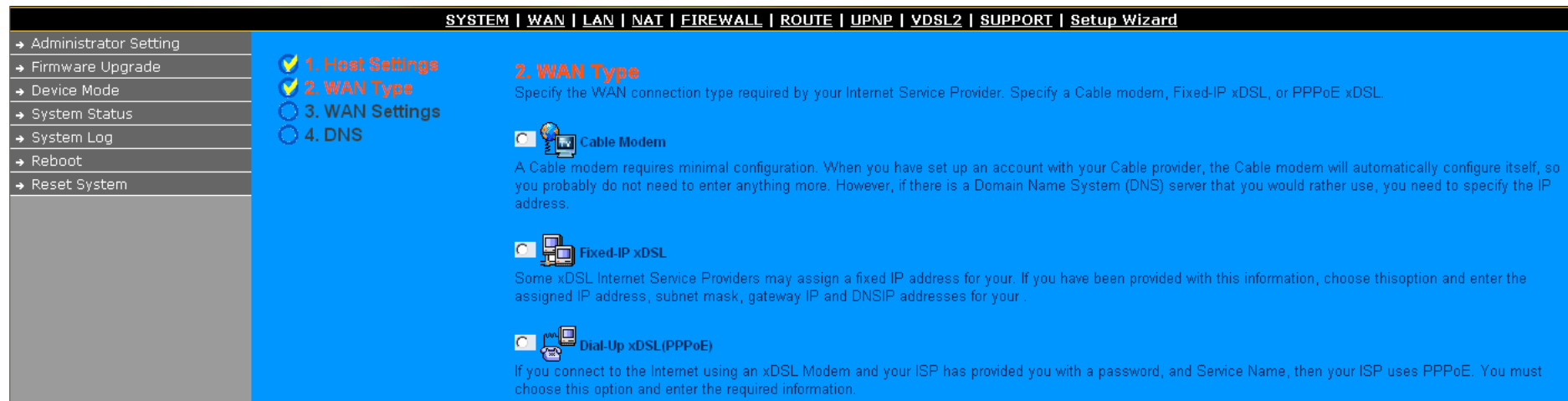
Figure 4.2.2 Clientmodem configuration

## 4.2.2 WAN Type

In this Menu you can configure the WAN Type on the ALL126AM2/AS2.

The following Connectionstypes can be selected:

- Cable Modem
- Fixed-IP xDSL
- Dial-UP xDSL (PPPOE)



**Figure 4.2.3 WAN Type**

### 4.3 Select LAN

The menus below will not be used very often. But when connecting the ALL126AM2/AS2 to a new control PC, you may want to go through the following steps in order to make the IP address previously set by ifconfig in the terminal console permanent. Or on some later occasion you may want to change it again without using the console. Then the menu below will help you too. In order to set the IP address, click on “LAN Settings”.



Figure 4.3 LAN menu

#### 4.3.1 Select LAN Settings and set the IP Address

The form below is used to change the IP address of the LAN port “adm0” in the ALL126AM2/AS2.

- The proposed IP address either is the default address of adm0 or it is the address changed by an ifconfig command via the shell running in the terminal.
- The Subnet Mask display can be ignored.
- In case the DHCP checkbox is checked, some additional data and options will be on display (see [Chapter 7.2.4.1](#) on [Page 50](#)). The DHCP server is not required to work with VDSL2 in a lab environment. It is recommended to uncheck the box if it is not unchecked already.

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

→ LAN Settings  
→ DHCP Client List  
→ LAN Switch Port Setting  
→ LAN Port Status

### LAN Settings

You can enable DHCP to dynamically allocate IP addresses to your client PCs.

IP Address: 192 168 16 249

Subnet Mask: 255 255 255 0

The Gateway acts as DHCP Server ☐ Enable

Figure 4.3.1 LAN Settings

Now the IP address either may be changed or left as it is. If it has been changed in the form or after it has been changed using the ifconfig command via the shell running in the terminal, it needs to be stored permanently Hit the “APPLY” button in order to make the displayed IP address new default address.

#### 4.3.2 Restart the Settings Dialog

After the “APPLY” button has been hit, the displayed IP address “adm0” port will be stored in a non volatile memory on the ALL126AM2/AS2. Also, the Ethernet link between the control PC and the ALL126AM2/AS2 will be re-initialized – even if the IP address has not been changed. Refresh the display of the HTTP browser running on the control PC and login again.



Figure 4.4.2 Login after Storing the IP Address as Default Value

The ALL126AM2/AS2 now is prepared to be controlled by the control PC.



## 5. Building a VDSL2 System

First a quick overview over a complete setup:

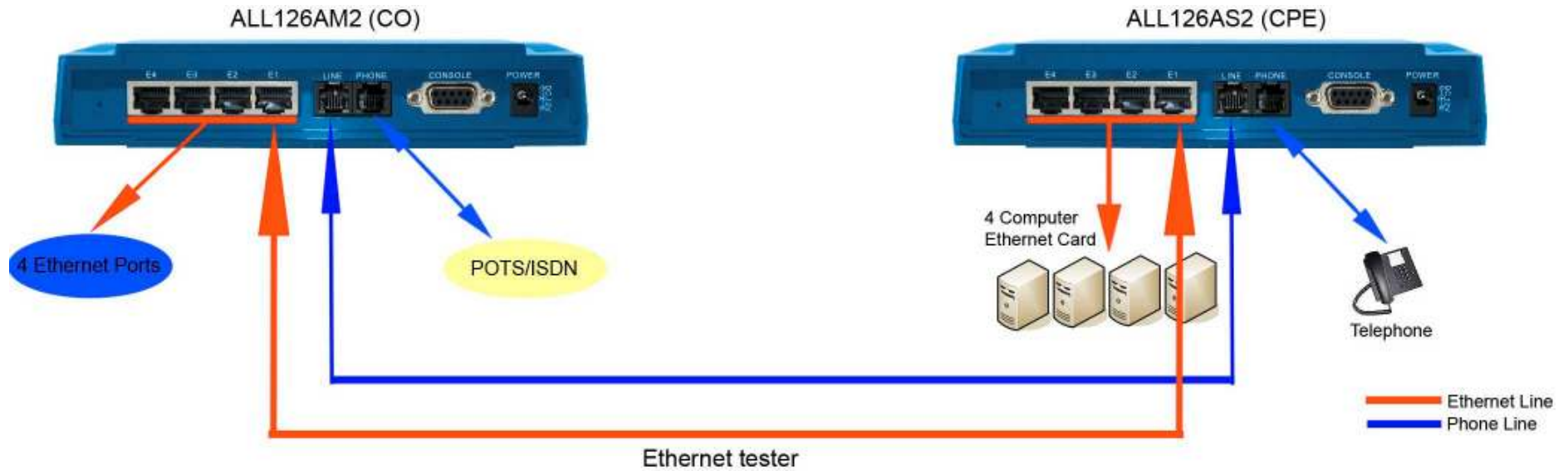


Figure 5 VDSL2 Application

### **5.1 Connect the ALL126AM2 (CO) and the ALL126AS2 (CPE) to the Line**

The objective for VDSL2 is passing data over a twisted pair cable at high speed. In the setup, either such a cable connects the ALL126AM2 (CO) and the ALL126AS2 (CPE), or a line simulator or any other hardware representation of a cable network, with or without noise injection and crosstalk simulations.

### **5.2 Connect the ALL126AM2 (CO) and the ALL126AS2 (CPE) to LAN Devices**

In the setup, usually a Ethernet tester serves as representation of the LAN side as well as representation of the WAN side.

### **5.3 Run Demos and Tests**

The Ethernet tester may send data downstream as well as upstream. It also receives the data in order to check the integrity of the data transmission.

Different data rates can be tested under different line conditions.

## **6. Operating the VDSL2 System**

After the VDSL2 system has been set up, you may want to configure the settings which are related to VDSL2.

Configuration of operation modes, test modes (loop back) and the display of status information is supported by an graphical user interface.

### **6.1 Configuration Settings**

Configure and start the ALL126AM2 (CO) and the ALL126AS2 (CPE)

- Configuration: As a minimum configuration, usually selecting the bandplan is required.  
See [Chapter 6.1.3, Profile Configuration](#).
- Next, both sides should be activated from the web interface.  
See [Chapter 6.1.6, Line Activation](#)
- The connection status of the link can be monitored.  
See [Chapter 6.2.1, Line Status](#)

### 6.1.1 Channel Configuration

This function is for setting VDSL channel. Click on VDSL 2 and then on Channel config

Figure 6.1.1 Channel Configuration Menu

#### Channel Configuration Settings

Setting	Description
Channel Number	To which bearer channel number shall the settings apply? •Channel 0
Direction	To which direction shall the settings apply? •Upstream •Downstream
Min Data Rate	Minimum Payload Data Rate
Max Data Rate	Maximum Payload Data Rate
Max Int Delay	Maximum Interleaver Delay

Note: **The Reboot is needed for saving the new settings.**

### 6.1.2 Line Configuration

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

→ Channel Config  
→ Line Config  
→ Profile Config  
→ Bands Config  
→ LoopBack  
→ Activate/Deactivate  
→ Line Status  
→ Channel Status  
→ Version Info  
→ SNR Graph  
→ Bits Graph

### Line Config

Direction Upstream

Target SNRM 6.000000 dB

HELP APPLY CANCEL

Figure 6.1.2 Line Configuration Menu for SNR Margin Selection

#### Line Configuration

Setting	Description
Direction	Select the target direction.
Target SNRM	Set the required SNR Margin *10 (60=6dB)

### 6.1.3 Profile Configuration

For this function, ALL126AM2/AS2 provides world wide telecom standard band plan, such as meet European telecom standard band plan 998(17a), USA telecom standard band plan 997(8a, 8b) and Janpan Telecom standard band plan (30a) etc.

Annex A specifies bandplans for the North American region and enables ALL126AM2/AS2 to be deployed with traditional POTS telephony or in an all-digital mode. Annex B specifies bandplans for Europe and enables ALL126AM2/AS2 deployment with underlying POTS and ISDN services. Annex C allows ALL126AM2/AS2 to coexist with TCM-ISDN services, found primarily in Japan.

ALL126AM2/AS2 has numerous configuration profiles and bandplans to meet regional service provider requirements.

The frequency bandwidth has increased to 30 MHz, with configuration options at 8.5 MHz, 12 MHz, 17.7 MHz and 30 MHz.

**Note :** Please deactivate then activate once when any band profile is being changed. This version does not support ADSL band profile, but will support that in the near future.

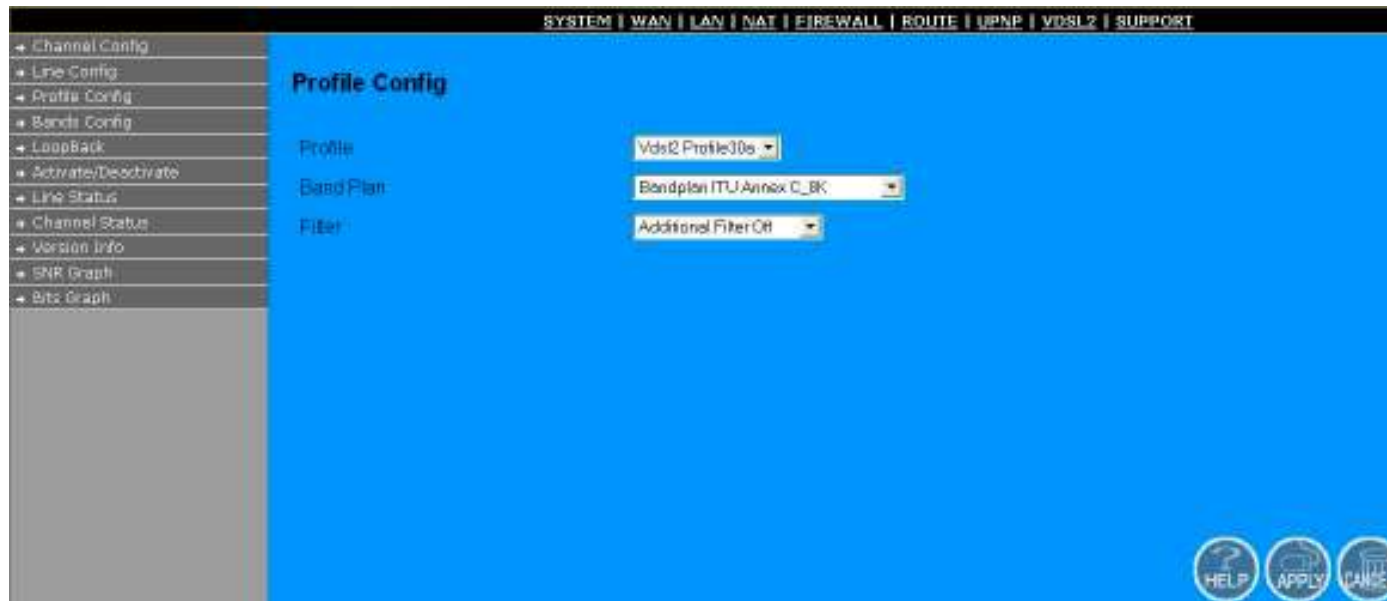


Figure 6.1.3 Profile Configuration

#### 6.1.4 Band Configuration

This function is for setting tones for each band.



Figure 6.1.4 Band Configuration

### 6.1.5 Loop Back

The loop back testing function for checking phone wire link problem: 1. System Loop 2. Line Side Loop

The screenshot displays the VDSL2 Modem web interface. At the top, a navigation bar contains the following tabs: SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT. On the left side, a vertical menu lists various configuration options: Channel Config, Line Config, Profile Config, Bands Config, LoopBack, Activate/Deactivate, Line Status, Channel Status, Version Info, SNR Graph, and Bits Graph. The 'LoopBack' option is selected, and the main content area is titled 'Loop Back'. This area contains three settings, each with a dropdown menu: 'Channel Number' is set to 'Channel0', 'Loop' is set to 'System - System Loop', and 'State' is set to 'Deactivate'. In the bottom right corner of the main content area, there are three circular icons: a question mark for 'HELP', a circular arrow for 'APPLY', and a trash can for 'CANCEL'.

Figure 6.1.5 Loop Back Activation/Deactivation Menu

#### Loop Back

Setting	Description
Channel Number	To which bearer channel number shall the settings apply? •Channel 0



### 6.1.6 Line Activation

This function is for enable/disable VDSL2 port.



Figure 6.1.6 Activation and Deactivation of the Line

#### Line Activation/Deactivation

Setting	Description
Line	Activate or deactivate the line. (Select the activity and the press the APPLY button.)

## 6.2 Status Displays

### 6.2.1 Line Status

This function provides SNR value for checking phone wiring quality.

→ Channel Config

→ Line Config

→ Profile Config

→ Bands Config

→ LoopBack

→ Activate/Deactivate

→ Line Status

→ Channel Status

→ Version Info

→ SNR Graph

→ Bits Graph

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

Line Status

Status of the Line.

	Upstream	Downstream
State	showtime tc sync	showtime tc sync
Band1 Actual SNR	7.600000 dB	10.300000 dB
Band2 Actual SNR	6.700000 dB	8.900000 dB
Band3 Actual SNR	10.900000 dB	9.500000 dB
Band4 Actual SNR	-3276.800049 dB	-3276.800049 dB
Band5 Actual SNR	-3276.800049 dB	-3276.800049 dB

Figure 6.2.1 Line Status Display: Actual SNR

The following status messages may occur: not\_initialized, exception, idle request, idle, silent request, silent, handshake, full init, discovery, training, analysis, exchange, showtime no sync, showtime tc sync, fast retrain, lowpower l2, loopdiagnostic, loopdiagnostic complete, resync, test, lowpower l3, unknown

### 6.2.2 Channel Status

This function show VDSL2 port status.

→ Channel Config

→ Line Config

→ Profile Config

→ Bands Config

→ LoopBack

→ Activate/Deactivate

→ Line Status

→ Channel Status

→ Version Info

→ SNR Graph

→ Bits Graph

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

Channel Status

Status of the bearer .

Channel Number	<div>Channel0 ▾</div>	
	Upstream	Downstream
Actual Data Rate	102392 kbps	102392 kbps
Actual Interleave Delay	0.000000 ms	0.000000 ms
Total CRC Count	0	0
Total FEC Count	0	0
Actual INP	0.000000 Symbols	0.000000 Symbols

Figure 6.2.2 Channel Status Display: Data Rate, Delay, Error Counters and Impulse Noise Protection

### 6.2.3 Version Info

This function show hardware and firmware version.

→ Channel Config

→ Line Config

→ Profile Config

→ Bands Config

→ LoopBack

→ Activate/Deactivate

→ Line Status

→ Channel Status

→ Version Info

→ SNR Graph

→ Bits Graph

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

Version Info

Version Numbers.

Web Interface Version	B.9.4a
DSL API Library Version	1.4.6.1
Chip Set FW Version	9.5.3.15.0.2
Chip Set HW Version	VINAX-DFE_V1.3_mono_reticle
DSL Driver Version	0.1.0.2

Figure 6.2.3 Display of Version Data

#### 6.2.4 SNR Graphs

When ALL126AM2 (CO) link with ALL126AS2 (CPE), this graph will show the SNR value for each band.

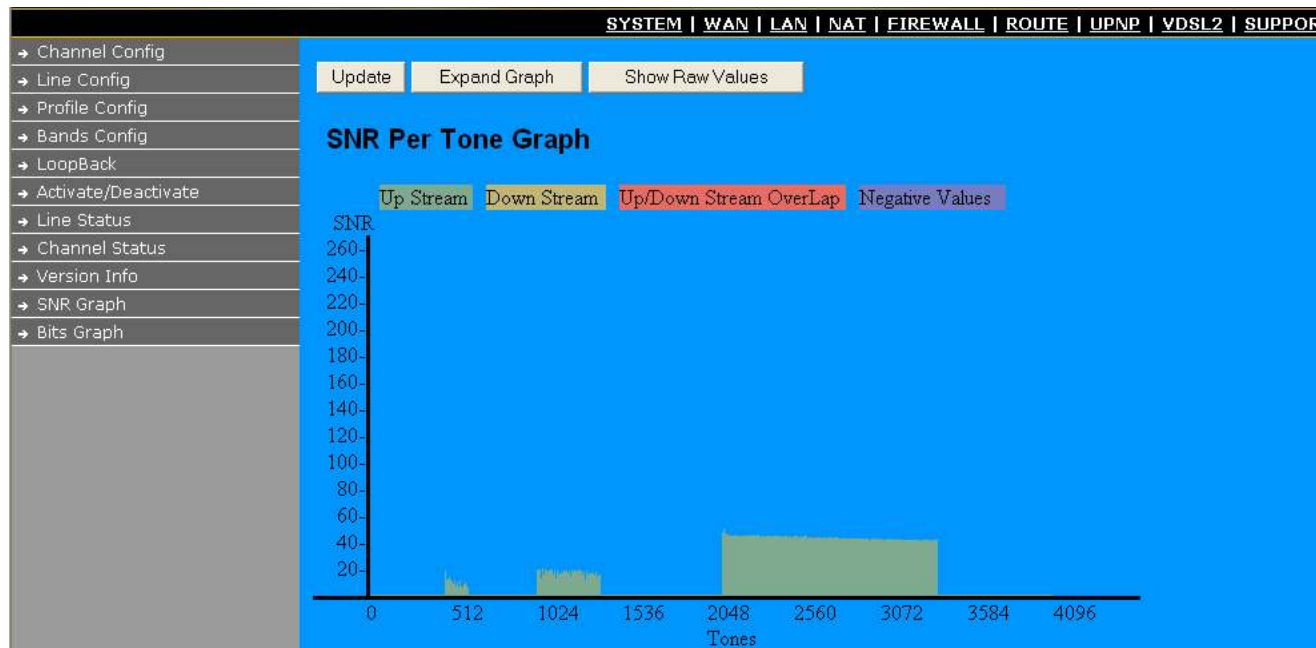


Figure 6.2.4 Display of SNR per Carrier

## **7. Configuration Interface of the Router**

This section explains how to configure the router section of the ALL126AM2/AS2 using its web-based configuration.

The parts of the circuitry as well as the router configuration menu has been ported from that of the reference kit to the ALL126AM2/AS2 reference board. As for the menu, There are only a few differences:

- The “adm1” port now is the port to the VDSL2 side. The port on the LAN is “adm0”. It supports four Ethernet connections.
- The IP addresses are used in this chapter are different from the examples in the previous chapters.
- The password used in this chapter is different from the examples in the previous chapters.
- The ALL126AM2/AS2 of course has no menu option for VDSL settings. The ALL126AM2/AS2 Series has a VDSL menu which is described in [Chapter 6](#). Also the entry menu ([Chapter 4.2](#)) has different “looks” tailored to the ALL126AM2/AS2.

### **7.1 Logging on to the ALL126AM2/AS2**

To log on to the ALL126AM2/AS2 Web Application, you must have a valid password. The Administrator creates the log on user with its password. When you log on to the ALL126AM2/AS2 Web Application, the USER LOGIN window is displayed as shown in [Figure 7.1](#).



Figure 7.1 ALL126AM2/AS2 Web Application

In the USER LOGIN window:

1. Enter the password in the Password text box. For an Admin user, the default password is “admin”.
2. Click LOGIN to begin the configuration or click CANCEL in the USER LOGIN window to cancel this log on operation.

## **7.2 Configuration Menu for Administrators**

This chapter is only for Administrators.

The Homepage is the first screen displayed when a user logs on to the ALL126AM2/AS2 Web Application.

The ALL126AM2/AS2 Web Application is categorized into two modules:

Advanced Setup — Advanced setup features allow the user to configure all the functions that are supported by the ALL126AM2/AS2 like Firewall, routing, UPnP.

### 7.2.1 Home Setup

The following configuration options are displayed in the top navigation bar, as shown in [Figure 7.2.1](#):

- System
- WAN
- LAN
- NAT
- Firewall
- Route
- UPnP
- vdsl2



Figure 7.2.1 Advanced Setup



### 7.2.2 System

The System link can be viewed in the left navigation bar. The following are the options available under System, as shown in [Figure 7.2.2](#) :

- Administrator Settings
- Firmware Upgrade
- Device Mode
- System Status
- System Log
- Reboot
- Reset System



Figure 7.2.2 System in the Left Navigator Bar

### 7.2.2.1 Administrator Settings

To add a user or change user's password, click on the Administrator Settings link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.2.1](#).

The screenshot shows a web interface for the VDSL2 Modem. At the top, there is a navigation bar with links: SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT. On the left side, there is a sidebar with a list of settings: Administrator Setting, Firmware Upgrade, Device Mode, System Status, System Log, Reboot, and Reset System. The main content area is titled "Administrator Settings" and contains the following text: "Set a password to restrict management access to the . If you want to manage the from a remote location (outside of the local network), you must also specify the IP address of the remote PC." Below this text, there are four input fields: "Current Password", "Password", "Re-type password" (with a note "(3-12 Characters)"), and "Auto-Logout Time" (with a value of "30" and a note "Min (Auto-Logout Time, at least >= 1 Min)").

SYSTEM   WAN   LAN   NAT   FIREWALL   ROUTE   UPNP   VDSL2   SUPPORT	
→ Administrator Setting	<b>Administrator Settings</b>  Set a password to restrict management access to the . If you want to manage the from a remote location (outside of the local network), you must also specify the IP address of the remote PC.  Current Password <input type="text"/>  Password <input type="text"/>  Re-type password <input type="text"/> (3-12 Characters)  Auto-Logout Time <input type="text" value="30"/> Min (Auto-Logout Time, at least >= 1 Min)
→ Firmware Upgrade	
→ Device Mode	
→ System Status	
→ System Log	
→ Reboot	
→ Reset System	

Figure 7.2.2.1 Administrator Settings Configuration

While adding a user, each user must be assigned a separate port. Hence the number of users that can be added to the system depends on the number of ports available on the ALL126AM2/AS2.

The screen contains the following details:

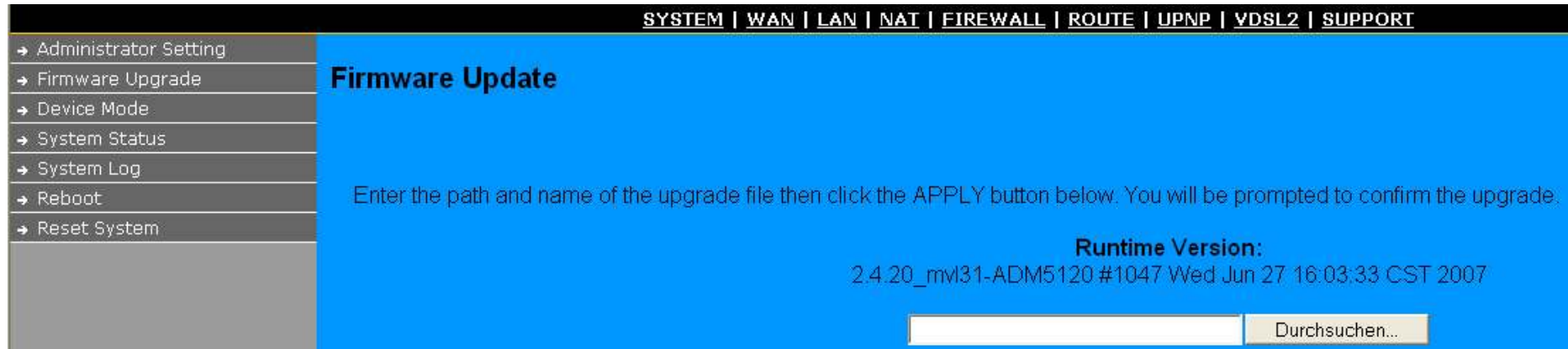
Fields in User Setting

Field	Description
Current Password	This is the password associated with the administrator. This is enabled only for the user Administrator login.
Password	This is the password of the login administrator.
Re-type Password	This is the password verification.
Auto-Logout Time	The auto-logout time, at least one minute.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

### 7.2.2.2 Firmware Upgrade

To update the system firmware, click on the Firmware Upgrade link in the left navigation bar. A screen is displayed as shown in 7.2.2.2



The screenshot shows a web interface for a VDSL2 modem. At the top, there is a navigation bar with links: SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT. On the left side, there is a sidebar with a list of menu items: Administrator Setting, Firmware Upgrade, Device Mode, System Status, System Log, Reboot, and Reset System. The main content area has a blue background and is titled "Firmware Update". Below the title, there is a text instruction: "Enter the path and name of the upgrade file then click the APPLY button below. You will be prompted to confirm the upgrade." Below this text, there is a section for "Runtime Version:" which displays "2.4 20\_mv131-ADM5120 #1047 Wed Jun 27 16:03:33 CST 2007". At the bottom right, there is a text input field and a button labeled "Durchsuchen..." (Search).

Figure 7.2.3.5 Firmware Update

The screen contains the following detail:

- Click Browse to select a specified file name to change the File Name.
- Click APPLY to start the firmware update.

### 7.2.2.3 Device Mode

The ADM5120 network processor used in the reference system is able to act as either a switch or a router. Clicking on Device Mode on the left navigation bar allows the user to change the mode of operation, as shown in the following figure.

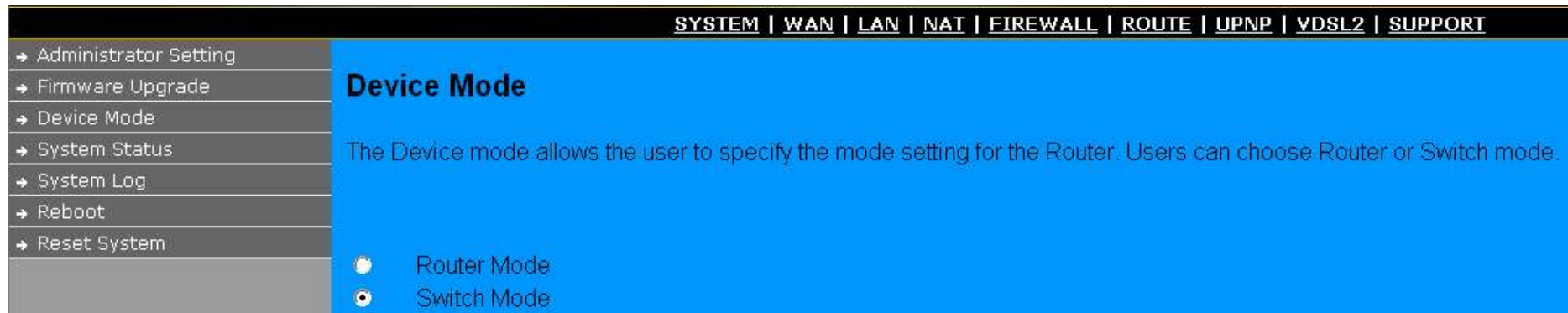


Figure 7.2.2.3 Device Mode

#### 7.2.2.4 System Status

To view system status, click on the System Status link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.2.4](#)

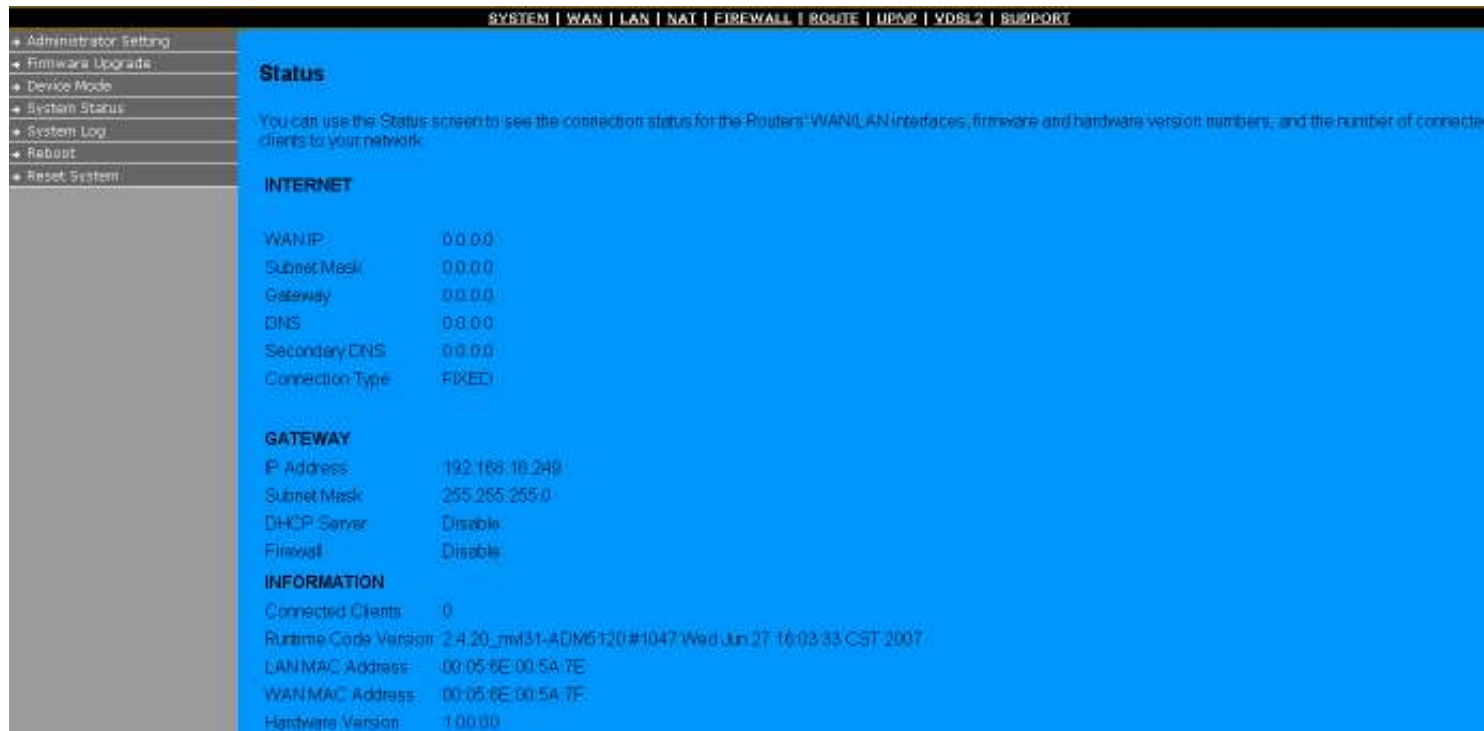


Figure 7.2.3.6 Status Window

This screen displays the status of certain important system parameters. It also offers control over the current DHCP lease for the IP Address.

- Click Release to release IP Address for the WAN interface.

- Click Renew to renew the IP Address for the WAN interface.

#### 7.2.2.5 System Log

To view the system logs, click on the System log link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.2.5](#).

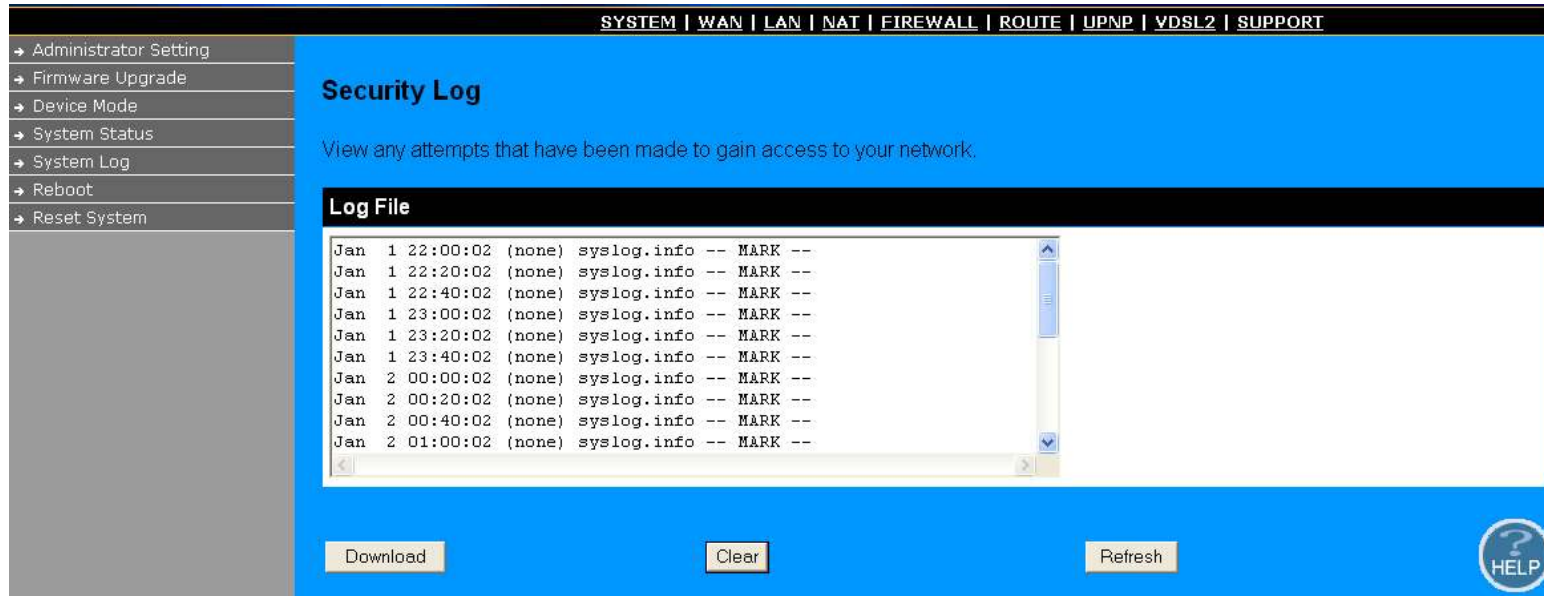


Figure 7.2.2.5 Security Logs

The screen contains the following details:

#### Fields in Security Logs

Field	Description
Log File	This lists all the system events.

- Click Download to download the log file to the computer.
- Click Clear to clear this page.
- Click Refresh to retrieve system event and update the log file.

#### 7.2.2.6 Reboot

To reboot the unit, click on the Reboot link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.2.6](#).

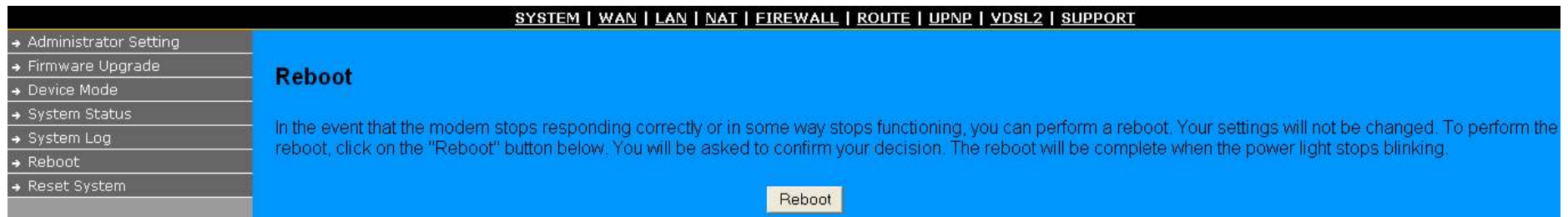


Figure 7.2.2.6 Reboot ALL126AM2/AS2 Modem

- Click Reboot to reboot the unit.

#### 7.2.2.7 Reset system

To reset the system, click on the Reset link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.2.7](#).



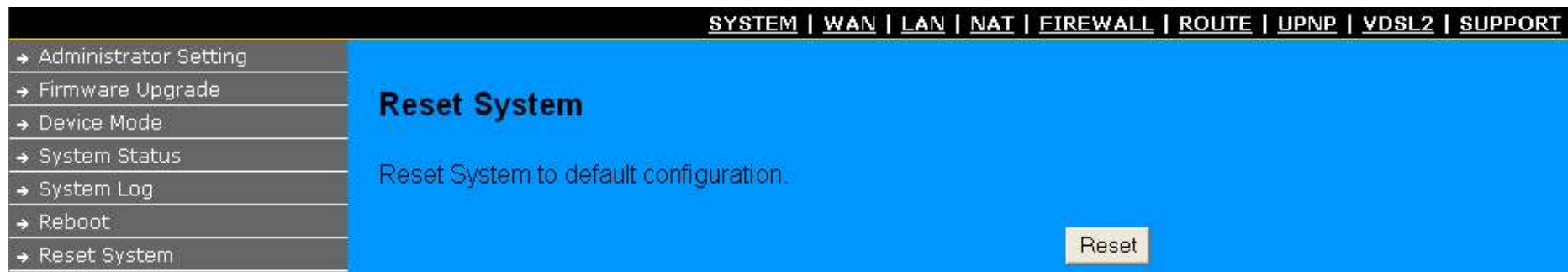


Figure 7.2.2.7 Reset ALL126AM2/AS2 Modem

- Click Reset to restart the system.

### 7.2.3 WAN

The WAN settings can be viewed in the left navigation bar. The following are the options available under WAN, as shown [Figure 7.2.3](#):

- Dynamic IP
- Static IP
- PPPoE
- DNS

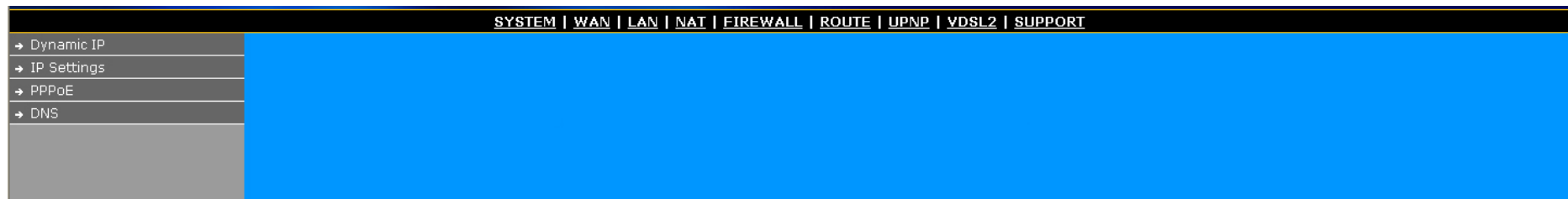


Figure 7.2.3 WAN Setting in Left Navigator Bar

### 7.2.3.1 Dynamic IP

To configure the WAN interface to dynamically obtain an IP Address, click on the Dynamic IP link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.3.1](#).



Figure 7.2.3.1 Dynamic IP Configuration

The screen contains the following details:

- Click APPLY to save the information that has been entered.
- Click CANCEL to exit from this page.

### 7.2.3.2 Static IP

To configure the WAN interface to use a Static IP Address, click on the Static IP link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.3.2](#).

The screenshot shows the 'IP Settings' configuration page. At the top, a navigation bar includes links for SYSTEM, WAN, LAN, NAT, FIREWALL, ROUTE, VPN, VDSL2, and SUPPORT. The left sidebar contains a menu with 'Dynamic IP', 'IP Settings' (selected), 'PPPoE', and 'DNS'. The main content area has a blue background and contains the following text and fields:

**IP Settings:**

If your Service Provider has assigned a fixed IP address, enter the assigned IP Address, Subnet Mask and ISP Gateway Address provided.

IP address assigned by your ISP: [Four input boxes for IP address]

Subnet Mask: [Four input boxes for subnet mask]

ISP Gateway Address: [Four input boxes for gateway address]

Does ISP provide more IP addresses: ☐ Yes

Figure 7.2.3.2 Static IP Configuration

The screen contains the following details:  
Fields in Static IP

Field	Description
IP Address assigned by your ISP	Enter the IP Address of ALL126AM2/AS2.
Subnet Mask	Enter the Subnet Mask of ALL126AM2/AS2.

Fields in Static IP (cont'd)

Field	Description
ISP Gateway Address	Enter the Gateway address of the ALL126AM2/AS2.
Does ISP provide more IP Address	Provides more IP Addresses of the WAN interface. Select the check box to enable this option. A screen is displayed as shown in Figure 41. Click Add to add IP Address and Subnet Mask.

7.2.3.3 PPPoE

To configure the WAN interface to use PPPoE, click on the PPPoE link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.3.3](#).

**PPPoE**

Enter the PPPoE user name and password assigned by your Service Provider. The Service Name is normally optional, but may be required by some service providers. Enter a Maximum Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the defined Maximum Idle Time, then it will be dropped. You can enable the Auto-reconnect option to automatically re-establish the connection as soon as you attempt to access the Internet again...

If your Internet Service Provider requires the use of PPPoE, enter the information below.

User Name

Password

Please retype your password

Service Name

MTU (1400-1492)

Maximum Idle Time  (minutes) ☐ Auto-reconnect

Figure 7.2.3.3 PPPoE Configuration

The screen contains the following details:

Fields in PPPoE

Field	Description
-------	-------------

User Name	Enter a name to use the PPPoE session.
Password	Enter the password of the login user.
Retype Password	Enter the password again to reconfirm.
Service Name	Enter a service name.

Fields in PPPoE (cont'd)

Field	Description
MTU	Enter the maximum connection units of the PPPoE. The MTU range is 1400 to 1492 bytes. By default, it is 1492.
Maximum Idle Time	This is the period of time required to keep the connection alive if no packets are transmitted. If no packets are transmitted between LAN port and WAN port or between ALL126AM2/AS2 and WAN, the connection is disconnected after the 'Maximum idle time'. If the Auto-reconnect check box is selected, the PPP connection is re-established if there is some data that is received from the upper layers to be transmitted on this link.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

#### 7.2.3.4 DNS

To configure the DNS address, click on the DNS link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.3.4](#):

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

→ Dynamic IP  
→ IP Settings  
→ PPPoE  
→ DNS

## DNS

Domain Name Server (DNS) Address

Secondary DNS Address (optional)

Figure 7.2.3.4 DNS Configuration

The screen contains the following details:

Fields in DNS

Field	Description
Domain Name Server(DNS) Address	Enter the DNS address of the primary DNS server.
Secondary DNS Address(optional)	Enter the address of the secondary DNS server, if available.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

#### 7.2.4 LAN

The LAN Setting can be viewed in the left navigation bar. The following are the options available under LAN, as shown in [Figure 7.2.4](#):

- LAN Settings
- DHCP Client List
- LAN Switch Port Setting
- LAN Port Status

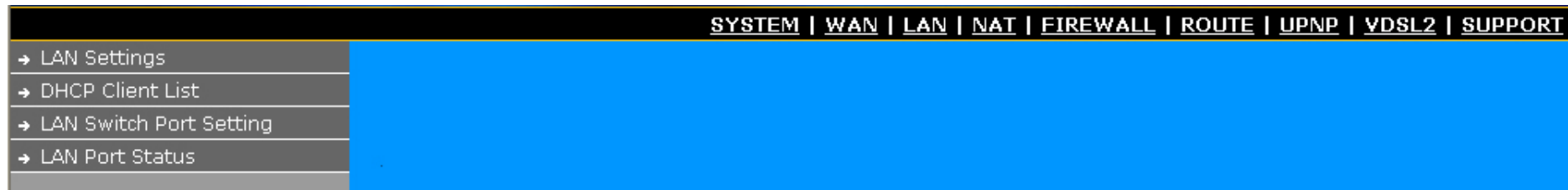


Figure 7.2.4 LAN in Left Navigator Bar

#### 7.2.4.1 LAN Settings

Attention: For the ALL126AM2/AS2 it is recommended to select a simple IP setting suitable to controlled lab environments. Set a static IP address and don't use DHCP. The required steps are explained in [Chapter 4.4](#) on [Page 13!](#)



To configure the LAN interface, click on the LAN Settings link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.4.1](#) in case of the ALL126AM2/AS2.

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

→ LAN Settings  
→ DHCP Client List  
→ LAN Switch Port Setting  
→ LAN Port Status

### LAN Settings

You can enable DHCP to dynamically allocate IP addresses to your client PCs.

IP Address: 192 168 16 249

Subnet Mask: 255 255 255 0

The Gateway acts as DHCP Server ☐ Enable

Figure 7.2.4.1 LAN Settings

The screen contains the following details:

Fields in LAN Settings

Field	Description
IP Address	Enter the LAN interface IP Address of ALL126AM2/AS2.

Subnet Mask	Enter the LAN Subnet Mask of ALL126AM2/AS2.
The Gateway acts as DHCP Server	Enable or disables the DHCP Server of the ALL126AM2/AS2. Select the check-box to enable this option.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

#### 7.2.4.2 DHCP Client List

To view the DHCP client list, click on the DHCP Client List link in the left navigation bar. A screen is displayed to list all DHCP client connection with IP Address and MAC Address as shown in [Figure 7.2.4.2](#).

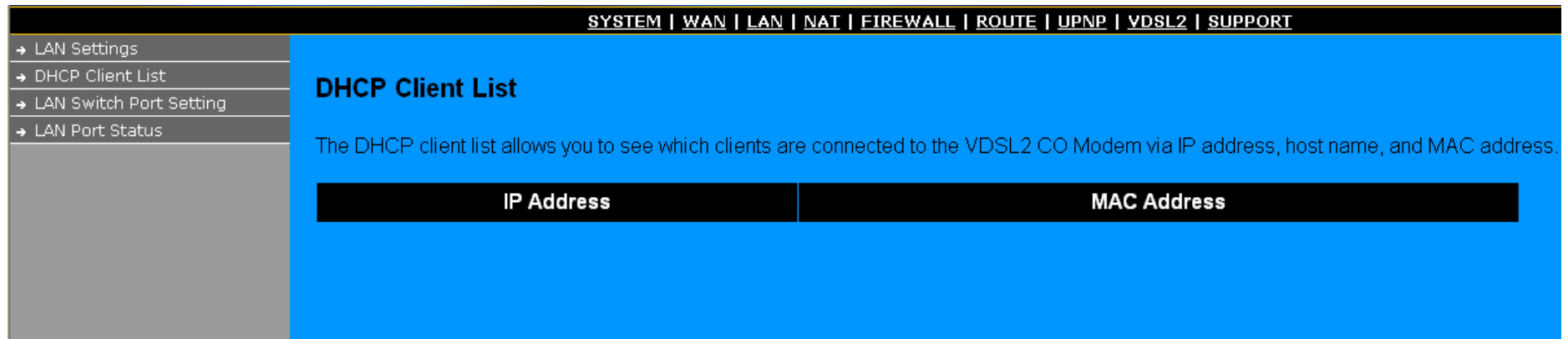


Figure 7.2.4.2 DHCP Client List

#### 7.2.4.3 LAN Switch Port Setting

To view the All Lan Port Setting, click on the All Lan Port Setting link in the left navigation bar. A screen is displayed to All Lan Port Setting as shown in [Figure 7.2.4.3](#).

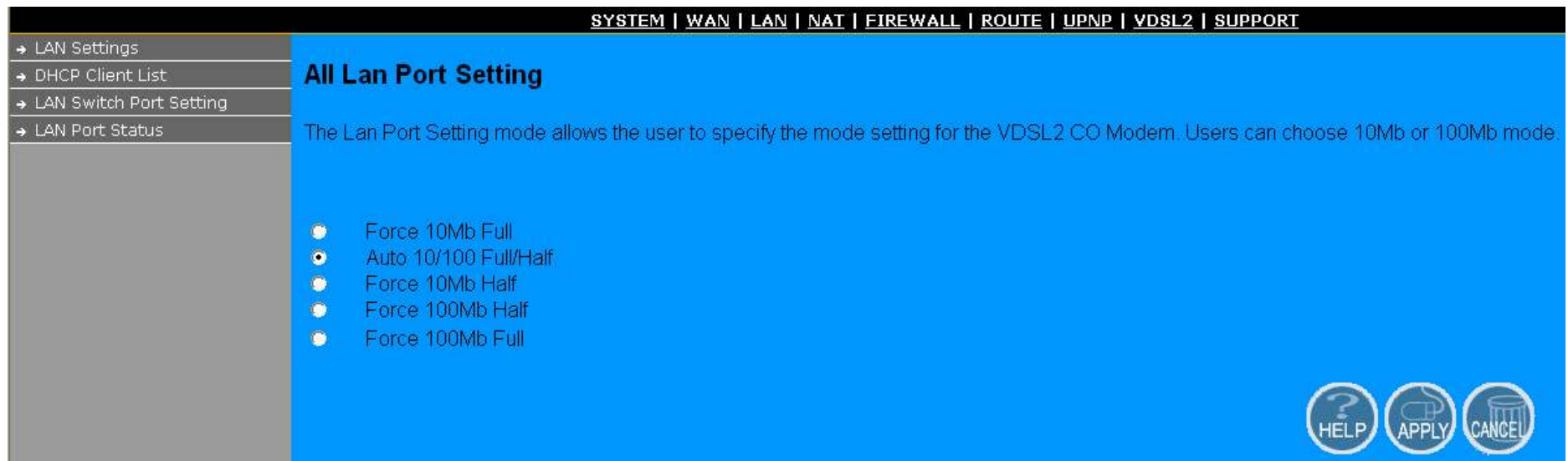


Figure 7.2.4.3 DHCP Client List

#### 7.2.4.4 LAN Port Status

The following information provides a view of the current Ethernet ports status of the unit

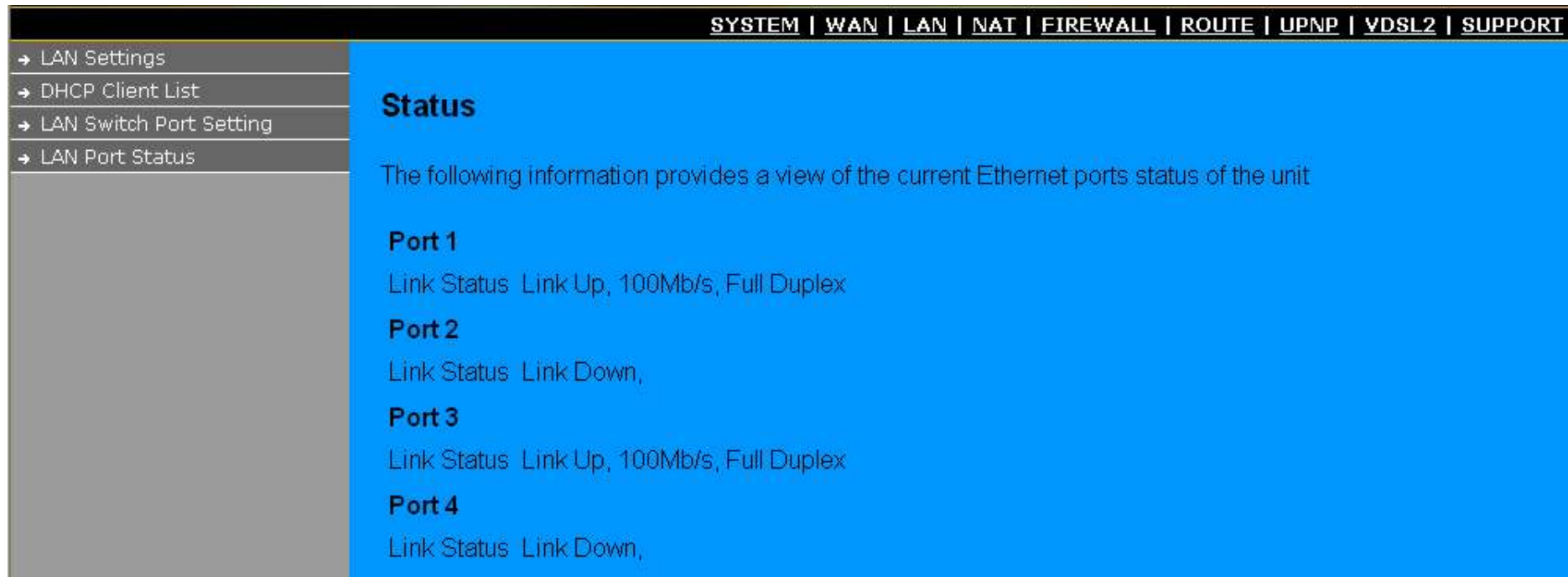


Figure 7.2.4.4 LAN Port Status

### 7.2.5 NAT

The NAT Settings can be viewed in the left navigation bar. The following are the options available under NAT, as shown in [Figure 7.2.5:](#)

- Virtual Server
- Port Mapping
- DMZ

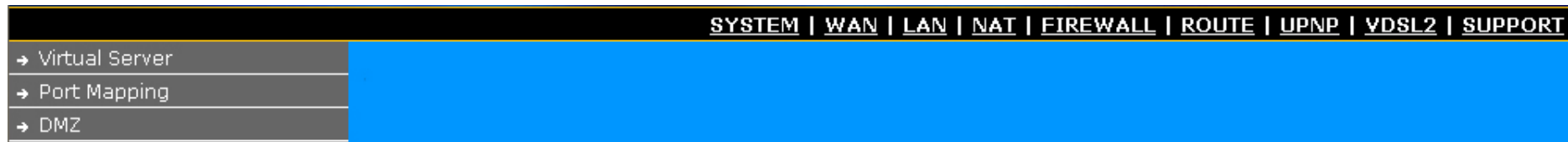


Figure 7.2.5 NAT in Left Navigator Bar

#### 7.2.5.1 Virtual Server

To configure virtual server, click on the Virtual Server link in the left navigation bar. A screen is displayed as shown in Figure 7.2.5.1:

	Private IP	Private Port	Type	Public Port	Enabled
1	192.168.16.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP		<input type="checkbox"/>
2	192.168.16.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP		<input type="checkbox"/>
3	192.168.16.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP		<input type="checkbox"/>
4	192.168.16.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP		<input type="checkbox"/>
5	192.168.16.		<input checked="" type="radio"/> TCP <input type="radio"/> UDP		<input type="checkbox"/>

Figure 7.2.5.1 Virtual Server Configuration

The screen contains the following details:  
Fields in Virtual Server

Field	Description
Private IP	Enter a private IP Address of specified entry.
Private Port	Enter a private Port number of the specified entry.
Type	Select virtual server protocol type of the specified entry.
Public Port	Enter a public port number of the internet user to access the virtual server.
Enabled	Enable the specified entry of the virtual server.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

#### 7.2.5.2 Port Mapping

To configure Port Mapping, click on the Port Mapping link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.5.2](#):

	Server IP	Mapping Ports	Enabled
1	192.168.16. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	192.168.16. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	192.168.16. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	192.168.16. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	192.168.16. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Figure 7.2.5.2 Port Mapping Configuration

The screen contains the following details:

Fields in Port Mapping

Field	Description
Server IP	Enter the IP Address of a specified local machine.
Mapping Port	Assign a range of port or specific port number to route the packets.
Enabled	Enable a specified entry of the Port Mapping.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

### 7.2.5.3 DMZ

To configure the DMZ, click on the DMZ link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.5.3](#):

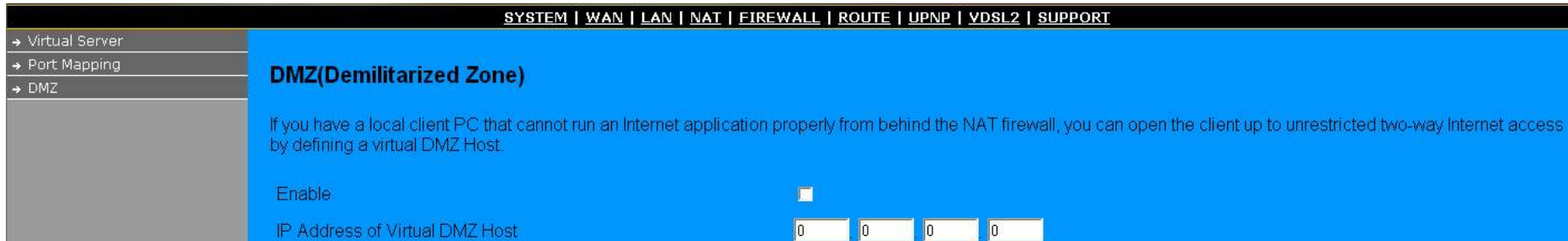


Figure 7.2.5.3 DMZ Configuration

The screen contains the following details:

#### Fields in DMZ

Field	Description
Enable	Enable or disable the DMZ setting of ALL126AM2/AS2. Select the check box to enable this option.
IP Address	Enter IP Address of the DMZ host.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

## 7.2.6 Firewall



The Firewall Settings can be viewed in the left navigation bar. The following are the options available under Firewall, as shown in [Figure 7.2.6](#):

- Firewall Options
- Client Filter MAC Control
- MAC Control

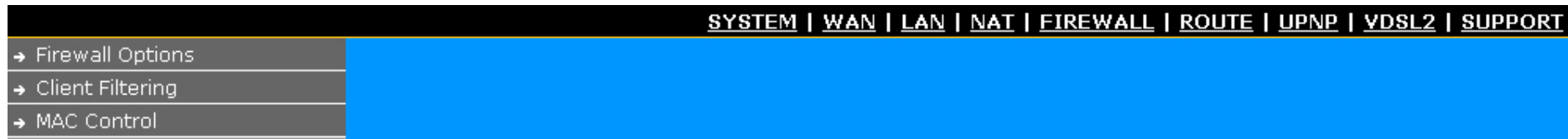


Figure 7.2.6 Firewall in Left Navigator Bar

### 7.2.6.1 Firewall Options

To enable the firewall options, click on the Firewall Options link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.6.1](#):

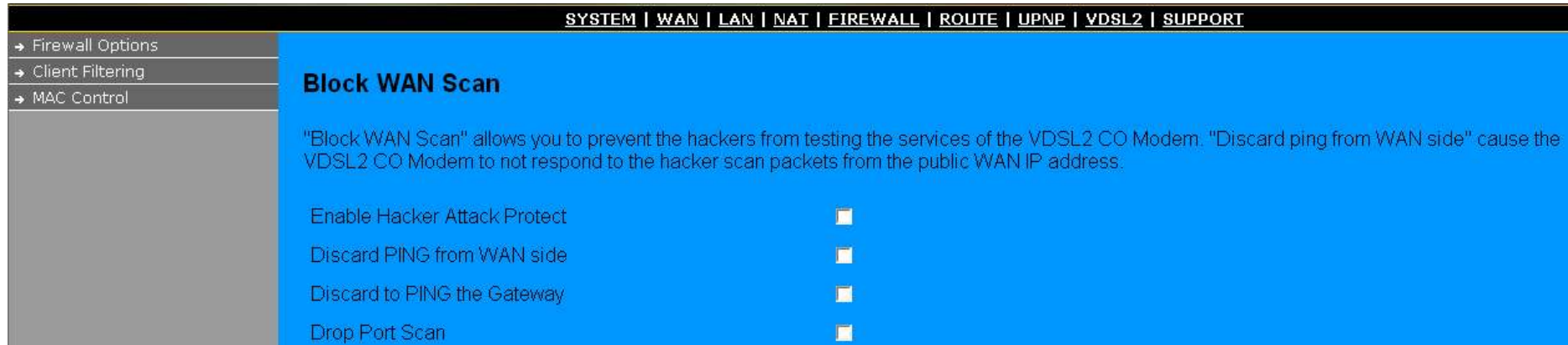


Figure 7.2.6.1 Firewall Options Configuration

The screen contains the following details:

Fields in Firewall Options

Field	Description
Enable Hacker Attack Protect	Select the check box to log and drop all the hacker attack events.
Discard PING from WAN	Select the check box to drop all PING from the WAN side.
Discard PING the Gateway	Select the check box to drop all PING to ALL126AM2/AS2 packet for the LAN side.
Drop Port Scan	Select the check box to drop all the port scan packets.

- Click APPLY to save the information that has been entered.

### 7.2.6.2 Client Filter

To enable Client Filter, click on the Client Filter link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.6.2](#).

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

Firewall Options  
Client Filtering  
MAC Control

### Client Filtering

You can block certain client PCs accessing the Internet based on time.

☒ Enable Client Filter

	IP	Port	Type	Enable
1	192.168.16. [ ] ~ [ ]	[ ] ~ [ ]	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
2	192.168.16. [ ] ~ [ ]	[ ] ~ [ ]	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
3	192.168.16. [ ] ~ [ ]	[ ] ~ [ ]	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
4	192.168.16. [ ] ~ [ ]	[ ] ~ [ ]	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>
5	192.168.16. [ ] ~ [ ]	[ ] ~ [ ]	<input checked="" type="radio"/> TCP <input type="radio"/> UDP	<input type="checkbox"/>

HELP APPLY CANCEL

Figure 7.2.6.2 Client Filter Configuration

The screen contains the following details:

Fields in Client Filter

Field	Description
Enable Client Filter	Enable or disable the Client Filter feature of VDSL2 CO&CPE MODEM. Select the check box to enable this option.
IP	Enter the filter IP Address range of the local machines under VDSL2 CO&CPE MODEM.
Port	Enter the filter Port number range of the local machines under VDSL2 CO&CPE MODEM.
Type	Select TCP or UDP to filter the protocol type packets from the local machines.
Enable	Provides more IP Addresses of the WAN interface.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY to save the information that has been entered.

### 7.2.6.3 MAC Control

To configure MAC Control, click on the MAC Control link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.6.3](#)

Figure 7.2.6.3 MAC Control Configuration

The screen contains the following details:

#### Fields in MAC Control

Field	Description
MAC Address Control	Enable or disable the MAC address control.
Block Connection to Internet	Enable or disable block status. If the check box is selected, it blocks the specified MAC address.
MAC Address	Assign the blocking MAC address for local machine.

- Click Add to add the specified MAC address entry in the list.

### 7.2.7 Route Settings

The Route Settings can be viewed in the left navigation bar. The following are the options available under Route, as shown in [Figure 7.2.7](#):

- Static Rotuing
- Routing Table List

SYSTEM | WAN | LAN | NAT | FIREWALL | ROUTE | UPNP | VDSL2 | SUPPORT

→ Static Routing  
→ Routing Table List

### Static Routing

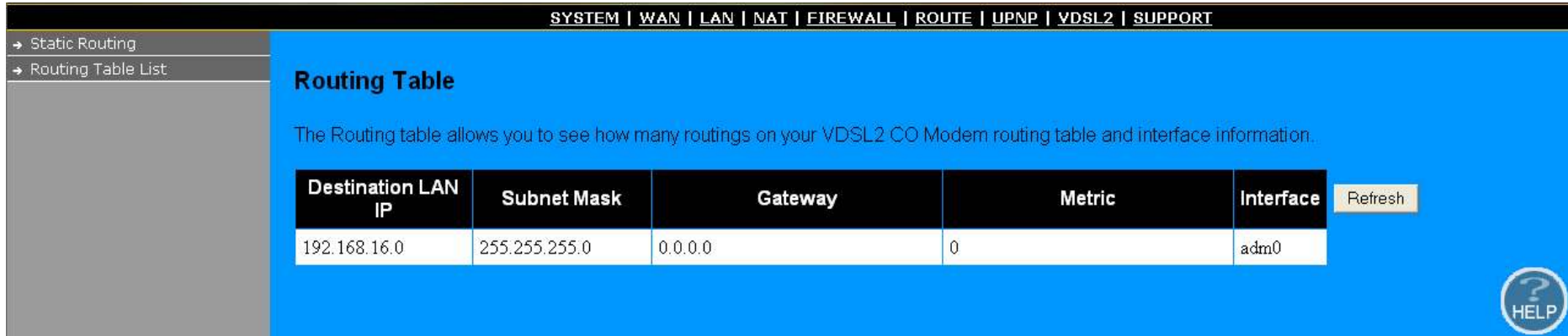
The static routing function determines the path that data follows over your network before and after it passes through your router. You can use static routing to allow different IP domain users to access the Internet through this VDSL2 CO Modem device.

Destination LAN IP	Subnet Mask	Gateway	
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="button" value=" &lt;&lt; Add"/>

Figure 7.2.7 Route in Left Navigator Bar

### 7.2.7.1 Routing Table List

To view the Routing entry table list of ALL126AM2/AS2, click on the Routing Table by link in the left navigation bar. A screen is displayed as shown in [Figure 7.2.7.1](#).



Destination LAN IP	Subnet Mask	Gateway	Metric	Interface
192.168.16.0	255.255.255.0	0.0.0.0	0	adm0

Figure 7.2.7.1 Routing Table List

The screen contains the following details:

- Click Refresh to update currently routing list of the ALL126AM2/AS2.

### 7.2.8 UPnP Setting

The UPnP Settings can be viewed in the left navigation bar. The following are the options available under UPnP, as shown in Figure 7.2.8:

To enable or disable the UPnP Settings, click on the Settings link in the left navigation bar.

A screen is displayed as shown in Figure 7.2.8.1.

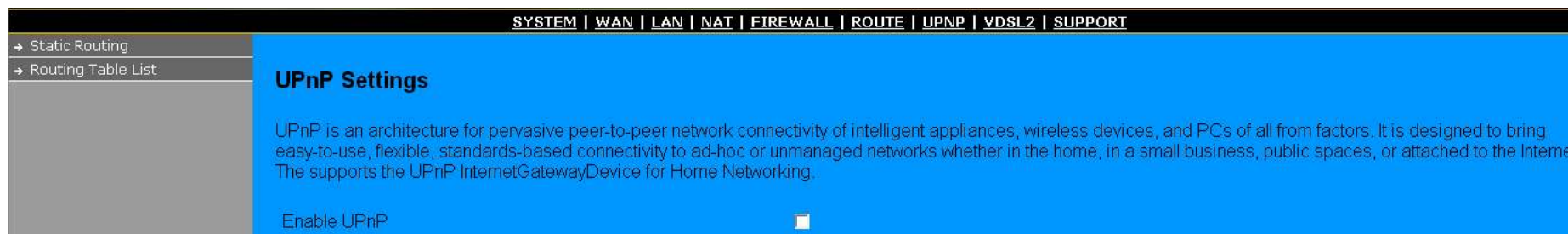


Figure 7.2.8 / 7.2.8.1

The screen contains the following details:

Table 22 Fields in UPnP Settings

Field	Description
Enable UpnP	To enable or disable UPnP Setting. Select the check box to Enable or Disable the UPnP function of SPEED-VDSL2 CO&CP MODEM.

- Click CANCEL to exit from this page without saving the changes.
- Click APPLY at any time during configuration to save the information that you have entered.



## **Appendix A: Product Features & Specification**

### **Product Name □ ALL126AM2/AS2 ( VDSL2 Modem)**

#### **Features:**

- Compliant with IEEE 802.3 & 802.3u Ethernet Standards
- Compliant with ETSI, ITU, ANSI VDSL standards
- Provides 4 x 10/100M auto-sensing RJ-45 Ethernet ports
- Supports Bandwidth setup with 100 Mbps VDSL RJ-11 ports
- POTS / ISDN Splitter port RJ-11 x 1 (Splitter on board)
- Supports auto speed for VDSL2 port
- Supports Web management(HTTP)
- Supports TFTP
- Supports PPPOE
- Supports NAT/DHCP/DMZ
- Supports Firewall
- Supports Route & Switch mode
- Supports UPnP
- Supports Loop back
- Supports SNR indicator
- Provides surge protection for VDSL2 port

**Specifications:**

- Compliant with IEEE 802.3 & 802.3u Ethernet Standards
- Compliant with ETSI, ITU, ANSI VDSL2 standards
- 10/100M auto-sensing/auto-MDIX RJ-45 Ethernet ports x 4
- VDSL2 RJ-11 port x 1 (ALL126AM2 for CO / ALL126AS2 for CPE)
- POTS / ISDN Splitter port RJ-11 x 1
- Switch method : store and forward
  
- Flow control Full duplex : IEEE 802.3x  
Half duplex : Back pressure
- Driver capable : 100 M: 0.3 Km
- Indication LED x 6: Power LED x1  
Ethernet Link/Active LED x 4  
VDSL Link LED x 1
- Console port : RS-232C/115200bps
- Dimension: L x W x H = 184mm x 146mm x 40mm(7.2" x 5.74" x 1.57")
- Operating temperature: 0°C to 50°C (32 to 122F)
- Operating humidity: 10% to 90% (non-condensing)
- Storage temperature: -20 to 65°C (-4F to 149F)
- AC to DC adapter  
Input range: 100VAC~240VAC/50~60Hz  
Output: 12VDC/1A
- Power consumption : 7.5w
- EMI Compliant: CE, FCC, VCCI
- Chipset: Infineon

## **Appendix B: Troubleshooting**

1. **Symptom:** Connected the Co-Modem with CPE-Modem within 300 meters RJ-11 phonecable got only less than 10 Mbit/s.  
**Cause:** Some testing program which is base on TCP/IP protocol such as FTP, Iperf, NetIQ, the bandwidth of testing outcome will be limited by TCP window size.  
**Solution:** We recommend to test VDSL2 bandwidth best by Smartbit equipment, if you don't have Smartbit, we recommend test that by IPERF program, and TCP window size must be setted max. 64k, the parameter as iperf -c co side ip address -l 1 -t 50 -w 65535 for client side.

## **Appendix C Compliance and Safety Information**

### **FCC Radio Frequency Interference Statement**

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

- 1.Reorient or relocate the receiving antenna.
- 2.Increase the distance between the equipment and receiver.
- 3.The equipment and the receiver should be connected to outlets on separate circuits.
- 4.Consult the dealer or an experienced radio/television technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If this telephone equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance in order for you to make necessary modifications to maintain uninterrupted service.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

### **Important Safety Instructions**

Caution□The direct plug-in wall transformer serves as the main product for disconnecting. The socket outlet shall be installed near the product and be readily accessible.

Caution□Use only the power supply included with this product. In the event the power supply is lost or damaged□In the United States, use only with CSA certified or UL listed Class 2 power supply, rated 12Vdc 1A or above.

IN Europe, use only with CE certified power supply, rated 12Vdc 1A or above.

Do not use this equipment near water, for example in a wet basement.

Avoid using a telephone during an electrical storm. There may be a remote risk of electrical shock from lightning.

Do not use the telephone to report a gas leak in the vicinity of the leaking area.

If you experience trouble with this unit, please contact customer service at the address and phone listed below. DO NOT DISASSEMBLE THIS EQUIPMENT. It does not contain any user serviceable components.

### **FCC Warning**

This equipment has been tested to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment can generate, use, and radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at owner's expense.

### **CE Mark Warning**

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

## **Warranty**

The original owner of this package will be free from defects in material and workmanship for one-year parts after purchase. For the warranty to apply, you must register your purchase by returning the registration card indicating the date of purchase.

There will be a minimal charge to replace consumable components, such as fuses, power transformers, and mechanical cooling devices. The warranty will not apply to any products which have been subjected to any misuse, neglect or accidental damage, or which contain defects which are in any way attributable to improper installation or to alteration or repairs made or performed by any person not under control of the original owner.

The above warranty is in lieu of any other warranty, whether express, implied, or statutory, including but not limited to any warranty of merchantability, fitness for a particular purpose, or any warranty arising out of any proposal, specification, or sample. Shall not be liable for incidental or consequential damages. We neither assumes nor authorizes any person to assume for it any other liability.

**Note: Please do not tear off or remove the warranty sticker as shown, otherwise the warranty will be void.**



**CE-Kennzeichnung und EG-Konformitätserklärung**

**Für das folgend bezeichnete Erzeugnis**

**ALL126AM2 VDSL2 Master-Modem**

**ALLNET PartNr. 63905**



**CE-Kennzeichnung**



Wird hiermit bestätigt, dass es den Anforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit **(89/336/EWG)** festgelegt sind.

Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen:

EN 55022: 1998 + A1: 2000 + A2: 2003, Class A

EN 61000-3-2: 2000

EN 61000-3-3: 1995 + A1:2001

EN 55024: 1998 + A1:2001

IEC 61000-4-2 1995 + A1: 1998 + A2: 2000

IEC 61000-4-3 2002 + A1: 2002

IEC 61000-4-4 1995 + A1: 2000 + A2: 2001

IEC 61000-4-5 1995 + A1: 2000

IEC 61000-4-6 1996 + A1: 2000

IEC 61000-4-8 1993 + A1: 2000

IEC 61000-4-11 1994 + A1: 2000

Diese Erklärung wird verantwortlich für den Hersteller/Bevollmächtigten abgegeben:

ALLNET Computersysteme GmbH

Maistr. 2

82110 Germering

**CE-Kennzeichnung und EG-Konformitätserklärung**

**Für das folgend bezeichnete Erzeugnis**

**ALL126AS2 VDSL2 Client-Modem**

**ALLNET PartNr. 63906**



**CE-Kennzeichnung**



Wird hiermit bestätigt, dass es den Anforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit **(89/336/EWG)** festgelegt sind.

Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen:

EN 55022: 1998 + A1: 2000 + A2: 2003, Class A

EN 61000-3-2: 2000

EN 61000-3-3: 1995 + A1:2001

EN 55024: 1998 + A1:2001

IEC 61000-4-2 1995 + A1: 1998 + A2: 2000

IEC 61000-4-3 2002 + A1: 2002

IEC 61000-4-4 1995 + A1: 2000 + A2: 2001

IEC 61000-4-5 1995 + A1: 2000

IEC 61000-4-6 1996 + A1: 2000

IEC 61000-4-8 1993 + A1: 2000

IEC 61000-4-11 1994 + A1: 2000

Diese Erklärung wird verantwortlich für den Hersteller/Bevollmächtigten abgegeben:

ALLNET Computersysteme GmbH

Maistr. 2

82110 Germering



**ERKLÄRUNG ZUR VERWENDUNG  
VON GPL-LIZENSierter SOFTWARE  
IN ALLNET-PRODUKTEN**

Im vorliegenden Produkt wurden Teile von Linux sowie des netfilter/iptables Projektes ([www.netfilter.org](http://www.netfilter.org)), die unter der GPL (General Public Licence, (<http://www.gnu.org/home.de.html>) lizenziert wurden, implementiert. Den Source Code, welcher in dem Produkt verwendet wurde, können Sie auf unserer Website [www.allnet.de](http://www.allnet.de) im Downloadbereich herunterladen.

Ihre Allnet Deutschland GmbH

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Fax: 089 / 894 222 33

[sales@allnet.de](mailto:sales@allnet.de)  
[www.allnet.de](http://www.allnet.de)

**Achtung:**

Bitte beachten sie, dass durch Modifikation der Firmware eines Allnet-Geräts die Garantie auf dieses Gerät verloren geht. Alle Veränderungen an der Firmware geschehen also auf ihr eigenes Risiko, da dieses Gerät dann im Fehlerfall nicht umgetauscht oder sonstwie ersetzt werden kann..

**DISCLAIMER FOR ALLNET-PRODUCTS  
WHICH CONTAIN GPL-LICENSED SOFTWARE**

The Allnet-product you have bought is using Linux software and parts of the netfilter/iptables-project. ([www.netfilter.org](http://www.netfilter.org)) , which both are licensed using the GPL (General Public License, available for download at [www.gnu.org/home.de.html](http://www.gnu.org/home.de.html) ).

You can download the complete source-code of this product at [www.allnet.de](http://www.allnet.de) in the download-area for this model.

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**Attention:**

Please be aware that any modifications of the firmware for this device will void the warranty. All modifications will be on your own risk and, in case of any damage to the device, Allnet can not repair or replace the device free of charge.