



Model 3124

ADSL2+ IpDSLAM

Administrator's Reference Guide

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About this guide

This user guide describes how to configure the Model 3124 system through the Web Management Interface (WMI). For detailed hardware or set-up information, refer to the product's *User Manual*.

Audience

This guide is intended for the following users:

- Operators
- Installers
- Maintenance technicians

Structure

This guide contains the following chapters and appendices:

- [Chapter 1](#) on page 4 provides an overview about the Web Management Interface (WMI)
- [Chapter 2](#) on page 12 provides information on setting up system features
- [Chapter 3](#) on page 27 provides information on configuring bridge features
- [Chapter 4](#) on page 77 provides information on configuring ADSL options
- [Chapter 5](#) on page 94 provides information on configuring traffic options
- [Chapter 6](#) on page 98 provides information on configuring SNMP features
- [Chapter 7](#) on page 102 provides information on configuring maintenance features
- [Chapter 8](#) on page 131 provides information on contacting Patton for service and support

Chapter 1 **Getting Started**

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Overview

This *Model 3124 Administrator's Reference Guide* provides information about configuring the software for the 3124 ADSL2+ IPDSLAM Module through the Web Management Interface (WMI). For information about setting up the unit, refer to the *Model 3124 User Manual* available online at www.patton.com/manuals/3124.pdf. For information about configuring the 3124 through the Command Line Interface (CLI), refer to the *Model 3124 CLI Reference Guide* available online at www.patton.com/manuals/3124-cli.pdf.

Getting Started with the WMI

Accessing the WMI

To access the Web Management Interface (WMI) for the Model 3124:

1. Connect a PC to the console port of the DSLAM. At the console, type the following CLI command:

WDS:>enable Enter the **enable command mode** from initial mode.

WDS:%show management all Display all in-band and out-band management IP settings.

The default LAN IP address is retrieved via DHCP.

2. Start your web browser and enter the URL you retrieve by using the above command.

If you need to change the accessing port number (default is 80) of the WMI, use the following CLI command (with the correct values added):

WDS:%configure Enter the **configuration command mode** from enable mode.

WDS:(conf)#http port <number> Set http port number.

Logging in to the WMI

Once you connect to the DSLAM, a login page displays. You must enter your username and password to access the pages. The default login username and password are as follows:

User Name: admin

Password: admin

Click on the Sign in button.

You are now ready to configure your DSLAM using the WMI.

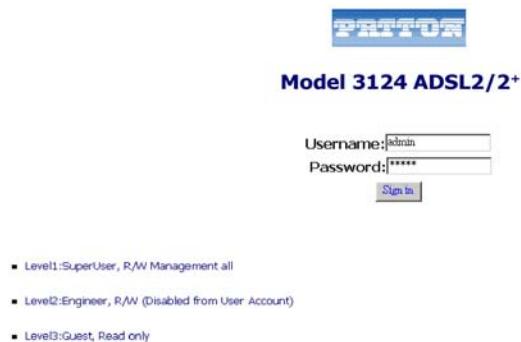


Figure 1. WMI login screen

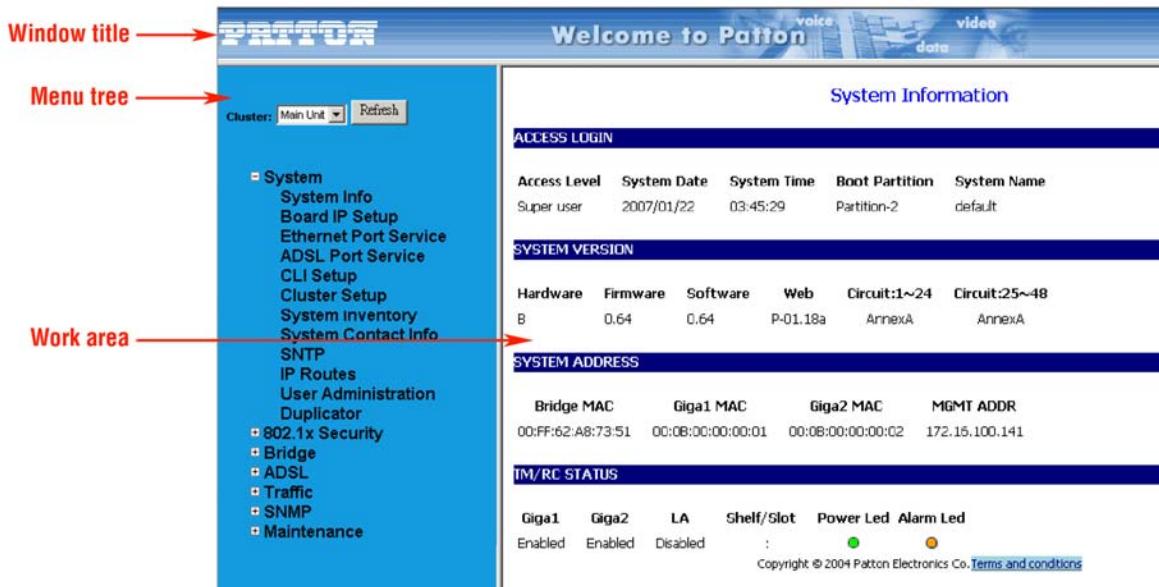


Figure 2. WMI screen description

WMI Overview

The Web Configuration Tool provides a series of web pages for users to setup and configure the Model 3124 system. These pages are organized into six main topics. You can select each of the following topics from the menu on the left-hand side of the main window:

- **System:** Information about the system, system status, basic setup of the system, CLI setup, SNTP setup, query system inventory, IP routes setup, and user administration.
- **Bridge:** Information about the bridge port setup, VLAN configuration, Access Control setup, Forwarding setup, DHCP relay and PPPoE relay setup, and IGMP setup.
- **ADSL:** Information about the configuration of the ADSL line and profiles, loop test, etc.

- **Traffic:** Information about the configuration of ATM traffic descriptor.
- **SNMP:** Information about SNMP Community, SNMP Target, and SNMP Notify setup.
- **Maintenance:** Information about SysLog server setup, Configuration import/export, Firmware update, ATM loopback setup, Fault management and Performance monitoring.

The exact information displayed on each web page depends on the specific configuration that an operator is using. The following chapters provide a general description of the setup and configuration details.

Table 1 lists the various pages of the web configuration tool.

Table 1. WMI Page Map

System	<i>System Information</i>
	<i>Board IP Setup</i>
	<i>Ethernet Port Service</i>
	<i>ADSL Port Service</i>
	<i>CLI Setup</i>
	<i>Cluster Setup</i>
	<i>System Inventory</i>
	<i>SNTP</i>
	<i>IP Routes</i>
	<i>User Administration</i>
	<i>Duplicator</i>
802.1x Security	<i>System Protocol</i>
	<i>RADIUS & Local Profile</i>

Table 1. WMI Page Map

Bridge	Interface Setup	<i>GIGA Bridge</i> <i>ADSL PVC</i> <i>ADSL Bridge</i> <i>ADSL Port Security</i>
	VLAN Configuration	<i>Static VLAN</i> <i>Protocol Based VLAN</i> <i>Translation VLAN</i> <i>Static Allowed IP</i> <i>MAC Spoofing</i>
	Access Control	<i>Filtering</i> <i>VLAN Priority Remark</i> <i>Rate Limit</i> <i>Priority Queue Mapping</i>
	Forwarding	<i>TP Forwarding DB</i> <i>Forwarding Static</i>
	Relay	<i>DSL Line Identity</i>
	IGMP	<i>Protocol & Route Port</i> <i>IGMP Profile</i> <i>IGMP Multicast</i>
	IPOA	<i>BRAS MAC</i> <i>Interface Setup</i>
	Profile	<i>Service Profile</i> <i>Service Profile (Channel)</i> <i>Spectrum Profile (Main)</i> <i>Spectrum Profile (ADSLx)</i> <i>TCA Profile</i>
	Data & Inventory	<i>Inventory</i> <i>Loop Test</i> <i>Carrier Data</i> <i>OP Data</i>
	Line Config & Info	<i>Line Configuration</i> <i>Line Information</i>
Traffic	<i>ATM Traffic Descriptor</i>	
SNMP	<i>SNMP Community</i>	
	<i>SNMP Target</i>	
	<i>SNMP Notify</i>	

Table 1. WMI Page Map

Maintenance	SYS Log Server	
	Database	
	Firmware Update	
	ATM Loopbacks	
	Fault Management	Alarm/Event Alarm Profile Hardware Temp
	Performance Management	System Utilization Ethernet Statistics ATM Statistics RMON ADSL Day/Interval

Operating Examples

This section explains how to operate in the pages of the WMI.

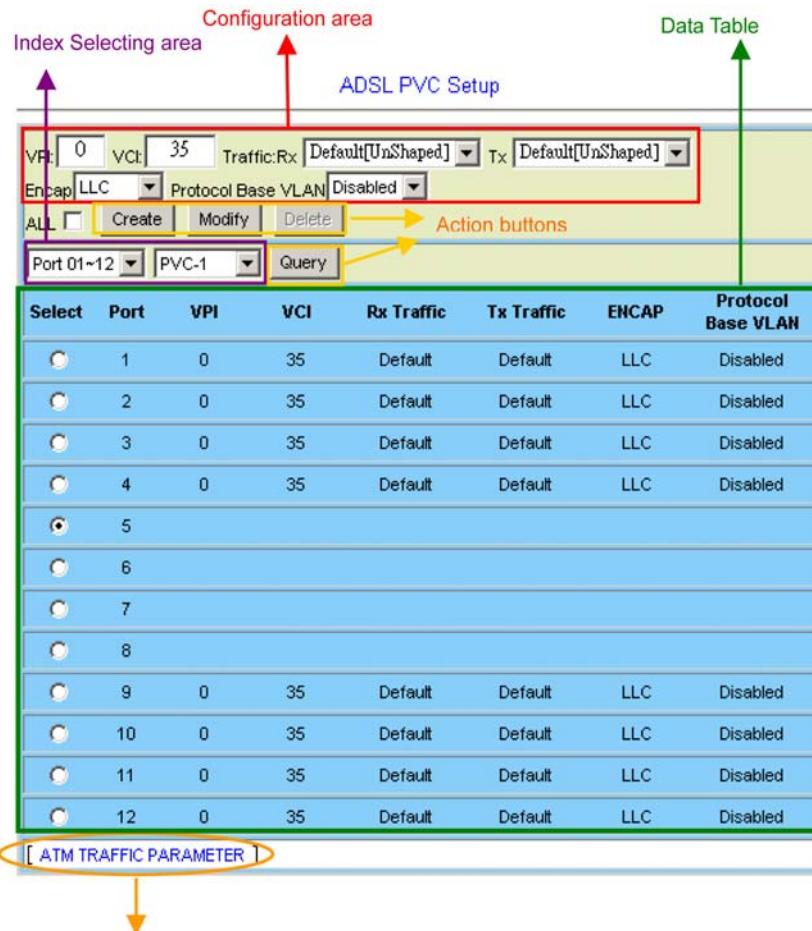


Figure 3. Navigating the ADSL PVC Setup page

Click on the hyperlinks below on each configuration page will lead you to the related page(s) directly without the need to search in the menu tree.

The Index Selecting area is usually for selecting the range of interface(s) to be configured. In this case, the filters (such as link type, circuit number, PVC number, or bridge port index) will enable the operator to easily locate the target interface(s) that he would like to provision. The Configuration area is for setting the parameter value of the entries in the table. This area shows the data of selected entry in Data Table to allow operator to modify the parameter values. The Data Table is for listing the setting of each interface (bridge port). Often, there is a radio button for each port. By clicking on the radio button, you can specify which entry to be created, modified, or deleted.

For the above example, first you must select the link type, circuit number range and PVC to identify the range of interfaces, and then the corresponding data of those interfaces will be listed in Data Table. Click on the radio button to select a circuit and modify the parameter values in the Configuration area. Then click on **Create** to create a new entry or **Modify** to change the setting of an existing entry. You can click on **Delete** to remove an entry. Click on **Query** to get current data whenever you want to make sure actual status of the system.

In some pages, there is the Global setup area (often with a **Set** button) on top of a page. After fill up the fields in this area, you have to click on **Set** to save the modification. Also the Configuration area is often located at the top inside the Data Table.

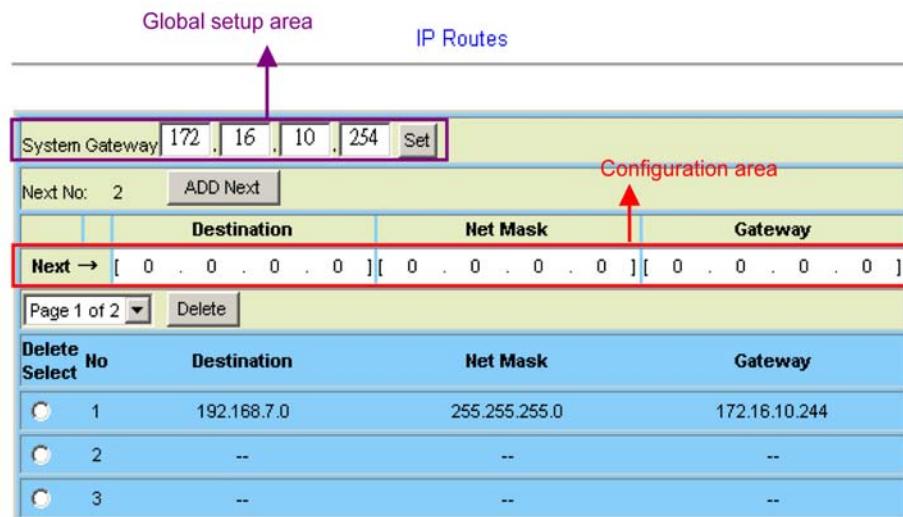


Figure 4. Navigating the IP Routes page

In some pages, you modify the data directly in the entry fields (remember to click on the check box or radio button to select the entry before you click on Modify button; thus the new values can really be saved into the system).

DSL Line Identify

Global setup area

DSL Global Configuration			
PPP Service Name:	IPDSLAM	PPP Service Name Check mode:	Disabled
DSLAM Name:	IPDSLAM	DSLAM Name mode:	Customer
Dhcp Mode:	Relay OFF	ID Select:	Circuit ID
Circuit ID Type:	DEFAULT	Remote ID Type:	DEFAULT
<input type="button" value="Set"/>			

DSL Line ID Configuration			
Port 01~12	PVC-1	Query	Modify
Select Port	Circuit ID	Remote ID	Trusted
<input type="checkbox"/> 01	IPDSLAM:001:000:00035	IPDSLAM:004	<input type="checkbox"/> FALSE
<input type="checkbox"/> 02	IPDSLAM:002:000:00035	IPDSLAM:005	<input type="checkbox"/> FALSE
<input type="checkbox"/> 03	IPDSLAM:003:000:00035	IPDSLAM:006	<input type="checkbox"/> FALSE
<input type="checkbox"/> 04	IPDSLAM:004:000:00035	IPDSLAM:007	<input type="checkbox"/> FALSE
<input type="checkbox"/> 05	IPDSLAM:005:000:00035	IPDSLAM:008	<input type="checkbox"/> FALSE

↓ Modify values here

Figure 5. WMI Entry Fields

Chapter 2 **System Configuration**

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System Information

The System Information page (the default page you'll see after you log in to the web configuration tool) contains information about the user access level, current system date and time, current boot configuration partition, system name, system HW/SW/FW version, web configuration software version, supported subscriber line type (AnnexA or AnnexB), system MAC address and management IP address, GBE interface status, and LED status (Power and Alarm).

From the **System** menu, click on **System Info**. The following page displays:

System Information					
ACCESS LOGIN					
Access Level	System Date	System Time	Boot Partition	System Name	
Super user	2007/01/22	09:20:52	Partition-2	default	
SYSTEM VERSION					
Hardware	Firmware	Software	Web	Circuit:1~24	Circuit:25~48
B	0.64	0.64	P-01.18a	AnnexA	AnnexA
SYSTEM ADDRESS					
Bridge MAC	Giga1 MAC	Giga2 MAC	MGMT ADDR		
00:FF:62:A8:73:51	00:08:00:00:00:01	00:08:00:00:00:02	172.16.100.141		
TM/RC STATUS					
Giga1	Giga2	LA	Shelf/Slot	Power Led	Alarm Led
Enabled	Enabled	Disabled	:		

Figure 6. System Information page

Board IP Setup

This option allows you to configure the in band IP address setting, VID management setting, HTTP port setting, etc..

From the System menu, click on Board Setup. The following page displays:

The screenshot shows the 'Board IP Setup' interface. At the top are two buttons: 'Modify' (grey) and 'RESTART' (red). Below is a section titled 'Inband Address' with fields for 'IP Address' (192.168.100.1) and 'Subnet Mask' (255.255.255.0). Under 'Inband VID Management', there's a checkbox 'NO Limit VID' (checked), a 'Limit VID' input field, and a 'Priority' dropdown set to '0'. The 'HTTP Port' section shows '80' as the port number and '192.168.8.193' as the 'Remote IP'. A 'System Name' field contains 'u13726b'. A link '[System Inventory]' is present, and a warning message at the bottom reads 'Modify the configuration may cause the connection loss'.

Figure 7. Board IP Setup page

Table 2. Board IP Setup Options

Label		Description
In Band Address	IP Address	Type in the IP address of the DSLAM for in-band management.
	Subnet Mask	Type in the in-band subnet mask of the DSLAM
Inband VID Management	No Limit VID	Select this checkbox if no specific in-band management VLAN is required, and the setting in "Limit VID" parameter will be ignored.
	Limit VID	The VLAN ID for individual in-band management VLAN.
	Priority	Select the VLAN priority level (0~7) of the in-band management traffic sent out from GBE port.
HTTP Port		Shows current HTTP port setting. You can modify http port setting in this field.
Remote IP		Shows the IP address of the management PC currently connected to this DLSAM.
System Name		Type in the name of the DLSAM (must not be all digital numbers, maximum 32 characters).
Modify		Click on this button to submit the modification.
RESTART		Click on this button to restart the system.

Ethernet Port Service

This option allows you to set the administration state and select the speed mode for the Gigabit Ethernet ports. From the **System** menu, click on **Ethernet Port Service**.

The screenshot shows a table titled "Ethernet Port Setup" with a "Modify" button at the top left. The table has six columns: Port, Admin Status, Selected Speed, Link Status, Current Speed, and Current Media. Row 1 shows Port 1 with Admin Status set to "Admin ON" and Selected Speed set to "AutoNegotiate". The Link Status is OFF, Current Speed is down, and Current Media is N/A. A link to "System Inventory" is at the bottom.

Ethernet Port Setup					
<input type="button" value="Modify"/>					
Port	Admin Status	Selected Speed	Link Status	Current Speed	Current Media
1	Admin ON	AutoNegotiate	OFF	down	N/A
[System Inventory]					

Figure 8. Ethernet Port Service page

Table 3. Ethernet Port Options

Label	Description
Port	This field shows port number of the Gigabit Ethernet interface.
Admin Status	Click on the drop-down list and select the administrative state (ON/OFF) to enable/disable the GBE port.
Selected Speed	Click on the drop-down list and select the speed mode for trunk GBE port. Supported options are: AutoNegotiate, 100Mbps Half (duplex), 100Mbps Full (duplex).
Link Status	Show operational status of the trunk ports (ON/OFF).
Current Speed	Show current speed mode of the trunk ports.
Current Media	Show current uplink transmission medium (via copper or SFP). This field will show N/A when Oper Status is OFF.
Modify	Click on this button to submit the modification.

ADSL Port Service

This option allows you to setup the service status of the line ports and to bind the selected service profiles and spectrum profiles. Also, you can query current setting and the operational status of the line ports.

From the **System** menu, click on **ADSL Port Service**. First, click on the drop-down list to select the port range to be displayed. Remember to click on the radio button to select a port to be modified (or select the All check-box to modify all ports of the page at a time).

Select	Port	Admin Status	Current Status	Service Profile	Spectrum Profile	TCA Profile
<input checked="" type="radio"/>	1	ON	ON	1	1	1
<input type="radio"/>	2	OFF	OFF	1	1	1
<input type="radio"/>	3	OFF	OFF	1	1	1
<input type="radio"/>	4	OFF	OFF	1	1	1
<input type="radio"/>	5	OFF	OFF	1	1	1
<input type="radio"/>	6	OFF	OFF	1	1	1
<input type="radio"/>	7	OFF	OFF	1	1	1
<input type="radio"/>	8	OFF	OFF	1	1	1
<input type="radio"/>	9	OFF	OFF	1	1	1
<input type="radio"/>	10	OFF	OFF	1	1	1
<input type="radio"/>	11	OFF	OFF	1	1	1
<input type="radio"/>	12	OFF	OFF	1	1	1

Figure 9. ADSL Port Service page

Table 4. ADSL Port Options

Label	Description
Admin	Click on the drop-down list and select the Administrative status: ON, OFF, or RESET.
Service Profile	Type in the index of the Service Profile (1~120).
Spectrum Profile	Type in the index of the Spectrum Profile (1~120).
TCA Profile	Type in the index of the TCA Profile (1~64).
All	Select the check box to select all circuits of current page.
Modify	Click on this button to submit the modification.
Query	Click on this button to get most recent status of the circuits.
Select	Click on the radio button to select the port to be modified.
Current Status	This field shows the operational status of the line ports. Possible values are ON (enabled), OFF (disabled), and Testing (in loop testing now).

CLI Setup

This option allows you to modify the timeout setting for a CLI session and the allowable number of sessions.

From the **System** menu, click on **CLI Setup**.

CLI Setup

The screenshot shows a user interface for 'CLI Setup'. At the top, there are two buttons: 'Modify' (highlighted in blue) and 'Default'. Below these are two input fields. The first field is labeled 'CLI Session' with the value '5'. The second field is labeled 'CLI Timeout' with the value '0'. Both fields have a blue border and are contained within a light gray box.

Figure 10. CLI Setup page

Table 5. CLI Setup Options

Label	Description
CLI Session	Allowable number of CLI sessions at the same time. Valid value: 1~10.
CLI Timeout	CLI session will be closed once the idle time exceeds this timeout value. Valid value: 180~3600 (sec), 0 for no timeout.
Modify	Click on this button to submit the modification.
Default	Click on this button to set default values (CLI session: 5, CLI timeout: 300 sec).

Cluster Setup

This option allows you to setup Cluster function, which can make a group of NEs (network elements) work together as a single NE from the management point of view. Before you group a Master and a Slave IPDSLAM, some parameters need to be well configured:

1. **Cluster domain name:** The group name for a cluster must be the same on Master and Slave.
2. **Cluster IP address:** IP address to be used for remote management when Master and Slave are grouped together.
3. **NE cluster name:** A name to identify Master or Slave.
4. Set private IP address on in-band port for both Master and Slave IPDSLAM. The private IP is used for communication between Master and Slave. The management center actually uses Cluster IP address for remote management.
5. Master and Slave need to be configured with same management VLAN.
6. The default gateway should be configured to the router that is aware how to route management traffic to Management Center of the management network. The setting of Cluster default gateway should be the same between Master and Slave.

Currently a Model 3124 cluster can support up to four cluster members (NEs). The IPDSLAMs in a cluster must all be in-band connected through the GBE port. It uses star topology for conducting a Clustering Management group.

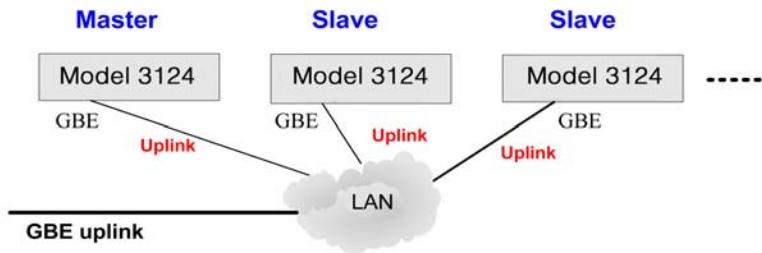


Figure 11. Cluster network topology - Star

From the **System** menu, click on **Cluster Setup**. The following page displays:

Cluster Configuration	
Modify	Query
IDLE	
Name	NE2
Domain	dvt
Role	Individual
Voting key	0
IP	172 . 16 . 77 . 88
Netmask	255 . 255 . 255 . 0
Gateway	172 . 16 . 77 . 177

Figure 12. Cluster Setup page

By default, the DSLAM is not in a cluster. The state of the Cluster Configuration shows “IDLE” and the Role shows “Individual”.

To make the DSLAM join a cluster, select the Role as “Cluster” or “Slave only” according to your plan and then click on Modify. The state of the Cluster Configuration will show from **DISCOVERING** to **VOTING** to **MASTER** or **SLAVE** at last.

The screenshot shows the 'Cluster Configuration' page with the 'State' set to 'DISCOVERING'. The configuration includes:

Name	NE2	IP	172 . 16 . 77 . 88
Domain	dvt	Netmask	255 . 255 . 255 . 0
Role	Cluster	Gateway	172 . 16 . 77 . 177
Voting key	0		

Figure 13. Cluster Configuration - Discovering State

The following figure shows the Cluster Setup page of a cluster containing two cluster members. You will see the following page if you’re connecting directly to the Master via its in-band IP address or connecting to the Cluster IP “172.16.77.88”. You can control all the IP DSLAMs in a cluster by connecting to the Cluster IP address, or by directly connecting to the Master IPDSLAM via its in-band IP address that is configured in the “Board IP Setup” on page 14.

The screenshot shows the 'Cluster Configuration' page with the 'State' set to 'MASTER'. The configuration includes:

Name	NE1	IP	172 . 16 . 77 . 88
Domain	dvt	Netmask	255 . 255 . 255 . 0
Role	Cluster	Gateway	172 . 16 . 77 . 177
Voting key	0		

Below the configuration table, there is a table showing cluster members:

ID	IP	Role	Name	Domain
1	20.20.20.1	Master	NE1	dvt
2	20.20.20.2	Slave	NE2	dvt

Figure 14. Cluster Configuration - Master State

Table 6. Cluster Setup Options

Label	Description
Name	Type in the NE name in the cluster.
Domain	Type in the name of the cluster domain.
Role	Valid options are: Cluster (Master or Slave is decided by the system), Slave only (role of the DSLAM is always Slave), and Individual (not in a cluster).
Voting Key	Type in 0 or a positive integer as the priority to be Master. 0 means to let system decides Master and Slaves. If positive integer is typed in, the smaller the number is, the higher priority for the DSLAM to be a master in a cluster. But if there's already a Master in a cluster, a new added DSLAM cannot try to be the Master by entering a smaller voting key number; the Master cannot be changed in this way.
IP	Type in the cluster IP address. Users can connect to and manage the cluster via the cluster IP address through in-band connection.

Table 6. Cluster Setup Options

Netmask	Type in the cluster's subnet mask.
Gateway	Type in the cluster's gateway IP address.
ID	This field shows Cluster ID, which indicates cluster ordering.
Modify	Click on this button to submit the modification.
Query	Click on this button to query current status.

To control a member in the cluster:

Select a Cluster member from the drop down list above the menu tree. Then you are controlling that NE now.

The screenshot shows the 'Cluster Configuration' page with the 'Slave' tab selected. The configuration details for the selected node (NE2) are displayed, including its name, domain, role (Slave Only), and voting key. Below this, a table lists cluster information for two nodes (NE1 and NE2).

ID	IP	Role	Name	Domain
1	20.20.20.1	Master	NE1	dvt
2	20.20.20.2	Slave	NE2	dvt

Figure 15. Cluster Configuration - Slave State

Every time you modify the setting (for example, changing the Role) of any cluster member, the cluster will be reconstructed (cluster state Discovering > Voting > Master or Slave). If you modify the Role to "Individual", Cluster State will show 'IDLE'. The DSLAM is not in a cluster now.

If you are directly connecting to a Slave in the cluster (connecting via its in-band IP address) you cannot switch to any other member in the cluster.

System Inventory

This option allows you to retrieve the system inventory including Description of the System, HW/FW/SW Version, Model Information, Part Number, Hardware Revision, and Serial Number.

From the **System** menu, click on **System Inventory**. Click on the **Query** button. The following page displays:

System Inventory			
<input type="button" value="Query"/>			
Description	Hardware	Firmware	Software
UMAP 2112 24-port ADSL2+ POTS	B	1.00B05	1.00B05
Model Information	Part Number	HW Revision	S/N
U2112-AM3155-88	A12-3456-E7890-1A23	tt	QWERTYUIOPK

Figure 16. System Inventory page

System Contact Info

This option allows you to specify the system name, system contact, and system location.

From the **System** menu, click on **System Contact Info**. The following page displays:

System Contact Information	
<input type="button" value="Query"/> <input type="button" value="Modify"/>	
Name	u7377A,A
Contact	
Location	
Description	UMAP 2112 24-port ADSL2+ POTS

Figure 17. System Contact Info page

Type in the value you desire, and then click on **Modify** to apply the setting. Click on **Query** to verify if the value is changed.

SNTP

This option allows you to setup the Simple Network Time Protocol (SNTP).

From the **System** menu, click on **SNTP**. The following page displays:

The screenshot shows a configuration page titled "Simple Network Time Protocol". At the top right is a "Modify" button. Below it is a dropdown menu labeled "Select Time Zone" with the value "(25) 0, 0, GMT, Greenwich Mean Time". The main area contains five rows of configuration fields:

Time Zone	GMT
System Date	2006 / 8 / 31
System Time	05 : 18 : 53
Polling Interval	600
SNTP Server address	61 . 206 . 115 . 3

Figure 18. SNTP page

Table 7. SNTP Options

Label	Description
Time Zone	Sets the local time zone by selecting in the Time Zone drop-down list. Sixty-five of the world's time zones are presented (including those using standard time and summer/daylight savings time).
System Date	Sets system date (yyyy/mm/dd).
System Time	Sets system time (hh:mm:ss).
Polling Interval	Sets the polling interval (in seconds) that SNTP client will sync with a designated SNTP server.
SNTP Server address	Sets the dedicated unicast server IP address for which the SNTP client can synchronize its time.
Modify	Click on this button to submit the modification.

IP Routes

This option allows you to configure the IP route table for the in-band management traffic.

From the **System** menu, click on **IP Routes**.

The screenshot shows the 'IP Routes' configuration page. At the top, there is a 'System Gateway' field containing '172.16.100.73' with a 'Set' button. Below it is a table with columns 'Destination', 'Net Mask', and 'Gateway'. The table has 9 rows, indexed from 1 to 8. Rows 1 and 2 have valid entries: row 1 has '192.168.7.0' as destination, '255.255.255.0' as net mask, and '172.16.100.73' as gateway; row 2 has '192.168.8.0' as destination, '255.255.255.0' as net mask, and '172.16.100.73' as gateway. Rows 3 through 8 are empty with '--' in all columns. Navigation buttons include 'Next No.' (set to 3), 'ADD', 'Delete', and 'Page 1 of 2'.

	Destination	Net Mask	Gateway
Next →	0 . 0 . 0 . 0	0 . 0 . 0 . 0	0 . 0 . 0 . 0
1	192.168.7.0	255.255.255.0	172.16.100.73
2	192.168.8.0	255.255.255.0	172.16.100.73
3	--	--	--
4	--	--	--
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--

Figure 19. IP Routes page

Table 8. IP Route Setup Options

Label	Description
System Gateway	This field shows current system default gateway. You can modify the gateway address by typing in new value and then click on Set . If the DSLAM is a Slave in a cluster, this field shows the in-band IP address of the Master; if the DSLAM is a Master in a field shows the IP address of the Cluster gateway.
ADD Next	Click on this button to add a new IP route.
Destination	Type in the destination IP address for the new IP route.
Net Mask	Type in the subnet mask for the new IP route.
Gateway	Type in the IP address of the gateway for the new IP route.
Delete	Click on the radio button to select a route and then click on this button to delete this route from the table.

User Administration

This option allows you to administer accounts for users who access the DSLAM.

From the **System** menu, click on **User Administration**. Click on the drop-down menu for **Select** and choose a page to display.

User Administration							
<input type="button" value="Select"/> Page 1 of 4(No.1 to 8) <input type="button" value="New"/> <input type="button" value="Delete"/> <input type="button" value="Modify"/>							
No.	User Name	Level	Aging day	Start Date	Last Login	Comment	
<input checked="" type="radio"/> 1	admin	Super	0		2006/08/31 07:58:37		
<input type="radio"/> 2	sang	Guest	0	2006/08/31 08:49:08	2006/08/31 08:49:22	comment2	

Figure 20. User Administration page

Table 9. User Administration Options

Label	Description
Page	Click on the drop-down list and select the page to be displayed.
New	Click on this button to create a new user. The following page displays: Once you have typed in all the information for the new user, click on the Create button.
Delete or Modify	Click on the radio button on the leftmost column of the user table to select the user you want to delete / modify. Then click on Delete / Modify button. Note that the default admin user cannot be deleted.
User Name	Shows the name of the user (up to 32 characters).
Level	The available access levels include: SUPERUSER , ENGINEER , and GUEST .
Aging day	Set password expiration days (0 for no expiration days)
Start Date	Shows the day when the account was first created.
Last Login	Shows the day when a user last login.
Comment	Description about the user account (up to 31 characters).

If a new account is added: (for example, Test1 is added)

User Administration							
Select: <input type="button" value="Page 1 of 4 (No.1 to 8)"/> <input type="button" value="New"/> <input type="button" value="Delete"/> <input type="button" value="Modify"/>							
No.	User Name	Level	Aging day	Start Date	Last Login	Comment	
1	admin	Super	0		2006/11/14 07:05:58		
2	Test1	Guest	0		2006/11/14 07:05:58	comment2	

Figure 21. Add New User Account

When user Test1 intends to login for the first time, he will be asked to change his password (see the figure below) and then login with the new password.

Model 3124 ADSL2/2+

Hi! **Test1** Please Change your password!

Old Password:	*****
New Password:	*****
Retry Password:	*****
<input type="button" value="SUBMIT"/>	

Figure 22. Change User Password

Duplicator

This option allows you to duplicate all/partial the configurations of one selected line port (as a template) to other ports (as many as you want).

From the System menu, click on Duplicator.

The screenshot shows the 'System Duplicator' interface. At the top, there is a field labeled 'Templated ADSL Port' with the value '1'. Below it is a 'Paste' button. A section titled 'To be duplicated ADSL Port:' contains a list of ports from 01 to 24, each with a checkbox. The port '1' is checked. Below this is a table with columns 'Select', 'Function', and 'Description'. The table lists nine functions, each with a checkbox:

Select	Function	Description
<input type="checkbox"/>	ADSL Line Configuration	ADSL Line configuration
<input type="checkbox"/>	ADSL Profiles	Service profile, Specturm profile and TCA profile have serviced in ADSL Port
<input type="checkbox"/>	ADSL Port Admin Status	ADSL line Admin Status
<input type="checkbox"/>	DSL Identify Trust	DSL Identify Trusted Status
<input type="checkbox"/>	PVC VLAN BRIDGE	ADSL Port PVC,Bridge and VLAN Settings
<input type="checkbox"/>	IGMP ACL	IGMP ACL Profile in Binding table
<input type="checkbox"/>	FILTERING	All of the Filtering
<input type="checkbox"/>	Priority Remark	VLAN Priority Remark table exclude Re-Generation function
<input type="checkbox"/>	Priority Re-Generation	The Re-Generation function in VLAN VLAN Priority Remark table
<input type="checkbox"/>	Ether policer	Ether policer of the Rate limit table

Figure 23. System Duplicator page

Select the content of configurations (ADSL line configuration, ADSL profiles, or...) you want to duplicate first. Then specify the port number as the template (the source port to be copied), and at last click on **Paste** to apply.

Chapter 3 Bridge Configuration

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Interface Setup

This option allows you to setup the trunk and line interfaces.

GIGA Bridge

This option allows you to setup the GBE (trunk) bridge interface. From the **Bridge** menu, click on **Interface Setup**, then **GIGA Bridge**. The following page displays:

Figure 24. GIGA Bridge page

Table 10. GIGA Bridge Options

Label	Description
Mode	Click on the drop-down list and specify the trunk port to be an Uplink or User (especially for system stacking).
VID	Type in the VLAN ID (1 ~ 4094).
Max MAC	Type in the maximum number of MAC addresses that can be learned by the bridge port (for GBE interface: 1 ~ 4096, for DSL interface: 1 ~ 128).
VLAN	VLAN setting for the egress traffic. Includes three drop-down lists: <ul style="list-style-type: none"> PRI-0 ~ 7: Set the VLAN priority Level. UnTagged/Tagged: Select to untag / tag the outgoing (upstream direction for trunk bridge ports) packets. If UnTagged is selected, a double-tagged packet will leave single-tagged (the outer most VLAN tag is removed) and a single-tagged packet will leave untagged. no Stack/Stack: Disable/Enable N:1 VLAN stacking (our system adds the default VLAN tag to all the incoming frames through this port). Note: When an untagged frame enters the Model 3124, it is assigned the default PVID of the ingress (incoming) bridge port and become a single-tagged frame no matter VLAN stacking is enabled or not.
Ingress	Set Ingress ON: check if the VID of the incoming frame is in the member set. If not in the member set, block the frame. Set Ingress OFF: Ingress filter disabled.
AccFrm	Click on the drop-down list and select to accept ALL Frame, only VLAN tagged frame, or only Untagged frame.
Isol	ON/OFF to enable/disable isolation. When port isolation is enabled, packets received from a trunk port (when both the trunk interfaces are configured as up-link) cannot be forwarded to the other trunk port even for broadcasting.

Table 10. GIGA Bridge Options

Modify	To modify the configuration of a GIGA port: 1. Click on the radio button to select trunk port 1 2. Change the parameter values 3. Click on Modify button to apply new values
Query	Click on this button to query current status.

ADSL PVC

This option allows you to setup the ADSL PVC. From the **Bridge** menu, click on **Interface Setup** and then **ADSL PVC**. Click on the drop-down lists to select port range and PVC first. Then the data of these PVCs (bridge ports) you selected will be displayed. Click on the radio button to select the PVC you want to create, modify, or delete.

[ADSL PVC Setup](#)

The screenshot shows the 'ADSL PVC Setup' window. At the top, there are dropdown menus for VPI (0), VCI (35), Traffic Rx (Default[UnShaped]), and Tx (Default[UnShaped]). Below these are dropdowns for Encap (LLC), Protocol Base VLAN (Disabled), and an 'ALL' checkbox. There are also 'Create', 'Modify', and 'Delete' buttons. A dropdown for Port (Port 01~12) is set to 'PVC-1'. A 'Query' button is also present. The main area displays a table of PVC configurations:

Select	Port	VPI	VCI	Rx Traffic	Tx Traffic	ENCAP	Protocol Base VLAN
<input type="radio"/>	1	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	2	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	3	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	4	0	35	Default	Default	LLC	Disabled
<input checked="" type="radio"/>	5						
<input type="radio"/>	6						
<input type="radio"/>	7						
<input type="radio"/>	8						
<input type="radio"/>	9	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	10	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	11	0	35	Default	Default	LLC	Disabled
<input type="radio"/>	12	0	35	Default	Default	LLC	Disabled

[ATM TRAFFIC PARAMETER]

Figure 25. ADSL PVC page

Table 11. ADSL PVC Options

Label	Description
VPI	Type in the VPI value: 0 ~ 255. Default value is 0.
VCI	Type in the VCI value: 21, 32 ~ 65535. Default value is 35.
Traffic	Click on the drop-down list and select a traffic type for transmit and receive direction respectively. Available options are created in the ATM Traffic Descriptor page.
Encap	Select AAL5 Encapsulation Type: VCMUX, LLC, or AUTO (for PVC#1 ~ PVC#4 only). ^a
Protocol Based VLAN	Select in the drop-down list to enable or disable protocol based VLAN function. When protocol based VLAN is enabled, the bridge port will work according to the protocol based VLAN table.

Table 11. ADSL PVC Options

All	Select the check box to copy specified circuit to all remainder circuits in current page.
Create	Click on the radio button to select a PVC (bridge port) that has not been created. Set the parameter values and then click on Create to create a PVC.
Modify	Click on the radio button to select the PVC (bridge port) you want to modify. Change the parameter values and then click on Modify.
Delete	Click on the radio button to select the PVC (bridge port) you want to delete. Then click on Delete to remove the PVC.
Query	Click on this button to get the most recent data.

a. The Model 3124 supports auto-detection of the ATM AAL5 encapsulation method, LLC or C-Mux. Meanwhile, the Model 3124 is also able to automatically sense the following protocol encapsulations: PPPoE over ATM (per RFC 2684), IPoE over ATM bridge mode, and PPP over ATM. IPoA works on individual PVC. However, there are limitations on auto-detection of encapsulations:

1. LLC/VC-Mux automatically detection is only applicable to PVC#1 ~ PVC#4 of each ADSL port. PVC#5 ~ PVC#8 must be assigned the ATM AAL5 encapsulation method manually.
2. PPPoA works only for PVC#1 ~ PVC#4 and the LLC/VC-Mux automatically detection must be enabled. Refer to section IPoA configuration.

ADSL Bridge

This option allows you to setup the ADSL bridge interface. From the **Bridge** menu, click on **Interface Setup**, then **ADSL Bridge**. The following page displays. Click on the drop-down lists to select port range and PVC first. Then the data of these PVCs (bridge ports) you selected will be displayed. Click on the radio button to select the bridge port you want to modify.

Select	Port	VID	VLAN	Ingress	Acc.Frm	Isolation	Priority Force
<input type="radio"/>	1	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	2	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	3	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	4	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	5	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	6						
<input type="radio"/>	7	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	8	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	9	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	10	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	11	1	UnTagged / pri-0 / No Stack	ON	ALL	ON	Disable
<input type="radio"/>	12						

Figure 26. ADSL Bridge page

Table 12. ADSL Bridge Options

Label	Description
VID	Type in the VLAN ID (1 ~ 4094).
VLAN	<p>VLAN setting for the egress traffic. Includes three drop-down lists:</p> <ul style="list-style-type: none"> • UnTagged/Tagged: Select to untag / tag the outgoing (downstream direction for line bridge ports) packets. If UnTagged is selected, a double-tagged packet will leave single-tagged (the outer most VLAN tag is removed) and a single-tagged packet will leave untagged. • PRI-0 ~ 7: Set the VLAN priority Level. • no Stack/Stack/TLS: disable N:1 VLAN stacking / enable N:1 VLAN stacking (our system adds the default VLAN tag to all the incoming frames through this port) / enable TLS (transparent LAN service) so that this bridge port becomes VLAN transparent (refer to DSL Forum, TR-101). A pre-configured S-Tag is used to encapsulate TLS traffic going through this port. That is, an S-Tag (PVID here) will be added to all the upstream frames received on this port, and the C-Tags will be the original tags of these frames (no C-Tag for untagged incoming frames). On the other hand, the S-tag will be removed from all the downstream (outgoing) frames. <p>Note: When an untagged frame enters the Model 3124, it is assigned the default PVID of the ingress (incoming) bridge port and become a single-tagged frame no matter VLAN stacking is enabled or not.</p>
Ingress	<p>Set Ingress ON: check if the VID of the incoming frame is in the member set. If not in the member set, block the frame.</p> <p>Set Ingress OFF: Ingress filter disabled.</p>
AccFrm	Click on the drop-down list and select to accept ALL Frame, only VLAN tagged frame, or only Untagged frame.
Isolation	ON/OFF to enable/disable isolation. When port isolation is enabled, packets received from a line bridge port (including trunk interface configured as user link) cannot be forwarded to the other trunk port even for broadcasting.
Priority Force	<p>Click on the drop-down list and select the priority-forcing mode.</p> <ul style="list-style-type: none"> • Disabled: Reserve the original priority of all packets. • Ingress: Force applying the default VLAN priority value to all the packets received on this bridge port (so this rule will work on all the member-set of this bridge port). • Egress: Force the priority value of all packets sent out from this bridge port's default VLAN to be the default VLAN priority (so this rule only works on default VLAN of this bridge port). • Both: Combine the rules of Ingress and Egress.
All	Select the check box to copy specified circuit to all remainder circuits in current page.

Table 12. ADSL Bridge Options

Modify	Click on the radio button to select the bridge port you want to modify. Change the parameter values and then click on Modify.
Query	Click on this button to get the most recent data.

ADSL Port Security

This option allows you to setup the ADSL port security. From the Bridge menu, click on Interface Setup, then **ADSL Port Security**. The following page displays. Click on the drop-down lists to select port range and PVC first. Then the data of these PVCs (bridge ports) you selected will be displayed. Click on the radio button to select the bridge port you want to modify.

Select	Port	Max MAC	MAC Learning	IP Allowed
<input checked="" type="radio"/>	1	4	Enabled	Disabled
<input type="radio"/>	2	4	Enabled	Disabled
<input type="radio"/>	3	4	Enabled	Disabled
<input type="radio"/>	4	4	Enabled	Disabled
<input type="radio"/>	5	8	Enabled	Disabled
<input type="radio"/>	6			
<input type="radio"/>	7	8	Enabled	Disabled
<input type="radio"/>	8	8	Enabled	Disabled
<input type="radio"/>	9	4	Enabled	Disabled

Figure 27. ADSL Port Security page

Table 13. ADSL Bridge Options

Label	Description
Max MAC	Type in the maximum number of MAC addresses that can be learned by the ADSL bridge port (1 ~ 128).
MAC Learning	Select to enable/disable MAC learning ability. Sometimes you can disable MAC learning on specified bridge port. This function is for 1:1 VLAN translation scenario.
IP Allowed	Select to enable/disable IP Allowed function. When you enable IP Allowed function on a bridge port, this bridge port will work according to the Static Allowed IP table (refer to section 4.3.4). So you need to define the source IP addresses that bind to this bridge port. Then the IP packets that contain these source IP addresses can pass through this bridge port; otherwise the packets will be blocked.
All	Select the check box to copy specified circuit to all remainder circuits in current page.
Modify	Click on the radio button to select the bridge port you want to modify. Change the parameter values and then click on Modify.
Query	Click on this button to get the most recent data.

802.1x Security Setup

System Protocol

This option allows you to enable/disable 802.1x authentication function of the system, and setup the 802.1x authentication mechanism for each line bridge port. Before you setup 802.1x for a line bridge port, you must create the ADSL PVC (bridge port) first.

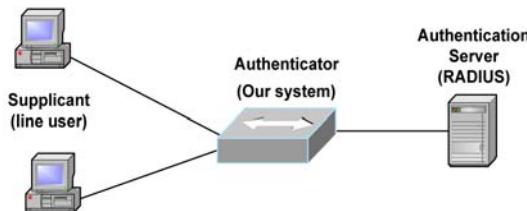


Figure 28. 802.1x Diagram

From the 802.1x Security menu, click on System Protocol.

Main Setting

System Authentication									
Modify		Query		802.1x Enabled ▼					
Port Authentication									
Main Setting Timer Setting <small>* Stands for default value</small> <small>[1] Accounting Interim Interval (300~600)Second</small> <small>[2] All of the Max Request(1~10)</small>									
Port 01~12	PVC-1	Modify	Delete	Default					
Select	Port	Enable	Accounting Control	Accounting Interval	Port Control	Max Request Authentication	ReAuthentication Control	Max Request ReAuthentication	
01	<input type="checkbox"/>	OFF	OFF	300	Auto	2	OFF	2	
02	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
03	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
04	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
05	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
06	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
07	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
08	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
09	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
10	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
11	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
12	<input type="checkbox"/>	Select	Select	Select	Select	Select	Select	Select	
ADSL PVC CONFIGURATION									

Figure 29. 802.1x System Protocol - Main Setting page

Table 14. 802.1x System Protocol - Main Setting Options

Label	Description
System Authentication section	
Click on the drop-down list to enable or disable the 802.1x authentication function of the system. If you select "Disabled", any setting in the Port Authentication section will not take effect.	

Table 14. 8021.x System Protocol - Main Setting Options

Port Authentication section - Main Setting	
Port 01~12 PVC-1	Select the line bridge port range to be listed.
Select Port	Remember to select the checkbox when you want to modify/delete the setting of a bridge port or set a bridge port to its default value.
Enable	OFF/ON: disable/enable 802.1x authentication function for the bridge port. When 802.1x is disabled, the system allows bidirectional normal traffic in this port in spite of its authentication state. Default is OFF.
Accounting Control	OFF: notify RADIUS server to stop accounting for this port. ON: notify RADIUS server to start accounting for this port. Default is OFF.
Accounting Interval	Type in the interval (300 ~ 600 sec) between accounting information updates. Default is 300 sec.
Port Control	Force-unAuth: cause the port to stay in the unauthorized state, ignoring all attempts by the client to authenticate. Force-Auth: disable 802.1X authentication and cause the port to transition to the authorized state without any authentication exchange required. Auto: enable 802.1x authentication and cause the port to begin the authentication process from unauthorized state.
Max Request Authentication	Type in the number of times our system will send authentication requests to Supplicant if no response from the Supplicant is received. Default value is 2.
ReAuthentication Control	OFF: disable re-authentication after a period of time ON: enable re-authentication after a period of time Default is OFF.
Max Request ReAuthentication	Type in the number of times our system will send authentication

Timer Setting

System Protocol

System Authentication						
Modify		Query	802.1x Enabled			
Port Authentication						
Main Setting Timer Setting						
* Stands for default value [1]All of the Timeout (0..60*.65535)Second [2]Tx Period (1..30*.65535)Second [3]Re-Auth Period (60..3600*.65535)Second [4]Quiet Period(0..60*.65535)Second						
Port 01~12 ▼ PVC-1 ▼		Modify	Delete	Default		
Select	Supplicant Timeout	Server Timeout	Tx Period	ReAuthentication Period	Quiet Period	
01 <input type="checkbox"/>	60	60	30	3600	60	
02 <input type="checkbox"/>						
03 <input type="checkbox"/>						
04 <input type="checkbox"/>						
05 <input type="checkbox"/>						
06 <input type="checkbox"/>						
07 <input type="checkbox"/>						

Figure 30. 802.1x System Protocol - Timer Setting page

Table 15. 8021.x System Protocol - Timer Setting Options

Label	Description
Port Authentication section - Timer Setting	
Port 01~12	Select the line bridge port range to be listed.
PVC-1	
Select Port	Remember to select the checkbox when you want to modify/delete the setting of a bridge port or set a bridge port to its default value.
Supplicant Timeout	Type in the number of seconds our system will wait for a response before resending the request to the supplicant. Default is 60 (sec).
Server Timeout	Type in the number of seconds our system will wait for a reply before resending the response to the authentication server. Default is 60 (sec).
Tx Period	Type in the number of seconds our system will wait for a response to an EAP-request/identity frame from the supplicant before resending the request. Default is 30 (sec).
ReAuthentication Period	Type in the number of seconds between re-authentication requests. Default is 3600 (sec).
Quiet Period	Type in the number of seconds that our system remains in the quiet state following a failed authentication exchange with the supplicant. Default is 60 (sec).

RADIUS & Local Profile

The Model 3124 system supports RADIUS client function for authenticating line ports with local authentication database or remote RADIUS server. From the **802.1x Security** menu, click on **RADIUS & Local Profile**. The following page displays:

The screenshot shows the configuration interface for RADIUS & Local Profile. It includes three main sections: Authentication Method, RADIUS Server, and Local Profile.

- Authentication Method:** A table with four columns (AAA Method1, AAA Method2, AAA Method3, AAA Method4) each with a dropdown menu set to "NONE". Below this is a "Modify" button.
- RADIUS Server:** A table with columns: Select, RADIUS Server IP, Authentication Port (default 1812), Accounting port (default 1813), MAX Fail (1..10), VLAN ID, and Secret ID. It lists three entries: Index#1, Index#2, and Index#3, all with IP 0.0.0.0.
- Local Profile:** A table with columns: Select, Username, Password, Select, Username, Password. It lists profiles No.01 through No.08.

Figure 31. RADIUS & Local Setup page

Table 16. RADIUS & Local Setup Options

Label	Description
Authentication Method section	
In this section, operators set up four AAA methods for the system to use, and the priority order is Method1 > Method2 > Method3 > Method4. If a user cannot be authenticated when the system uses Method1, the system will then try to use Method2, and so on. Click on the AAA method drop-down list and select a RADIUS server index or the local profile, which has been already configured in the RADIUS Server section or Local Profile section. Lastly, click on the Modify button.	
RADIUS Server section	
Select (Index#n)	Remember to select the checkbox when you want to modify or delete a RADIUS server entry.
RADIUS Server IP	Type in the IP address of the remote RADIUS server.
Authentication Port	Type in the port number for RADIUS Authentication in the Layer-4 header. Default is 1812.
Accounting Port	Type in the port number for RADIUS Accounting in the Layer-4 header. Default is 1813.
Max Fail	Type in the maximum allowable times of continuously failed authentication attempts.
VLAN ID	Type in the VID of the VLAN which the RADIUS server belongs to.
Secret ID	Type in the authentication key in text format.
Local Profile section	
Select	Click on the drop-down list and select the profile range to be listed. There are total 8 pages and 8 profiles per page (up to 64 local profiles can be set in our system).
Username	Type in the username for authentication.
Password	Type in the password for authentication.

VLAN Configuration

Static VLAN

This option allows you to configure the static VLAN. From the Bridge menu, click on VLAN Configuration and then Static VLAN. The Static VLAN page displays. Click on the radio button to select CONFIG VLAN or SHOW VLAN.

CONFIG VLAN

Click on the drop-down list to select **ADSL or GIGA** port. Then, select a port and PVC if ADSL is selected. Once you have selected the bridge interface, its current static VLAN setting displays. To add a new VLAN member, type in VID for the **New VID** field and then select Tagged/UnTagged for **VLAN Tag**, ON/OFF for **Isolation**, and **VLAN Priority** Level (specify a number or reserve the original value) for Priority. Lastly, click on **Create=>**. To modify or delete a VLAN, select the checkboxes of the entries you want to modify or delete and then click on **Modify** or **Delete**.

Port	Default VID	VLAN ID List			
ADSL Port1-PVC1	1	5,8			
<input type="checkbox"/> Modify	<input type="checkbox"/> Delete	Added VID	Vlan Tag	Isolation	Priority
		5	Tagged	ON	Reserved
		8	Tagged	OFF	Reserved
Create=>		New VID	Vlan Tag	Isolation	Priority
		[--]	Tagged	ON	Reserved

[GIGA BRIDGE | ADSL BRIDGE]

Figure 32. Static VLAN - CONFIG VLAN

SHOW VLAN

In **SHOW VLAN**, type in the VID and then click on **Query**. All the bridge ports belonging to the VLAN and the configuration data of these ports will display in the table.

No.	Default VID	VLAN Tag	VLAN Priority	Isolated	Egress Port
1	True	UnTagged	Reserved	Enabled	GIGA UPLINK:1
2	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:1-1
3	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:2-1
4	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:3-1
5	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:4-1
6	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:5-1
7	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:7-1
8	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:8-1
9	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:9-1
10	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:10-1
11	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:11-1
12	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:12-1
13	True	UnTagged	Reserved	Enabled	ADSL Port-PVC:6-5

[GIGA BRIDGE | ADSL BRIDGE]

Figure 33. Static VLAN - SHOW VLAN

Protocol Base VLAN

This option allows you to configure the protocol-based VLAN table. From the **Bridge** menu, click on **VLAN Configuration** and then **Protocol Base VLAN**. The following page displays. Select the checkboxes of the entries you want to create or delete. To create a new entry, type in the **VLAN ID** and select the **EtherType** (protocol). If you select Other for EtherType, type the EtherType value in the field on the far right.

Select	NO	VLAN ID (1..4094)	EtherType	
<input type="checkbox"/>	1	1	PPPoE Discovery Stage	--
<input type="checkbox"/>	2	2	PPPoE Session Stage	--
<input checked="" type="checkbox"/>	3	3	Other	0x 8035
<input type="checkbox"/>	4		Select	0x
<input type="checkbox"/>	5		Select	0x
<input type="checkbox"/>	6		Select	0x
<input type="checkbox"/>	7		Select	0x
<input type="checkbox"/>	8		Select	0x

[STATIC VLAN]

Figure 34. Protocol Base VLAN

Translation VLAN

This option allows you to configure the translation VLAN table, which defines some special VLAN working rules such as VLAN stack, VLAN cross-connect, etc. Before you configure the Translation VLAN table for a line bridge port, you shall configure the Static VLAN table for this line bridge port and the GIGA bridge port in advance. Also, you shall disable VLAN stacking feature of this line bridge port in the ADSL bridge interface setup page (see “[ADSL Bridge](#)” on page 31), otherwise the VLAN translation rule here will not take effect. From the **Bridge** menu, click on **VLAN Configuration** and then **Protocol Base VLAN**. The following page displays. Click on the radio button to select translation Mode first.

Translation VLAN					
<input checked="" type="radio"/> 1:1 User Mode <input type="radio"/> N:1 User Mode <input type="radio"/> C_VLAN Stacking Replaced Mode					
sTag ether type: 0x 8100 <input type="button" value="Set"/> ADSL <input type="button" value="Port-1"/> PVC-1 <input type="button" value="PVC-1"/>					
Port	Default VID	VLAN ID List			
ADSL Port1-PVC1	1	1,5,8			
<input type="button" value="Delete"/>	ADSL VID	UPLINK Port	UPLINK VID	UPLINK Priority	VLAN MODE
	1	GIGA1	1	0	RESERVED
	5	GIGA1	1	1	STACKING
	ADSL VID	G1 UPLINK VID		UPLINK Priority	VLAN MODE
	<input type="button" value="Create==>"/>	<input type="button" value="1*"/>	<input type="button" value="Select"/>	<input type="button" value="Select"/>	<input type="button" value="Select"/>
<input type="button" value="GIGA BRIDGE"/> <input type="button" value="ADSL BRIDGE"/> <input type="button" value="STATIC VLAN"/>					

Figure 35. Translation VLAN

The Model 3124 provides five translation modes: four for “[1:1 VLAN \(including 1:1 User Mode and C_VLAN Stacking Replaced Mode\)](#)” on page 40 and one for “[N:1 VLAN \(N:1 User Mode\)](#)” on page 41.

1:1 VLAN (including 1:1 User Mode and C_VLAN Stacking Replaced Mode)

If the ADSL user bridge port only has 1:1 VLAN, then MAC learning function of this bridge port can be disabled.

- 1. Reserved:** In this mode, the system does not make any change on C-Tag. That is the uplink port's S-Tag is actually the C-Tag. The system provides a tunnel for the user port and uplink port. And one VLAN ID can only make one tunnel.
- 2. Replaced:** In this mode, the system will change the user port's C-Tag to the Uplink port's S-Tag. And the mapping is one to one, that is, one user port's C-Tag (one VID) can only translate to one uplink port's S-Tag (one VID), and vice versa. For example, for ADSL Port1-PVC1, if ADSL VID 5 translates to GIGA1 VID 1, then you cannot make ADSL VID 5 translate to another GIGA VID. You also cannot make another ADSL VID translate to GIGA VID1.

Upstream: C-Tag -> (User port)-----(Uplink port) -> S-Tag

Downstream: S-Tag -> (Uplink port)-----(User port) -> C-Tag

- 3. Stacking:** In this mode, the system will add S-TAG before user port's C-TAG. Note that the mapping from C-Tag to S-Tag+C-Tag is still one to one. So a user port's C-Tag can't be used for another translation rule, as well as an uplink port's S-Tag+C-Tag.

Upstream: C-Tag -> (User port)----- (Uplink port) -> S-Tag+C-Tag

Downstream: S-Tag+C-Tag -> (Uplink port)----- (User port) -> C-Tag

- 4. Stacking and Replaced:** In this mode, the system will replace the user port's C-Tag to C'-Tag and add S-Tag before C'-Tag. Note that the mapping from C-Tag to S-Tag+C'-Tag is still one to one. So a user port's C-Tag can't be used for another translation rule, as well as an uplink port's S-Tag+C'-Tag.

Upstream: C-Tag -> (User port)----- (Uplink port) -> S-Tag+C'-Tag

Downstream: S-Tag+C'-Tag -> (Uplink port)----- (User port) -> C-Tag

[Translation VLAN](#)

1:1 User Mode <input checked="" type="radio"/> N:1 User Mode <input type="radio"/> C_VLAN Stacking Replaced Mode <input type="radio"/>							
sTag ether type: 0x 8100 <input type="button" value="Set"/>							
ADSL <input type="button"/> Port-1 <input type="button"/> PVC-1 <input type="button"/>							
Port	Default VID	VLAN ID List					
ADSL Port1-PVC1	1	1,5,8					
Delete	ADSL VID	UPLINK Port	UPLINK VID	New CVLAN ID	New CVLAN Priority	UPLINK Priority	VLAN MODE
ADSL VID G1 UPLINK VID				New CVLAN ID	New CVLAN Priority	UPLINK Priority	VLAN MODE
<input type="button" value="Create=>"/> <input style="width: 20px; height: 20px; border: 1px solid black; border-radius: 50%;" type="button" value="1"/> <input style="width: 100px; height: 20px; border: 1px solid black; border-radius: 5px; padding: 0 5px;" type="button" value="Select"/> <input style="width: 20px; height: 20px; border: 1px solid black; border-radius: 5px;" type="button" value="["/> <input style="width: 20px; height: 20px; border: 1px solid black; border-radius: 5px;" type="button" value="]"/> <input style="width: 100px; height: 20px; border: 1px solid black; border-radius: 5px; padding: 0 5px;" type="button" value="Select"/> <input style="width: 100px; height: 20px; border: 1px solid black; border-radius: 5px; padding: 0 5px;" type="button" value="Select"/> <input style="width: 100px; height: 20px; border: 1px solid black; border-radius: 5px; padding: 0 5px;" type="button" value="CTAG"/>							
[GIGA BRIDGE] [ADSL BRIDGE] [STATIC VLAN]							

Figure 36. Translation VLAN - C-Tag

N:1 VLAN (N:1 User Mode)

N:1 can also be called shared VLAN, so in this mode MAC learning function of the bridge ports must not be disabled.

- Replaced N:1:** In this mode, the system will change the user port's C-Tag to the Uplink port's S-Tag. And the mapping is N to 1, so a user port's C-Tag can't be used for another VLAN translation rule. But an uplink port's S-Tag can be used for another N:1 VLAN translation rule. So in this mode several bridge ports can have the same VLAN cross-connect rule.

Translation VLAN

<input type="radio"/> 1:1 User Mode <input checked="" type="radio"/> N:1 User Mode <input type="radio"/> C_VLAN Stacking Replaced Mode					
sTag ether type: 0x 8100 <input type="button" value="Set"/> ADSL <input type="button" value="Port-1"/> <input type="button" value="PVC-1"/>					
Port	Default VID	VLAN ID List			
ADSL Port1-PVC1	1	1,5,8			
<input type="button" value="Delete"/>	ADSL VID	UPLINK Port	UPLINK VID	UPLINK Priority	VLAN MODE
	ADSL VID	G1 UPLINK VID	UPLINK Priority	VLAN MODE	
<input type="button" value="Create==>"/> 1 st <input type="button" value="Select"/> Select <input type="button" value="Select"/> REPLACED N:1					
[GIGA BRIDGE ADSL BRIDGE STATIC VLAN]					

Figure 37. Translation VLAN - Replaced N:1

Static Allowed IP

This option allows you to configure the Static Allowed IP table. From the **Bridge** menu, click on **VLAN Configuration** and then **Static Allowed IP**. The following page displays. To make bridge port work according to this Static Allowed IP table, the IP allowed function must be enabled (see “[ADSL Port Security](#)” on page 33).

Static Allowed IP

CONFIG ALLOWED IP

<input type="button" value="Delete"/> <input type="button" value="Query"/>				
Delete Select	No	Port	VLAN ID	Allowed Source IP
<input type="checkbox"/>	1	ADSL Port1-PVC1	1	172.2.0.1
<input type="checkbox"/>	2	ADSL Port8-PVC1	8	172.2.0.1
ADSL <input type="button" value="Port-1"/> <input type="button" value="PVC-1"/> VLAN ID: <input type="text"/> Allowed IP: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="button" value="Create"/>				
[GIGA BRIDGE ADSL BRIDGE]				

Figure 38. Static Allowed IP table

Click on the drop-down lists to select ADSL port and PVC number, then type in VID and allowed source IP that can pass through the VLAN.

MAC Spoofing

This option allows you to enable/disable anti-MAC Spoofing function and MAC-Spoofing detection log function. From the **Bridge** menu, click on **VLAN Configuration** and then **MAC Spoofing**. The following page displays.

No	Port	VLAN ID	MAC
[GIGA BRIDGE ADSL BRIDGE]			

Figure 39. MAC Spoofing page

Table 17. MAC Spoofing Options

Label	Description
Spoofing	Click on the drop-down list to select: OFF: The system is able to provide service to users with duplicate MAC addresses. ON: The system is able to deny service to users with duplicate MAC addresses.
Set	Click on the drop-down list to select: OFF: No log of MAC spoofing data when detected. ON: The system provides log when duplicated MAC addresses detected.
Log	Click on this button to apply the setting.
Query	Click on this button to get the MAC spoofing information (the Log function must be enabled).

Access Control

Filtering

This option allows you to setup the filter rule for the packets. From the Bridge menu, click on Access Control and then Filtering. Click on Filtering Type drop-down list and select a filtering type first.

The screenshot shows a software interface for managing network filters. At the top, there is a dropdown menu labeled "Filtering Type" with the option "Select" highlighted. Below this is a table titled "Filtering Table" containing six rows, each corresponding to a filtering type: (0)Protocol, (1)Source MAC, (2)Source IP Address, (3)Layer 4 Destination Port, (4)Destination IP, (5)Destination MAC, and (6)Ether Type. At the bottom of the interface, there are three buttons: "GIGA BRIDGE", "ADSL BRIDGE", and "STATIC VLAN".

Figure 40. Filtering Table

Protocol Filtering

The screenshot shows a "Protocol Filtering" page. At the top, it displays "Filtering Type: Protocol", "No. From: 1", and "To: 1". Below this is a table with three rows. The first row has columns "No.", "Port", and "Passable Protocol", with values 1, ADSL Port1-PVC1, and ICMP respectively. The second row contains dropdown menus for "ADSL", "Port-1", and "PVC-1". The third row is a "Create" row with fields for "Next No: 2", "Protocol: (01)ICMP", and a "Create" button. At the bottom, there are three buttons: "GIGA BRIDGE", "ADSL BRIDGE", and "STATIC VLAN".

Figure 41. Protocol Filtering page

Table 18. Protocol Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Protocol	Click on this drop-down list and select a protocol to deny: ICMP, IGMP, IP in IP, TCP, GRP, IGP, UDP, GRE, EIGRP, or OSPF.
Create	Click on this button to create new filter rules in the table.

Source MAC Filtering

The screenshot shows a web-based configuration interface for source MAC filtering. At the top, there are dropdown menus for 'Filtering Type' (set to 'Source MAC'), 'No. From' (set to 1), and 'To' (set to 1). Below these are buttons for 'Query' and 'Delete'. The main area contains a table with columns 'No.', 'Port', and 'Source MAC'. One row is present, showing No. 1, Port GIGA1, and Source MAC 03:ae:00:ee:00:ff. Below the table are dropdown menus for 'GIGA' and 'GIGA1'. A text input field for 'Next No.' is set to 2. A 'Source MAC' input field shows the value 00:00:00:00:00:00. At the bottom are 'Create' and 'Delete' buttons, and a footer navigation bar with links to 'GIGA BRIDGE', 'ADSL BRIDGE', and 'STATIC VLAN'.

No.	Port	Source MAC
1	GIGA1	03:ae:00:ee:00:ff

Figure 42. Source MAC Filtering page

Table 19. Source MAC Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Source MAC Address	Type in the MAC Address of the source.
Create	Click on this button to create new filter rules in the table.

IP Address Filtering

The screenshot shows a configuration page for IP address filtering. At the top, there are dropdown menus for 'Filtering Type' (set to 'Source IP'), 'No. From' (set to 1), and 'To' (set to 2). Below this is a table with two rows:

No.	Port	Source IP	Subnet Mask
1	GIGA1	172.16.100.77	255.255.255.0
2	ADSL Port1-PVC1	172.16.100.66	255.255.0.0

Below the table are three dropdown menus: 'ADSL' (selected), 'Port-1' (selected), and 'PVC-1' (selected). A 'Create' button is located at the bottom left. The footer contains links: [GIGA BRIDGE | ADSL BRIDGE | STATIC VLAN].

Figure 43. Source IP Address Filtering page

Table 20. Source IP Address Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Source IP Address	Type in the IP Address of the source.
MASK	Type in the subnet mask.
Create	Click on this button to create new filter rules in the table.

Layer 4 Destination Port Filtering

The screenshot shows a configuration page for Layer 4 destination port filtering. At the top, there are dropdown menus for 'Filtering Type' (set to 'L4 Dest Port'), 'No. From' (set to 1), and 'To' (set to 1). Below this is a table with one row:

No.	Port	L4 Destination PORT
1	ADSL Port1-PVC1	65535

Below the table are three dropdown menus: 'ADSL' (selected), 'Port-1' (selected), and 'PVC-1' (selected). A 'Create' button is located at the bottom left. The footer contains links: [GIGA BRIDGE | ADSL BRIDGE | STATIC VLAN].

Figure 44. Layer 4 Destination Port Filtering page

Table 21. Layer 4 Destination Port Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Destination Port	Type in the Destination Port number (1 ~ 65535).
Create	Click on this button to create new filter rules in the table.

Destination IP Filtering

The screenshot shows a web-based configuration interface for destination IP filtering. At the top, there are dropdown menus for 'Filtering Type' (set to 'Destination IP') and 'No. From' (set to 1) and 'To' (set to 1). Below this is a 'Query' button and a 'Delete' button. The main area contains a table with columns: No., Port, Destination IP, and Subnet Mask. One row is visible, showing No. 1, Port 'ADSL Port2-PVC1', Destination IP '172.16.100.25', and Subnet Mask '255.255.0.0'. Below the table are dropdown menus for 'ADSL' (selected), 'Port-1', and 'PVC-1'. There are also fields for 'Next No.' (set to 2), 'Destination IP' (with input fields for octets 0-3), 'MASK' (with input fields for octets 0-3), and a 'Create' button. At the bottom, there are links for 'GIGA BRIDGE', 'ADSL BRIDGE', and 'STATIC VLAN'.

Figure 45. Destination IP Filtering page

Table 22. Destination IP Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Destination IP	Type in the Destination IP address.
MASK	Type in the subnet mask.
Create	Click on this button to create new filter rules in the table.

Destination MAC Filtering

The screenshot shows a web-based configuration interface for 'Destination MAC Filtering'. At the top, there's a header with 'Filtering Type' set to 'Destination MAC', 'No. From' 1, and 'To' 5. Below this is a note: 'No range from 1 to 256'. There are 'Query' and 'Delete' buttons. The main area contains a table with columns 'No.', 'Port', and 'Destination MAC'. One row is shown with No. 1, Port 'ADSL_Port1-PVC1', and Destination MAC '11:22:33:44:55:66'. Below the table are dropdown menus for 'ADSL', 'Port-1', and 'PVC-1'. A 'Next No.' field shows '2'. A 'Destination MAC' input field contains '00 00 00 00 00 00'. A 'Create' button is at the bottom. Navigation links at the bottom include 'GIGA BRIDGE', 'ADSL BRIDGE', and 'STATIC VLAN'.

No.	Port	Destination MAC
1	ADSL_Port1-PVC1	11:22:33:44:55:66

Figure 46. Destination MAC Filtering page

Table 23. Destination MAC Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Destination MAC	Type in the Destination MAC address.
Create	Click on this button to create new filter rules in the table.

Ether Type Filtering

No.	Port	Ether Type
1	ADSL Port1-PVC1	0x8100
2	ADSL Port2-PVC1	0x8035

Next No: 3 Incoming EtherType Ox Create

[GIGA BRIDGE | ADSL BRIDGE | STATIC VLAN]

Figure 47. Ether Type Filtering pages

Table 24. Ether Type Filtering Settings

Label	Description
Filtering Type	Select the filtering type from the drop-down list.
No. From...To...	Type in the range of serial number in the filter rule table. Valid number value: 1 ~ 256.
Query	Once you have specified the serial number, click on this button to display the filter rules.
Delete	Once you have specified the serial number, click on this button to delete the filter rules in the table.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Incoming Ether Type	Type in the EtherType value (hexadecimal).
Create	Click on this button to create new filter rules in the table.

VLAN Priority Remark

This option allows you to configure the VLAN priority. From the Bridge menu, click on Access Control and then **VLAN Priority Remark**. The following page displays:

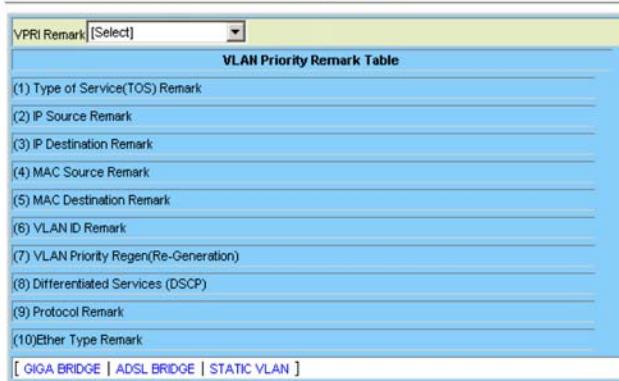


Figure 48. VLAN Priority Remark page

Click on the VPRI Remark drop-down list and select a type of VLAN Priority Remark, including TOS, IP Source, IP Destination, MAC Source, MAC Destination, VLAN ID, VLAN Priority Regeneration, Differentiated Services, Protocol, and Ether Type.

TOS

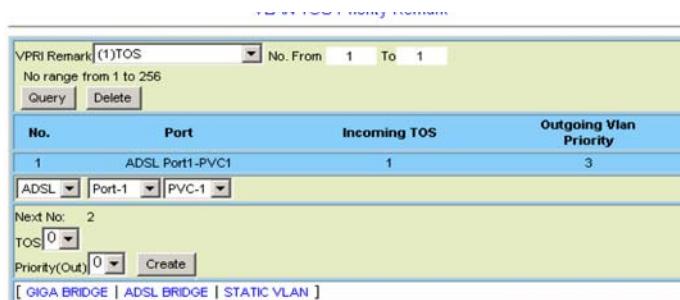


Figure 49. VLAN TOS Priority Remark page

Table 25. VLAN Priority Remark Settings - TOS

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.

Table 25. VLAN Priority Remark Settings - TOS

TOS	In order to provide basic support for classes of service to the Internet Protocol. The IP protocol header contains what is known as the ToS (Type of Service) bits. Click on the drop-down list and select incoming TOS (value range 0 ~ 7), then you can create the mapping between TOS and VLAN priority.
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

IP Source

The screenshot shows a configuration interface for VLAN IP Source Priority Remarks. At the top, there is a dropdown menu labeled "VPRI Remark (2)IP Source". Below it, a search bar displays "No. From 1 To 1" and includes "Query" and "Delete" buttons. The main area is a table with the following columns: No., Port, IP Source ADDRESS, Subnet Mask, and Outgoing Vlan Priority. There is one entry: No. 1, Port ADSL Port1-PVC1, IP Source ADDRESS 172.113.006.000, Subnet Mask 255.255.000.000, and Outgoing Vlan Priority 2. Below the table, there are dropdown menus for "ADSL" (set to "ADSL"), "Port-1" (set to "Port-1"), and "PVC-1" (set to "PVC-1"). A "Next No." field shows "2". Under "Source IP", there are input fields for "Source IP" (0 0 0 0) and "MASK" (0 0 0 0). A "Priority(Out)" dropdown is set to "0". At the bottom, there is a "Create" button and a footer with links: [GIGA BRIDGE | ADSL BRIDGE | STATIC VLAN].

Figure 50. VLAN IP Source Priority Remark page

Table 26. VLAN Priority Remark Settings - IP Source

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Source IP	Enter the IP address of the incoming source.
MASK	Type in the subnet mask.
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

IP Destination

No.	Port	IP Destination ADDRESS	Subnet Mask	Outgoing VLAN Priority
1	GIGA1	172.023.002.002	255.255.000.000	7

Next No: 2
Destination IP: [0 0 0 0] MASK: [0 0 0 0]
Priority(Out): [0] Create
[GIGA BRIDGE | XDSL BRIDGE | STATIC VLAN]

Figure 51. VLAN IP Destination Priority Remark page

Table 27. VLAN Priority Remark Settings - IP Destination

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Source IP	Enter the IP address of the incoming source.
MASK	Type in the subnet mask.
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

MAC Source

No.	Port	MAC Source ADDRESS	Outgoing Vlan Priority
1	GIGA1	10:ee:00:ff:00:25	1

Next No: 2
Source MAC [00 00 00 00 00 00]
Priority(Out) [0] Create
[GIGA BRIDGE | XDSL BRIDGE | STATIC VLAN]

Figure 52. VLAN MAC Source Priority Remark page

Table 28. VLAN Priority Remark Settings - MAC Source

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Source MAC	Enter the MAC address of the incoming source.
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

MAC Destination

No.	Port	MAC Destination ADDRESS	Outgoing Vlan Priority
1	GIGA1	12:aa:00:bc:e1:00	7

Next No: 2
Destination MAC: 00 00 00 00 00 00
Priority(Out): 0

[GIGA BRIDGE | XDSL BRIDGE | STATIC VLAN]

Figure 53. VLAN MAC Destination Priority Remark page

Table 29. VLAN Priority Remark Settings - MAC Destination

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Destination MAC	Enter the MAC address of the destination.
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

VLAN ID

The screenshot shows a web-based configuration interface for VLAN ID Priority Remarks. At the top, there is a dropdown menu labeled "VPRI Remark (5))VLAN ID" and input fields for "No. From" (1) and "To" (2). Below this is a "Query" button and a "Delete" button. The main area contains a table with columns: No., Port, VLAN ID, and Outgoing Vlan Priority. Two rows are listed: row 1 has port GIGA1, VLAN ID 1, and priority 2; row 2 has port GIGA1, VLAN ID 5, and priority 0. Below the table are dropdown menus for "Select Port List" (set to GIGA) and "VLAN ID" (set to GIGA1). There are also fields for "Next No." (3), "VLAN ID" (1), and "Priority(Out)" (0), followed by a "Create" button. At the bottom, there are links for "GIGA BRIDGE", "XDSL BRIDGE", and "STATIC VLAN".

No.	Port	VLAN ID	Outgoing Vlan Priority
1	GIGA1	1	2
2	GIGA1	5	0

Figure 54. VLAN ID Priority Remark page

Table 30. VLAN Priority Remark Settings - VLAN ID

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
VLAN ID	Type in the VLAN ID (1 ~ 4094).
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

VLAN Priority Regeneration

No.	Port	Incoming Vlan Priority	Outgoing Vlan Priority
1	GIGA1	0	3
2	GIGA1	2	5

Next No: 3
 Priority(In) 0
 Priority(Out) 0 Create
[\[GIGA BRIDGE \]](#) [\[XDSL BRIDGE \]](#) [\[STATIC VLAN \]](#)

Figure 55. VLAN Priority Regeneration page

Table 31. VLAN Priority Remark Settings - VLAN Priority Regeneration

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Priority (In)	Click on the drop-down list and select the incoming VLAN priority (0 ~ 7).
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create new filter rules in the table.

Differentiated Services

No.	Port	Incoming DSCP	Outgoing VLAN Priority
1	GIGA1	DEFAULT	0
2	GIGA1	AF12 001100	1

Next No: 3
Incoming DS (00)DEFAULT
Priority(Out) 0

Figure 56. VLAN DSCP Priority Remark page

Table 32. VLAN Priority Remark Settings - Differentiated Services

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Incoming DS	Click on the drop-down list and select the incoming DSCP (Diffserv Code Points, which is a 6-bit number). The standardized combinations are listed below: default Default value (bits:000000) af11 Assured Forwarding Class 1:Low Drop (bits:001010) af12 Assured Forwarding Class 1:Medium Drop (bits:001100) af13 Assured Forwarding Class 1:High Drop (bits:001110) af21 Assured Forwarding Class 2:Low Drop (bits:010010) af22 Assured Forwarding Class 2:Medium Drop (bits:010100) af23 Assured Forwarding Class 2:High Drop (bits:010110) af31 Assured Forwarding Class 3:Low Drop (bits:011010) af32 Assured Forwarding Class 3:Medium Drop af33 Assured Forwarding Class 3:High Drop (bits:011110) af41 Assured Forwarding Class 4:Low Drop (bits:100010) af42 Assured Forwarding Class 4:Medium Drop (bits:100100) af43 Assured Forwarding Class 4:High Drop (bits:100110) ef Expedited Forwarding (bits:101110)
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create a new entry in the table.

Protocol

The screenshot shows a configuration page for VLAN Protocol Priority Remarks. At the top, there are dropdown menus for 'VPRI Remark' (set to '(9)Protocol Remark') and 'No. From...To...' (set to '1 To 1'). Below this is a table with the following data:

No.	Port	Incoming Protocol	Outgoing Vlan Priority
1	GIGA1	ICMP	0

Below the table are two dropdown menus: 'Select Port List' (set to 'GIGA') and 'Incoming Protocol' (set to '(01)ICMP'). There is also a dropdown for 'Priority(Out)' set to '0' and a 'Create' button. At the bottom of the page are links for 'GIGA BRIDGE', 'XDSL BRIDGE', and 'STATIC VLAN'.

Figure 57. VLAN Protocol Priority Remark page

Table 33. VLAN Priority Remark Settings - Protocol

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Incoming Protocol	Click on the drop-down list and select the incoming protocol. Available options are: ICMP, IGMP, IP in IP, TCP, GRP, IGP, UDP, GRE, IGRP, or OSPF.
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create a new entry in the table.

Ether Type

The screenshot shows a configuration page for VLAN Ether Type Priority Remarks. At the top, there is a dropdown menu labeled "VPRI Remark" set to "(10)Ether Type Remark". Below it are fields for "No. From" (1) and "To" (1), with a note "No range from 1 to 256". There are "Query" and "Delete" buttons. The main area is a table with columns: No., Port, Incoming EtherType, and Outgoing VLAN Priority. One row is present: No. 1, Port GIGA1, Incoming EtherType 0x8100, and Outgoing VLAN Priority 0. Below the table are dropdown menus for "Select Port List" (GIGA) and "Incoming EtherType" (GIGA1). A note says "Next No: 2". At the bottom are "Priority(Out)" (0) and "Create" buttons, along with links for "GIGA BRIDGE", "XDSL BRIDGE", and "STATIC VLAN".

No.	Port	Incoming EtherType	Outgoing VLAN Priority
1	GIGA1	0x8100	0

Figure 58. VLAN Ether Type Priority Remark page

Table 34. VLAN Priority Remark Settings - Ether Type

Label	Description
VPRI Remark	Select the priority remark type from the drop-down list.
No. From...To...	Type in the range of entry number in the table. Valid number value: 1 ~ 256.
Query	To query entries, type in the entry number range and then click on this button to retrieve.
Delete	To delete entries, type in the entry number range and then click on this button to delete.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Incoming Ether Type	Type in the EtherType value (hexadecimal).
Priority (Out)	Click on the drop-down list and select the outgoing VLAN priority (0 ~ 7).
Create	Click on this button to create a new entry in the table.

Rate Limit

This option allows you to limit the rate of broadcast/multicast packets that are received on a VLAN, and configure the Three Color Maring (TCM) Policer profile. From the Bridge menu, click on Access Control and then Rate Limit. The following page displays. Click on the **Rate Limit By** drop-down list and select the item you want to setup.

Rate Limit Type	[Select]
Rate Limit Select Table	
(1)	Broadcast
(2)	Flooding(Multicast and Unknown MAC Address)
(3)	Policer Profile
(4)	Policer Binding Table
(5)	Three Color Marking

Figure 59. Rate Limit page

Rate Limit Broadcast

Rate Limit Type	Broadcast
Committed Information Rate	80000 1536~1000000000(Bits/sec)
Leaky Bucket	80 1~1024 (Milli-sec)
Modify	Query

Figure 60. Rate Limit - Broadcast page

Table 35. Rate Limit - Broadcast Settings

Label	Description
Rate Limit Type	Click on this drop-down list and select the item you want to setup.
Committed Information Rate	Committed Information Rate (1536 ~ 1G bits per second). The threshold rate to turn on the rate-limit mechanism.
Leaky Bucket	Leaky bucket size. The unit is millisecond. This parameter ranges from 1 to 1024. The bucket depth is the product of CIR and this parameter.
Modify	Click on this button to modify data in the table.
Query	Click on this button to get most recent status.

Rate Limit Flooding

VID	Committed Information Rate (Bits/sec)	Leaky Bucket (Milli-sec)
1	80000	40

Figure 61. Rate Limit - Flooding page

Table 36. Rate Limit - Flooding Settings

Label	Description
Rate Limit Type	Click on this drop-down list and select the item you want to setup.
Flooding VID	Type in VLAN ID. (VID value: 1 ~ 4094) The VLAN must have been created in the static VLAN table.
Committed Information Rate	Committed Information Rate (1536 ~ 1G bits per second). The threshold rate to turn on the rate-limit mechanism.
Leaky Bucket	Leaky bucket size. The unit is millisecond. This parameter ranges from 1 to 1024. The bucket depth is the product of CIR and this parameter.
Modify	Click on this button to modify data in the table.
Query	Click on this button to get most recent status.
Delete	Click on this button to delete the entries in the table.

Rate Limit Policer

The Model 3124 supports two kinds of TCM Policer: two-rate TCM (with dual leaky buckets) and single-rate TCM (with single leaky bucket).

The single-rate TCM meters a traffic stream and marks its packets according to Committed Information Rate (CIR) and Committed Burst Size (CBS) to be either green, or red. The single-rate TCM operates with a single leaky bucket that is updated according to only one rate, the committed information rate - CIR. A packet is marked green if the leaky bucket is not full and red otherwise.

The two-rate TCM meters a traffic stream and marks its packets based on two rates, Committed Information Rate (CIR) and Excess Information Rate (EIR), and their associated burst sizes, Committed Burst Size (CBS) and Excess Burst Size (EBS), to be either green, yellow, or red. The two-rate TCM operates with dual leaky bucket, where each bucket is updated according to a different rate. The first bucket is updated according to the CIR, the second bucket is updated according to the EIR. A packet is marked red if it exceeds the PIR. Otherwise it is marked either yellow or green depending on whether it exceeds or doesn't exceed the EIR.

Select	No	Share Mode	LB Mode	CIR (1536-1G bps)	EIR (1536-1G bps)	1st LBS (1..1K ms)	2nd LBS (1..1K ms)	Status
<input type="checkbox"/>	1	Share	Single	20000	—	50	—	Complete
<input checked="" type="checkbox"/>	2	NO Share	Dual	80000	80000	20	200	Complete
<input type="checkbox"/>	3	Select	Select					Non-Complete
<input type="checkbox"/>	4	Select	Select					Non-Complete
<input type="checkbox"/>	5	Select	Select					Non-Complete
<input type="checkbox"/>	6	Select	Select					Non-Complete
<input type="checkbox"/>	7	Select	Select					Non-Complete
<input type="checkbox"/>	8	Select	Select					Non-Complete
<input type="checkbox"/>	9	Select	Select					Non-Complete
<input type="checkbox"/>	10	Select	Select					Non-Complete
<input type="checkbox"/>	11	Select	Select					Non-Complete
<input type="checkbox"/>	12	Select	Select					Non-Complete

Figure 62. Rate Limit - Policer page

Table 37. Rate Limit Policer Settings

Label	Description
Rate Limit Type	Click on this drop-down list and select the item you want to setup.
Page List	Click on this drop-down list and select a page to be displayed.
Select	Select the checkbox when you want to create/modify/delete this entry.
Share Mode	Share mode: All the bridge ports which bind to the share mode policer profile will share the same Leaky Bucket defined by the CIR, EIR...parameters. So in Share mode, system only creates one Leaky Bucket for all the binding bridge ports. No Share mode: Every bridge port which bind to the non-share policer profile will have its own Leaky Bucket.
LB Mode	Single: Single Leaky Bucket. For SLB, there is one controlling parameter: CIR. Dual: Dual Leaky Bucket. For DLB, there are two controlling parameters: CIR and EIR.
CIR	Committed Information Rate (100 ~ 4294697295 bits per second). The threshold rate to turn on the rate-limit mechanism.
EIR	Excess Information Rate (1536 ~ 1G bits per second) controls the number of tokens in the second bucket (EBS bucket).
1st LBS	Leaky Bucket Size. The unit is millisecond. This parameter ranges from 1 to 1024. The first bucket depth is the product of CIR and this parameter.
2nd LBS	Leaky Bucket Size. The unit is millisecond. This parameter ranges from 1 to 1024. The second bucket depth is the product of EIR and this parameter.
Modify	Click on this button to modify data in the table.
Query	Click on this button to get most recent status.
Delete	Click on this button to delete the entries in the table.

Rate Limit Policer Binding Table

Rate Limit Policer Binding Table

Rate Limit Type: Policer Binding Table			
<input type="button" value="GIGA"/>	<input type="button" value="Modify"/>	<input type="button" value="Query"/>	
Select	Port	Policer No.	Binding Status
<input checked="" type="checkbox"/>	GIGA1	<input type="button" value=""/>	<input type="button" value="OFF"/>

Figure 63. Rate Limit - Policer Binding Table

Table 38. Rate Limit Policer Binding Table Settings

Label	Description
Rate Limit Type	Click on this drop-down list and select the item you want to setup.
Select Port List	Click on these drop-down lists to select an ADSL bridge port or GIGA bridge port.
Modify	Once you have finished setting the parameter values, click on this button to submit the modification.
Query	Click on this button to get most recent data.
Select	Remember to select the checkbox when you want to modify this entry.
Policer No.	Click on the drop-down list and select the Policer profile you want to bind with this port.
Binding Status	Select to bind (ON) or unbind (OFF) the Policer profile.

Three Color Marking Policer

The Model 3124 supports TCM Policer in accordance with the Metro Ethernet Forum (MEF) Bandwidth Profile and RFCs 2697 & 2698. Our TCM Policer supports both Color Aware and Color Blind modes. The “color” is used for determining whether a packet will proceed to the policer when TCM Policer works in Color Aware mode; also in the policer the packet may be remarked with new color according to the packet’s conformance to the policer rules. A packet is considered green when it enters the TCM Policer only if its input color field, VLAN priority bits or DSCP field, has the same value with the green value configured in this page (see the following figure and parameter description). Likewise, a packet is considered yellow only if its input color field has the same value with the yellow value configured in this page. All other values are considered red.

Once a packet has passed through the TCM Policer, it will be directed to the class queues for scheduling.

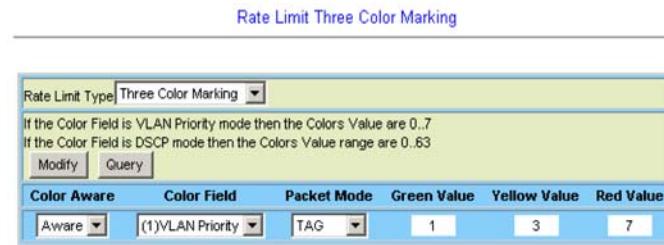


Figure 64. Three Color Marking page

Table 39. Three Color Marking Settings

Label	Description
Rate Limit Type	Click on this drop-down list and select the item you want to setup.
Modify	Click on this button to modify data in the table.
Query	Click on this button to get most recent data
Color Aware	Color aware mode: the packets are classified before they're sent through the policer. Color blind mode: the packets are directed through the entire policer regardless of their color.
Color Field	There are two fields you can select for determining the packet's input color: the VLAN priority bits within the Ethernet header or the DSCP field within the IP header.
Packet Mode	This parameter defines the action for non-conforming packets. You can choose Tag or Discard. If Tag is chosen, then all the packets will be marked as red in the Color field rather than be discarded.
Green Value	Type in the green color value that is used when determining a packet's input color (for Color Aware mode) or remarking a packet's output color as green. Valid value is 0 ~ 7 for VLAN Priority color field or 0 ~ 63 for DSCP color field.
Yellow Value	Type in the yellow color value that is used when determining a packet's input color (for Color Aware mode) or remarking a packet's output color as yellow. Valid value is 0 ~ 7 for VLAN Priority color field or 0 ~ 63 for DSCP color field.
Red Value	Type in the red color value that is used when remarking a packet's output color as red. Valid value is 0 ~ 7 for VLAN Priority color field or 0 ~ 63 for DSCP color field.

Priority Queue Mapping

This web page is used to select SPQ/WFQ/WRR queuing mechanism and to setup the mapping between VLAN priority levels and system internal queues. From the **Bridge** menu, click on **Access Control** and then **Priority Queue Mapping**. The following page displays:

GIGA Queue Scheduling	ATM Queue Scheduling	Queue#3 Weighted	Queue#2 Weighted	Queue#1 Weighted	Queue#0 Weighted		
SPQ	SPQ	40	30	20	10		
GIGA Priority#7	GIGA Priority#6	GIGA Priority#5	GIGA Priority#4	GIGA Priority#3	GIGA Priority#2	GIGA Priority#1	GIGA Priority#0
Queue#3	Queue#3	Queue#2	Queue#2	Queue#1	Queue#1	Queue#0	Queue#0
ATM Priority#7	ATM Priority#6	ATM Priority#5	ATM Priority#4	ATM Priority#3	ATM Priority#2	ATM Priority#1	ATM Priority#0
Queue#7	Queue#6	Queue#5	Queue#4	Queue#3	Queue#2	Queue#0	Queue#1

Figure 65. Priority Queue Mapping page

The queues for Giga and ATM interfaces are different.

- **Giga:** The Giga interface has 4 Queues and these queues can only work on Strict Priority Queuing (SPQ) scheduling. The priorities of these queues are: Q3 > Q2 > Q1 > Q0.
- **ATM:** Each ATM PVC bridge interface on each ADSL port has 8 Queues and can work in SPQ or SPQ/WFQ mix mode.

For SPQ, the priorities of these queues are: Q7 > Q6 > Q5 > Q4 > Q3 > Q2 > Q1 > Q0.

For SPQ/WFQ mixed, the priority of SPQ queues (Q7~Q4) is higher than WFQ queues (Q3~Q0).

And:

Q7 ~ Q4 are for SPQ and the priorities are Q7 > Q6 > Q5 > Q4.

Q3 ~ Q0 are for WFQ (Weighted Fair Queuing) and you can define the weight value for Q3 ~ Q0.

Note that if each queue has different weight value, the system will work as WFQ mode. If all queues have the same weight value, the system will work as Weighted Round Robin (WRR) mode.

The system allows 8 priority levels fully work at Q0 only in the Priority Queue Mapping table.

Forwarding

TP Forwarding DB

This option allows you to configure the transparent forwarding database. The forwarding table will reveal the information of MAC addresses that are learned or statically configured on a specific bridge port. From the Bridge menu, click on Forwarding and then TP Forwarding DB. The following page displays:

Forward Table							
Aging Time(10..1000000 Sec): <input type="text" value="300"/> <input type="button" value="Modify"/>							
No.	From	To	15				
No range from 1 to 6144 <input type="button" value="Query"/>							
No.	Source MAC	IFC	Port	Status	VID	Aging Bit	Process Mode Unknown Mac Mode
1	02:11:22:33:44:AA	1	Giga:1	Dynamic	100	True	PASS Disabled
2	66:00:00:00:00:33	4	Port-PVC:1-1	Static	1	False	PASS Disabled

Figure 66. Transparent Forwarding Database page

Table 40. Transparent Forwarding Database Settings

Label	Description
Aging Time	Type in the aging time in seconds. An entry will be removed from the FDB (aged-out) if the device does not transmit for a specified period of time (the aging time).
Modify	Click on this button to submit the modification.
No. From...To...	Select the range of entry number in the forwarding database.
Query	Once you have selected the entry number, click on this button to get the most recent status of MAC addresses forwarding.

Forwarding Static

This option allows you to configure the static MAC address forwarding entries on a specific bridge port. The setting of static MAC address takes effect on egress direction of bridge port. From the **Bridge** menu, click on **Forwarding** and then **Forwarding Static**. The following page displays:

No.	Destination MAC	Output Port	VID	Process mode
2	ee:00:ff:00:00:33	GIGA1	1	PASS

Next No.: 1
Source MAC: 00 00 00 00 00 00
VID: 1 Process: Pass Create

Figure 67. Forwarding Static page

Table 41. Forwarding Static Settings

Label	Description
No. From...To...	Select the range of entry number in the FDB. Valid number value: 1 ~ 513.
Query	Click on this button to display the FDB entries.
Delete	Delete the entries according to the entry number range you type in.
Select Port List	Click on these drop-down list to select a bridge port (ADSL bridge port or GIGA bridge port) where the static forwarding entries to be configured.
Source MAC	Type in the MAC address for the static entry.
VID	Type in the VID for the static entry (1 ~ 4094).
Process	Click on the drop-down list and select "Deny" the packets with the destination MAC address or "Pass" the packets with the destination MAC address.
Create	Click on this button to create a new entry.

Relay

DSL Line Identify

This option allows you to configure the DHCP option and PPPoE relay function. From the Bridge menu, click on Relay and then DSL Line Identify. The following page displays:

The screenshot shows two stacked configuration pages. The top page is 'DSL Global Configuration' with fields for PPP Service Name (disabled), DSLAM Name (IPDSLAM), PPP Service Name Check mode (disabled), DHCP Mode (Relay OFF), ID Select (Circuit ID), Circuit ID Type (DEFAULT), and Remote ID Type (DEFAULT). The bottom page is 'DSL Line ID Configuration' showing a table of 12 ports. Each row contains a checkbox, a port number (01-12), a Circuit ID (e.g., IPDSLAM:001:000:00035), a Remote ID (e.g., IPDSLAM:001/1), and a Trusted status (set to FALSE).

Select	Port	Circuit ID	Remote ID	Trusted
<input type="checkbox"/>	01	IPDSLAM:001:000:00035	IPDSLAM:001/1	FALSE
<input type="checkbox"/>	02	IPDSLAM:002:000:00035	IPDSLAM:002/1	FALSE
<input type="checkbox"/>	03	IPDSLAM:003:000:00035	IPDSLAM:003/1	FALSE
<input type="checkbox"/>	04	IPDSLAM:004:000:00035	IPDSLAM:004/1	FALSE
<input type="checkbox"/>	05	IPDSLAM:005:000:00035	IPDSLAM:005/1	FALSE
<input type="checkbox"/>	06	IPDSLAM:006:000:00035	IPDSLAM:006/1	FALSE
<input type="checkbox"/>	07	IPDSLAM:007:000:00035	IPDSLAM:007/1	FALSE
<input type="checkbox"/>	08	IPDSLAM:008:000:00035	IPDSLAM:008/1	FALSE
<input type="checkbox"/>	09	IPDSLAM:009:000:00035	IPDSLAM:009/1	FALSE
<input type="checkbox"/>	10	IPDSLAM:010:000:00035	IPDSLAM:010/1	FALSE
<input type="checkbox"/>	11	IPDSLAM:011:000:00035	IPDSLAM:011/1	FALSE
<input type="checkbox"/>	12	IPDSLAM:012:000:00035	IPDSLAM:012/1	FALSE

Figure 68. DSL Line Identify

Table 42. DSL Line Identify Settings

Label	Description
DSL Global Configuration	
PPP Service Name	Type in the PPPoE service name to add.
PPP Service Name Check Mode	Enable: the system will check whether the PPPoE service names from the PPPoE server and client are the same. If not the same, the PPP connection between server and client will not be established. Disable: the system will not check the PPPoE service name.
DSLAM Name	Type in name of the DSLAM when DSLAM Name mode is set to 'Customer'.
DSLAM Name Mode	Select the DSLAM name to be customer-defined or cluster name (Domain name:NE name).
DHCP Mode	Click on this drop-down list and select OFF/ON to disable/enable DHCP relay function.
ID Select	Click on this drop-down list and select the Relay Agent Information that is inserted to the forwarding packets. Options are: Circuit ID, Remote ID, or Both.
Circuit ID Type	Click on this drop-down list and select the type of Circuit ID. Options are: DEFAULT, CUSTOMER. DEFAULT means our system-defined default type (DSLAM name:circuit number); CUSTOMER means the customer-defined type.

Table 42. DSL Line Identify Settings

Remote Type	Click on this drop-down list and select the format of Remote ID. Options are: DEFAULT, Line ID (ADSL line identifier), Line Desc (description for the line), Line Phone (phone number), CUSTOMER. DEFAULT means our system default format, which is DSLAM name: port_id/bridge_id. CUSTOMER means the customer-defined format; customer can type in any word not exceeding 48 characters. For Line ID, the format is port_id/bridge_id:Port Identifier. For Line Desc, the format is port_id/bridge_id:Port Description. For Line Phone, the format is port_id/bridge_id:Port Phone Number. The Port Identifier, Description, and Phone Number are set in the ADSL line information table.
Set	Once you have changed the setting of any one of the parameters (Dhcp Mode, ID Select, CKT Type, Remote Type, DLSAM Name, Service Name), remember to click on Set to submit the modification.
DSL Line ID Configuration	
Bridge Port List	Click on these drop-down lists to select the bridge ports to be displayed (these bridge ports must have been created in previous web page).
Query	Click on this button to display table.
Modify	Click on this button to submit the modification of DSL line identify table.
Select Port	Bridge port index. Select the checkbox(s) corresponding to the circuit(s) of which you want to modify the setting.
Circuit ID	Type in the Circuit ID when CUSTOMER is selected for the CKT Type.
Remote ID	Type in the Remote ID when CUSTOMER is selected for the Remote Type.
Trusted	Click on this drop-down list and specify the circuit to be trusted (TRUE), or untrusted (FALSE; the relay agent will discard the DHCP packets from an untrusted circuit).

IGMP

IGMP Protocol & Router Port

This option allows you to setup the IGMP router port. From the Bridge menu, click on IGMP and then **Protocol & Router Port**. The IGMP Router Port page displays:

IGMP Protocol Settings					
<input type="button" value="Modify"/> All of the interval from 1 to 500 Query(Query Interval),URI(Unsolicited Report Interval),BC(Older host present interval) MRT(Max Response Time),LMOT(Last Member Query Time),GMT(Group Membership Time) readonly					
IGMP Version	IGMP Mode	IGMP ACL Mode	Deny No Alert	Max Groups Limit	
IGMP V2	Snooping	Disabled	Disabled	Disabled	
Query	URI	BC	MRT	LMOT	GMT
125	1	400	10	1	260

Router Port Settings					
GIGA1 <input checked="" type="radio"/> Router Port VID: 1 Router IP: 0 0 0 0 The IGMP Router's IP is available while IGMP in Proxy mode. "0.0.0.0" means an operator is needless IGMP Router's IP. <input type="button" value="Create"/>					
<input type="button" value="Delete"/>					
Delete Select	VID	Router Port	Router IP		
<input type="checkbox"/>	1	GIGA 1	172.002.002.002		

Figure 69. IGMP Protocol & Router Port page

Table 43. IGMP Router Port Settings

Label	Description
Modify	Click on this button to modify the IGMP configuration once you have set new values for the parameters.
IGMP Version	Select the IGMP version. Options are: IGMP OFF, IGMP V1, IGMP V2, and IGMP V3.
IGMP Mode	Select the IGMP mode. Options are: Snooping and Proxy.
IGMP ACL Mode	Disable or enable ACL mode. IGMP ACL profile (refer to section 4.7.2) will be effective only when ACL mode is enabled.
Deny No Alert	Enabled: the system will deny IGMP packets that have no router alert option in their IP header. Disabled: default value; the system will not care router alert option.
Max Groups Limit	Enabled: the system will limit the maximum active counter of IGMP groups can be joined (concurrently) for every bridge port. Disabled: the system will not limit the counter of IGMP groups can be joined for the bridge port.
Query 1~500(s)	The Query Interval is the interval between General Queries sent by the Querier. By varying this value, an administrator may tune the number of IGMP messages on the network; larger values cause IGMP Queries to be sent less often. Value range is 1 ~ 500. Default is 125 seconds.
URI 1~500(s)	The Unsolicited Report Interval is the time between repetitions of a host's initial report of membership in a group. Value range is 1 ~ 500. Default: 1 second.

Table 43. IGMP Router Port Settings

BC 1~500(s)	The Older Host Present Interval. It represents how long a host must wait after hearing a Version 1 Query before it may send any IGMPv2 messages. Default is 400 (sec).
MRT 1~500(s)	The burstiness of IGMP traffic is inversely proportional to the Max Response Time. A longer Max Response Time will spread Report messages over a longer interval. However, a longer Max Response Time in Group-Specific and Source-and-Group- Specific Queries extends the leave latency. (The leave latency is the time between when the last member stops listening to a source or group and when the traffic stops flowing.). Value range is 1 ~ 500. Default is 10.
LMQT 1~500(s)	The Last Member Query Interval is the Max Response Time used to calculate the Max Resp Code inserted into Group- Specific Queries sent in response to Leave Group messages. It is also the Max Response Time used in calculating the Max Resp Code for Group-and-Source-Specific Query messages. Value range is 1 ~ 500. Default is 1.
GMT 1~500(s)	Read-only value. The Group Membership Interval is the amount of time that must pass before a multicast router decides there are no more members of a group or a particular source on a network. This value MUST be ((the Robustness Variable) times (the Query Interval)) plus (one Query Response Interval).
GIGA1	Click on this radio button to select GBE as the IGMP router port.
Route Port VID	Route Port VID Type in the VID you want to setup/delete the router port for. Valid VID value is 1 ~ 4094.
Router IP	Type in IGMP router IP address. When working in IGMP proxy mode, DSLAM will send IGMP general query whose source IP address is 0.0.0.0. But PCs with Windows OS do not receive this kind of packets. So user can assign an IP address here for proxy mode IGMP general query packet reference.
Create	Click on this button to create a new entry.
Delete	Click on this button to delete an entry.

IGMP Profile

This option allows you to configure the IGMP ACL (Access Control List) profile. This profile defines the IGMP multicast channels, which are allowed to join for each ADSL port. That is, a multicast stream will be copied to an ADSL port only if that multicast stream is registered in the ACL profile that is bound to this ADSL port. The maximum number of IGMP multicast channels in an ACL profile is 256. Note that the same multicast channel can be existed concurrently in two or more ACL profiles.

The ACL profile will be referred to only when ACL mode is enabled in the IGMP Configuration page. From the **Bridge** menu, click on **IGMP** and then **ACL Profile**. The following page displays:

IGMP ACL Profile									
IGMP PROFILE		BINDING PROFILE							
Profile ID (01)		IP CHANNEL MAP (1)Channel_001~032		Query					
Create		Delete							
All select:	<input type="checkbox"/>	Quickly IP Assign:	224 . 2 . 5 . 1	2	5	1	Quickly VID Assign:	1	Assign
Select Channel	IP Address	VID	Select Channel	IP Address	VID				
<input type="checkbox"/> 1	224 . 2 . 5 . 1	1	<input type="checkbox"/> 2	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 3	224 . 1 . 1 . 1	1	<input type="checkbox"/> 4	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 5	224 . 1 . 1 . 1	1	<input type="checkbox"/> 6	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 7	224 . 1 . 1 . 1	1	<input type="checkbox"/> 8	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 9	224 . 1 . 1 . 1	1	<input type="checkbox"/> 10	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 11	224 . 1 . 1 . 1	1	<input type="checkbox"/> 12	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 13	224 . 1 . 1 . 1	1	<input type="checkbox"/> 14	224 . 1 . 1 . 1	1				
<input type="checkbox"/> 15	224 . 1 . 1 . 1	1	<input type="checkbox"/> 16	224 . 1 . 1 . 1	1				

Figure 70. IGMP ACL Profile

Table 44. IGMP ACL Profile - Profile Configuration

Label	Description
Profile ID	Click on this drop-down list and specify the profile ID. Valid value is 01 ~ 15.
IP CHANNEL MAP	Click on this drop-down list and select the channel index range. Options are: Channel 001~032, Channel 033~064, ..., Channel 225~256.
All select	Click on this checkbox to select all channels in this page at one time. This is convenient for quick value assignment.
Quickly IP Assign	Type the IGMP group IP address here for quick assignment. Click on Assign button to put the value into the table. Then you can modify parts of the IP addresses directly in the table.
Quickly VID Assign	Type the IGMP group IP address here for quick assignment. Click on Assign button to put the value into the table.
Assign	Click on this button to apply the parameter values you have just entered. But these values haven't been really saved in the database. You must click on Create to save the values. Once the setting has been saved, you cannot modify the values. You must delete the channel and then create again.
Select	Click on this checkbox to select the channel you want to create, delete, or assign values.
IP Address	Type in the IGMP group address. Valid values: 224.0.0.0 ~ 239.255.255.255. The range of addresses from 224.0.0.0 to 224.0.0.255 is reserved for the use of routing protocols and other low-level topology discovery or maintenance protocols.
Query	Click on this button to display current channels in the profile.
Create	Click on this button to create new channels (IGMP group address).
Delete	Click on this button to delete channel(s) (IGMP group address).

Table 45. IGMP ACL Profile - Profile Binding Settings

Label	Description
Bridge Port List	Click on these drop-down lists to select a line bridge port.
All Select	Click on this checkbox to select all ports in this page at one time. This is convenient for quickly value assignment.
Quickly Max Group Assign	This field is for quick value assignment (assign the same value to all the ports in current page at one time). Type in the maximum IGMP groups can be joined simultaneously per line port, and then click on Assign to put the value into the table.
Quickly Profile ID Assign	Click on this drop-down list to select the profile ID you want to bind. This is for quick value assignment.
Quickly Binding Assign	Click on this drop-down list to select the binding action. This is for quick value assignment. Options are: off – unbind the profile, on – bind the profile, reset – rebind the profile.

Table 45. IGMP ACL Profile - Profile Binding Settings

Assign	Click on this button to apply the parameter values you have just entered (or selected). But these values haven't been really saved in the database. You must click on Modify to save the values.
Modify	Click on this button to submit the modification.
Port	Click on the checkbox to select the port you want to modify or assign values.
Max Groups	You can type in the maximum IGMP groups can be joined simultaneously to limit the concurrent multicast channels for a bridge port. This value is effective only when the limit maximum IGMP groups function is enabled.
Profile ID	You can select the profile ID you want to bind here.
Binding Status	You can select the binding action here.

IGMP Multicast

This option allows you to query the IGMP multicast status. From the Bridge menu, click on IGMP and then IGMP Multicast. The IGMP Group page displays. Click on the IGMP Type drop-down list and select Group or Source.

IGMP Type > Group: Click on List by drop-down list to select listing by Number or listing by VID & Group IP.

List by Number

IGMP Group							
IGMP Type:		Group					
List by:		Number	No. From	1	To	5	Query
No.	VID	Group IP	AddActions	IGMP Mode	Number of sources	Port	
1	1003	224.0.0.13	1	Exclude	0	ADSL Port3-PVC3,	
2	1004	224.0.0.12	1	Exclude	0	ADSL Port4-PVC2,	
3	1002	224.0.0.11	1	Exclude	0	ADSL Port2-PVC4,	
4	1001	224.0.0.10	1	Exclude	0	ADSL Port1-PVC1,	

Figure 71. IGMP Group - List by Number page

Table 46. IGMP Group - List by Number Settings

Label	Description
No. From...To...	Type in the entry number range in the table.
Query	Click on this button to display the table entries.

List by VID & Group IP

IGMP Type:	Group	<input type="button" value="▼"/>			
List by:	VID & Group IP	<input type="button" value="▼"/>			
VID: 1001 Group IP: 224.0.0.10					
<input type="button" value="Query"/>					
VID	Group IP	AddActions	IGMP Mode	Number of sources	Port
1001	224.0.0.10	1	Exclude	0	ADSL Port1-PVC1,

Figure 72. IGMP Group - List by VID & Group IP page

Table 47. IGMP Group - List by VID & Group IP Settings

Label	Description
VID	Type in the VLAN ID (1~ 4094).
Group IP	Type in the IGMP group IP address.
Query	Click on this button to display the table entries.

IGMP Source

IGMP Type > Source: This option allows you to query the **Source IP**, which is the IP address of the source that is joining a multicast group on an interface. This option is available only when IGMP version 3 is selected for the system's IGMP configuration (see “[IGMP Multicast](#)” on page 73).

IGMP Type:	Source	<input type="button" value="▼"/>			
VID:	1001	Group IP:	224.0.0.11	No. From:	1 To: 5
<input type="button" value="Query"/>					
No	VID	Group IP	Source IP	Timer On	Port
1	1001	224.0.0.11	192.168.100.100	0	ADSL Port1-PVC1,
2	1001	224.0.0.11	192.168.100.101	0	ADSL Port1-PVC1,

Figure 73. IGMP Source page

Table 48. IGMP Source Settings

Label	Description
VID	Type in the VLAN ID (1~ 4094).
Group IP	Type in the IGMP group IP address.
No. From...To...	Type in the entry number range in the table.
Query	Click on this button to display the table entries.

IPOA

BRAS MAC

The Model 3124 supports an IPOA/IPOE IWF (Interworking Function). This option allows you to setup the BRAS MAC address that is used by the IPOA/IPOE IWF. From the **Bridge** menu, click on **IPOA** and then **BRAS MAC**. The following page displays.

To add/modify a MAC:

Select a checkbox beside an index and type in BRAS MAC address, and then click on Modify button.

To delete a MAC:

Select a checkbox (checkboxes) beside the index and then click on Delete button:

Select	Index	BRAS MAC(xxxxxxx:xxxxxx)
<input type="checkbox"/>	1	: : : : :
<input type="checkbox"/>	2	: : : : :
<input type="checkbox"/>	3	: : : : :
<input type="checkbox"/>	4	: : : : :
<input type="checkbox"/>	5	: : : : :
<input type="checkbox"/>	6	: : : : :
<input type="checkbox"/>	7	: : : : :
<input type="checkbox"/>	8	: : : : :
<input type="checkbox"/>	9	: : : : :
<input type="checkbox"/>	10	: : : : :
<input type="checkbox"/>	11	: : : : :
<input type="checkbox"/>	12	: : : : :

Figure 74. IPOA BRAS MAC

Interface Setup

This option allows you to setup the interface for IPoA/IPoE IWF. From the **Bridge** menu, click on **IPOA** and then **Interface Setup**. The following page displays. Click on the radio button to select a circuit, set values for the parameters, and then click on **Modify** button.

Port	VPI	VCI	MaxMAC	C-VLAN ID	C-VLAN Priority	Traffic Rx/Tx	BRAS MacIdx	Uplink Index	AAL5 Ecap	IPoA Status
1	0	43	4	1001	0	Def / Def	1	Gigabit	LLC	Disabled
2	0	43	4	1002	0	Def / Def	1	Gigabit	LLC	Disabled
3	0	43	4	1003	0	Def / Def	1	Gigabit	LLC	Disabled
4	0	43	4	1004	0	Def / Def	1	Gigabit	LLC	Disabled
5	0	43	4	1005	0	Def / Def	1	Gigabit	LLC	Disabled

Figure 75. IPOA Interface Setup page

Table 49. IGMP Source Settings

Label	Description
Line Port List	Click on the drop-down list and select the line ports to be listed.
VPI	Type in the VPI. Value range is 0 ~ 255.
VCI	Type in the VCI. Value range is 21, 32 ~ 65535.
MaxMAC	Type in the maximum number of MAC addresses that can be learned by the bridge port (for GBE interface: 1 ~ 4096, for DSL interface: 1 ~ 128).
CVPRI	Type in the VID value of C-Tag (the innermost VLAN tag as defined in IEEE 802.1ad and having an EtherType value of 0x8100). The C-VID indicates the access loop.
Traffic (Rx/Tx)	Click on the drop-down lists and select a traffic type for transmit and receive direction respectively. Available options are created in the ATM Traffic Descriptor page.
BRAS	Click on the drop-down list and select a BRAS MAC. Available options are created through “ BRAS MAC ” on page 75.
Uplink	Click on the drop-down list and select the uplink interface.
Encap	Select AAL5 Encapsulation Type: VCMUX/LLC
Status	Enable/Disable IPoA IWF.
Modify	Click on this button to submit the modification.
Query	Click on this button to query most recent data.

Chapter 4 **ADSL Configuration**

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Profile

Line Service Profile

This option allows you to configure the ADSL line service profile. From the ADSL menu, click on **Profile**, and then **Service Profile (main)**. The following page displays:

Select Index: (1)01~10 <input type="button" value="Modify"/> <input type="button" value="Delete"/> <input type="button" value="Query"/>				
	Index	Name	Rate Mode DownStream	Rate Mode UpStream
Next →	3	Test	(3)Dynamic	(3)Dynamic
<input type="radio"/>	1	default	Init	Init
<input type="radio"/>	2	Name2	Manual	Manual
<input checked="" type="radio"/>	3	Test	Dynamic	Dynamic
<input type="radio"/>	4	----	----	----
<input type="radio"/>	5	----	----	----
<input type="radio"/>	6	----	----	----
<input type="radio"/>	7	----	----	----
<input type="radio"/>	8	----	----	----
<input type="radio"/>	9	----	----	----
<input type="radio"/>	10	----	----	----

Figure 76. ADSL Line Service Profile page

Table 50. ADSL Line Service Profile Settings

Label	Description
Select Index	Click on the drop-down list and select the range of profile index. Options are: 0~10, 11~20, ..., 111~120.
Index	This field shows the profile index. Click on the radio button beside the profile index to select the profile you want to modify or delete. Note that profile 1 (default) cannot be modified or deleted.
Name	Type in the name of the profile.
Rate Mode Downstream	Click on the drop-down list and select the Downstream Rate Adaptive Mode. Valid options are: Manual - Rate changed manually Init - Rate automatically selected at start up only and does not change after that Dynamic - Rate automatically selected at initialization and is continuously adapted during operation (show time).
Rate Mode Upstream	Click on the drop-down list and select the Upstream Rate Adaptive Mode. Valid options are: Manual - Rate changed manually Init - Rate automatically selected at start up only and does not change after that Dynamic - Rate automatically selected at initialization and is continuously adapted during operation (show time).

Service Channel Profile

This option allows you to configure the ADSL service channel profile. From the ADSL menu, click on Profile and then Service Profile (Channel). The following page displays:

Select Index: (1)1~5		Modify		Query													
						BitRate (kbit/s)-65535				DownShift		UpShift		InterLeave MaxDelay 1~63 (ms)		Min INP 0~8 (symbols)	
						Min	Planned	Max	L2 Min	Noise Margin (dB)	Min Interval (sec)	Noise Margin (dB)	Min Interval (sec)	InterLeave MaxDelay 1~63 (ms)	Min INP 0~8 (symbols)		
Next →	1	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
			US	4	128	65535	N/A	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
	1	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
			US	4	128	65535	—	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
	2	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
			US	4	128	65535	—	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
	3	23	DS	128	1024	65535	128	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
			US	4	128	65535	—	3.0	10	9.0	10	1	0.0	0.0	0.0	0.0	
	4	0	DS	0	0	0	0	0.0	0	0.0	0	0	0.0	0.0	0.0	0.0	
			US	0	0	0	—	0.0	0	0.0	0	0	0.0	0.0	0.0	0.0	
	5	0	DS	0	0	0	0	0.0	0	0.0	0	0	0.0	0.0	0.0	0.0	
			US	0	0	0	—	0.0	0	0.0	0	0	0.0	0.0	0.0	0.0	

Figure 77. ADSL Service Channel Profile page

Table 51. ADSL Service Channel Profile Settings

Label	Description
Select Index	Click on the drop-down list and select the range of profile index. Options are: 0~10, 11~20, ..., 111~120.
Index	This field shows the profile index. Click on the radio button beside the profile index to select the profile you want to modify or delete. Note that profile 1 (default) cannot be modified or deleted.
L2 Packet	This is a threshold value that is the minimum packet size before the system leaving the L2 low power state. Valid value is 0~32.
Direction	DS: downstream. US: upstream.
BitRate	Min: Minimum bit rate during show time Planned: Planned bit rate during setup Max: Maximum bit rate during show time L2 Min: Minimum bit rate during L2 low power state
DownShift Noise Margin (dB)/ Min Interval (sec)	Decrease net data rate if Noise Margin is below than the Downshift Noise Margin for DownShift Min Interval.
UpShift Noise Margin (dB)/Min Interval (sec)	Increase net data rate if Noise Margin is above than the Upshift Noise Margin for Upshift Min Interval.
Interleaving MaxDelay	Maximum interleaving delay (1~63 ms)
IMP 0~8 (symbols)	Minimum impulse noise protection (0.0~8.0 dB)

Spectrum Main Profile

This option allows you to configure the ADSL spectrum profile. From the ADSL menu, click on **Profile** and then **Spectrum Profile (main)**. The following page displays:

Select Index: (1)1~4		Query	Modify	Delete									
Index	Name	Power Mode	Pwr Management	Direction	Message	Noise Margin 0~31.0,51.1(db)							
			L0 Time L2 ATPR		ds min us min	Min	Tar	Max					
			L2 Time L2 ATPRT										
Next →	1	default	Disable L2 L2L3 <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	30 30 1 6	DS US 4 4	0.0 0.0	6.0 6.0	51.1 51.1					
	1 complete	default	Disable	30 30 1 6	DS US 4 4	0.0 0.0	6.0 6.0	51.1 51.1					
	2 complete	Name2	Disable	30 30 1 6	DS US 4 4	0.0 0.0	6.0 6.0	51.1 51.1					
	3	-----	-----	-- -- -- --	DS US -- --	--- --- --- ---	--- --- --- ---	---					
	4	-----	-----	-- -- -- --	DS US -- --	--- --- --- ---	--- --- --- ---	---					

Figure 78. ADSL Spectrum Profile page

Table 52. ADSL Spectrum Profile Settings

Label	Description
Select Index	Click on the drop-down list and select the range of profile index. Options are: 0~10, 11~20, ..., 111~120.
Index	This field shows the profile index. Click on the radio button beside the profile index to select the profile you want to modify or delete. Note that profile 1 (default) cannot be modified or deleted.
Name	Type in the name of the profile.
Power Mode	Click on the radio button to select allowed power management mode. Options are Disable (only L0 state allowed), L2 (L0 and L2 states allowed), L2L3 (L0, L2, and L3 states allowed).
L0 Time	Type in the minimum time (in seconds) between Exit from L2 low power state and the next Entry into the L2 low power state. Value range is 0 ~ 255.
L2 Time	Type in the minimum time (in seconds) between an Entry into L2 low power state and the first L2 low power trim request, and between two consecutive L2 power trim requests. Value range is 0 ~ 255.
L2 ATPR	Type in the maximum aggregate transmit power reduction (in dB) that is allowed at transition of L0 to L2 state or an L2 low power trim request. Value range is 0 ~ the value of L2 ATPRT (dB).
L2 ATPRT	Type in the total maximum aggregate transmit power reduction (in dB) that is allowed in the L2 state; the total reduction is the sum of all reductions of L2 Request (i.e., at transition of L0 to L2 state) and L2 power trims. Value range is 0 ~ 15 (dB).
Direction	DS: downstream. US: upstream.

Table 52. ADSL Spectrum Profile Settings

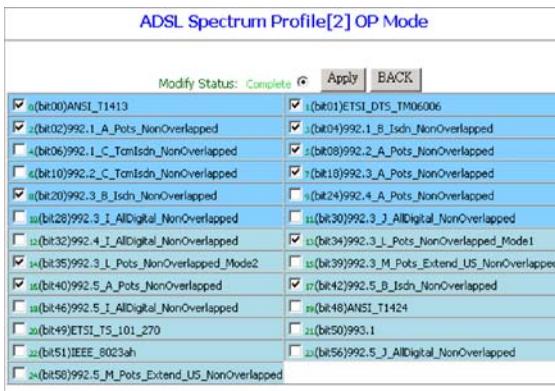
Message	Type in the minimum rate of the message-based overhead that shall be maintained by the ATU in upstream/downstream direction. Value range is 4 ~ 28k bit/s.
Noise Margin	Type in the Noise Margin values. Min: Minimum noise margin (0.0~31.0,51.1db, default 0.0) Tar: Target noise margin (0.0~31.0,51.1db, default 6.0) Max: Maximum noise margin (0.0~31.0,51.1db, default 51.1)
Modify	Click on this button to submit the modification
Delete	Click on this button to delete a profile
Query	Click on this button to display the profiles.
OP Mode-N	Click on this button to view/modify allowed ADSL modes of operation for the profile. The following page displays. An OP Mode is supported if the check box is selected. Modify Status: Complete - modems will re-train after you click on Apply button 

Table 52. ADSL Spectrum Profile Settings

Carrier Mask-N	<p>Click on this button to view/modify the current downstream/upstream Carrier Mask parameters. Input Carrier bit value and then click Apply.</p> <p>Modify Status: Complete - modems will re-train after you click on Apply button</p>																																																						
RFI-N	<p>Click on this button to view/modify Radio Frequency Interference (RFI) Bands data. Input the Start/Stop frequency, select the Ingress Level, Egress Control, Signal Type, and then click on the Apply button.</p> <p>Modify Status: Complete - modems will re-train after you click on Apply button</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>Start Frequency 0~12000 (kHz)</th> <th>Stop Frequency 0~12000 (kHz)</th> <th>Ingress Level</th> <th>Egress Control</th> <th>Signal Type</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>2</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>3</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>4</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>5</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>6</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> <tr><td>7</td><td>0</td><td>0</td><td>Low</td><td>NoControl</td><td>HAM</td></tr> </tbody> </table>	NO.	Start Frequency 0~12000 (kHz)	Stop Frequency 0~12000 (kHz)	Ingress Level	Egress Control	Signal Type	0	0	0	Low	NoControl	HAM	1	0	0	Low	NoControl	HAM	2	0	0	Low	NoControl	HAM	3	0	0	Low	NoControl	HAM	4	0	0	Low	NoControl	HAM	5	0	0	Low	NoControl	HAM	6	0	0	Low	NoControl	HAM	7	0	0	Low	NoControl	HAM
NO.	Start Frequency 0~12000 (kHz)	Stop Frequency 0~12000 (kHz)	Ingress Level	Egress Control	Signal Type																																																		
0	0	0	Low	NoControl	HAM																																																		
1	0	0	Low	NoControl	HAM																																																		
2	0	0	Low	NoControl	HAM																																																		
3	0	0	Low	NoControl	HAM																																																		
4	0	0	Low	NoControl	HAM																																																		
5	0	0	Low	NoControl	HAM																																																		
6	0	0	Low	NoControl	HAM																																																		
7	0	0	Low	NoControl	HAM																																																		

Spectrum ADSLx Profile

This option allows you to configure the ADSL2/2+/READSL spectrum profile. From the ADSL menu, click on **Profile** and then **Spectrum Profile (ADSLx)**. The following page displays:

Spectrum ADSL2/ReADSL2/ADSL2+							
<input type="button" value="Select Index (1)1~4"/> <input type="button" value="Modify"/> <input type="button" value="Query"/>							
Index	Modem Features	Direction	Aggregate Power	PSD Level	PBO	Max Rx Aggr. Allowed PWR	
→ 2	ADSL2 Enabled	DS US	10.0 10.0	-40.0 -38.0	NA OFF	NA 25.5	
1	ADSL2 Disabled	DS US	25.5 25.5	-40.0 -38.0	---- OFF	---- 25.5	
2	ADSL2 Disabled	DS US	25.5 25.5	-40.0 -38.0	---- OFF	---- 25.5	
3	ADSL2 Disabled	DS US	25.5 25.5	-40.0 -38.0	---- OFF	---- 25.5	
4	---- ----	DS US	0.0 0.0	0.0 0.0	---- ----	---- 0.0	

Figure 79. ADSL Spectrum ADSLx Profile page

Table 53. ADSL2 Spectrum Profile Settings

Label	Description
Select Index	Click on the drop-down list to select the range of profile index. Options are: 1~4, 5~8, ..., 117~120.
Index	This field shows the profile index.
Modem Features	Select ADSL2/ReADSL2/ADSL2+ and Enable/Disable special modem functions for better performance.
Direction	DS: downstream. US: upstream
Aggregate Power	Maximum nominal aggregate transmit power (0~25.5dB)
PSD Level	Maximum PSD level. Valid values are: ADSL2: -60 ~ -40 dB/Hz DS, -60 ~ -38 dB/Hz US ReADSL2: -60 ~ -37 dB/Hz DS, -60 ~ -32.9 dB/Hz US ADSL2+: -60 ~ -40 dB/Hz DS, -60 ~ -38 dB/Hz US
PSD Shape	Only for ADSL2+. Valid options are: Standard/CA100/CA110/CA120/CA130/CA140/CA150/ CA160/CA170/CA180/CA190/CA200/CA210/CA220/CA230/CA240/CA250/CA260/CA270/CA280
PBO	Power backoff operation mode (OFF/ON).
Max Rx Aggr. Allowed PWR	Maximum aggregate receive power over a set of subcarriers. It ranges from -25.5 to +25.5 dBm, with 0.1 dB steps.

ADSL TCA Profile

This option allows you to setup the PM counter threshold for TCA (threshold crossing alert). From the ADSL menu, click on **Profile** and then **TCA Profile**. The following page displays:

Select No	Enable	int ESs	int SESs	int UASs	day ESs	day SESs	day UASs	int LOS	int LOF	int LOPWR	int LOL	int ErrFrm
<input type="checkbox"/> 1	Disabled	NE	0	0	0	0	0	0	0	NA	0	0
		FE	0	0	0	0	0	0	0	0	NA	0
<input type="checkbox"/> 2	Select	NE								NA		
		FE								NA		
<input type="checkbox"/> 3	Select	NE								NA		
		FE								NA		
<input type="checkbox"/> 4	Select	NE								NA		
		FE								NA		

Figure 80. ADSL TCA Profile page

Table 54. ADSL TCA Profile Settings

Label	Description
Page List	Click on this drop-down list to select the page to be displayed.
Modify	Once you have typed in new threshold values, click on this button to submit the modification.
Delete	Click on this button to delete a selected profile (or profiles).
Select	Click on the checkbox to select the profile you want to modify or delete.
Enable	To issue TCA when the PM statistics exceed thresholds, this profile must be enabled.
int/day ESs-NE/FE	Interval/Day Errored Seconds – near end/far end
int/day SESs-NE/FE	Interval/Day Severely Errored Seconds – near end/far end
int/day UASs-NE/FE	Interval/Day Unavailable Seconds – near end/far end
int LOS-NE/FE	Interval Loss of Signal – near end/far end
int LOF-NE/FE	Interval Loss of Frame – near end/far end
int LOPWR-FE	Interval Loss of Power – far end
int LOL-NE	Interval Loss of Link – near end
int ErrFrm-NE/FE	Interval Error Frame – near end/far end

Data & Inventory

Inventory

This option allows you to view the inventory of the ATUC and ATUR. From the ADSL menu, click on **Data & Inventory**. The following page displays:

Port 01~12					Atux:	ATUC	Query
Port(ATUC)	Serial Number	Version Number	System Vendor ID	Modem Vendor ID			
1	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
2	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
3	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
4	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
5	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
6	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
7	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
8	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
9	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
10	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
11	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			
12	Broadcom 6411/6510 A0	VE_6_4_7	0x4d54	BDCM			

Figure 81. ADSL Inventory page

Table 55. ADSL Inventory Settings

Label	Description
Port List	Click on this drop-down list and select the ports to display.
Atux	Select ATUC or ATUR inventory to display in the table.
Query	To view the inventory, click on this button once you have selected the port and ATUx.

Loop Test

This option allows you to do the ADSL Dual End Loop Test. From the ADSL menu, click on **Data & Inventory**, and then **Loop Test**. The following page displays:

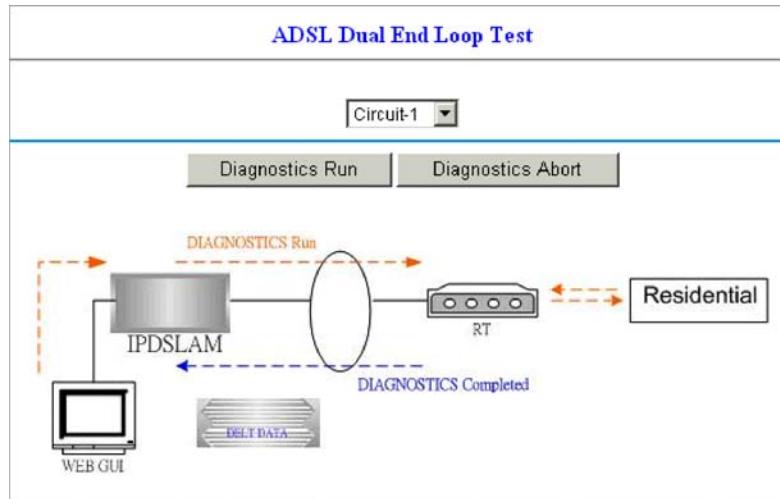


Figure 82. ADSL Loop Test page

Click on the drop-down list and select the circuit you want to test. Then click on **Diagnostics Run** to start a DELT. If you want to stop the test or make the loop go back to the normal state when the test has finished, just click on **Diagnostics Abort**.

Test in progress

Click on **Diagnostics Run** and then the following page displays:

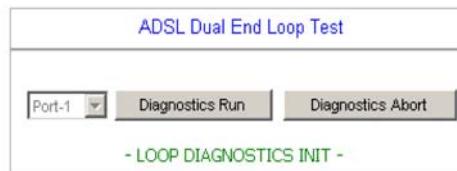


Figure 83. ADSL Loop Test in progress

Test completed

When the test is completed successfully, the test results will display as shown in [Figure 84](#) on page 87, [Figure 85](#) on page 88 and [Figure 86](#) on page 89.

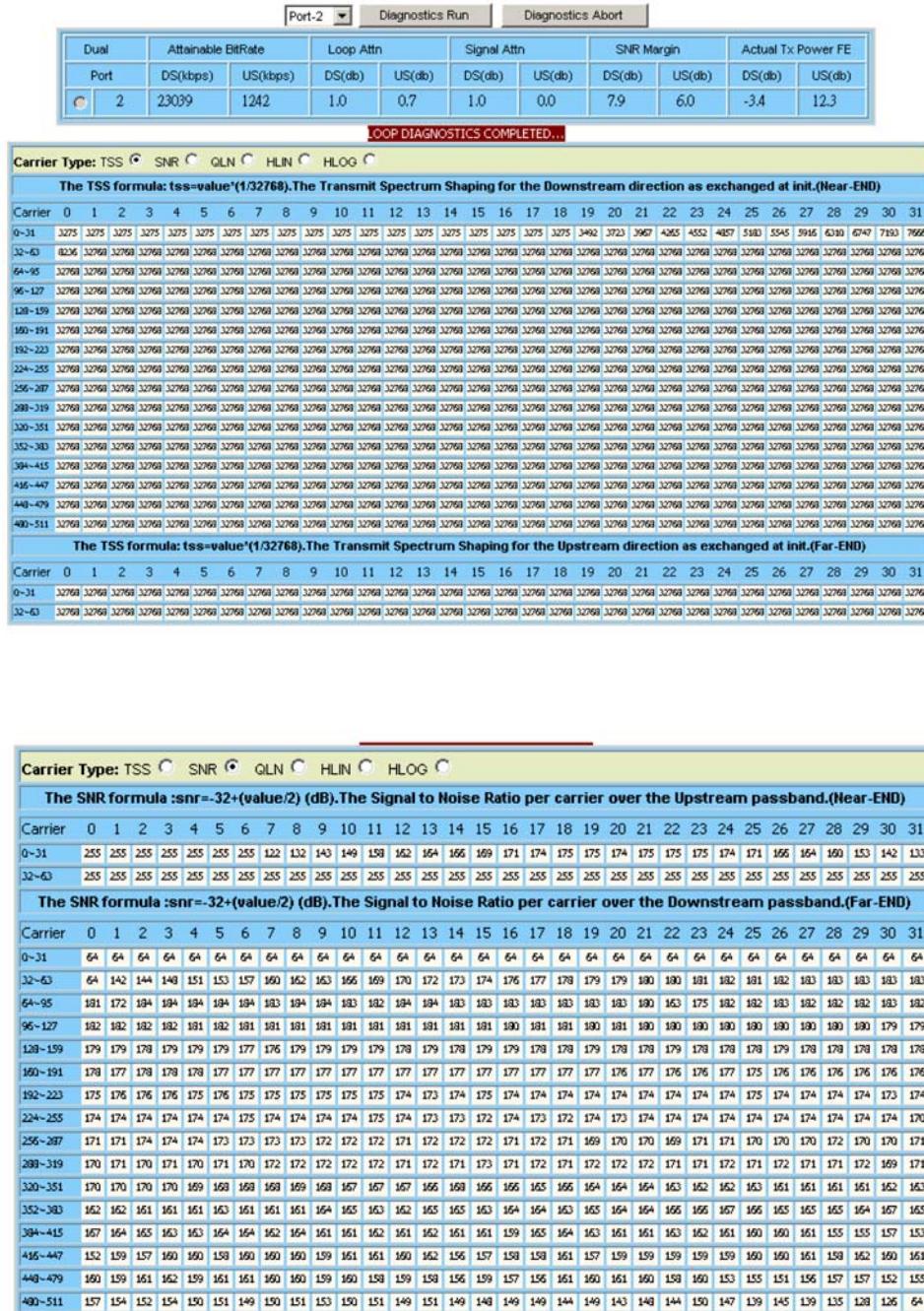


Figure 84. ADSL Loop Test Results

Carrier Type:	TSS	SNR	QLN	HIN	HLOG																											
The QLN formula: $qln = -23 - (\text{value}/2)$ (dBm/Hz). The Quiet Line Noise measurement per carrier over the Upstream passband. (Near-END)																																
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0-31	255	195	190	191	190	190	194	179	170	166	175	173	173	172	174	180	176	190	174	181	178	178	185	182	182	183	182	181	184	186	188	191
32-63	194	193	192	191	190	190	189	191	190	191	189	190	191	190	192	193	190	189	191	191	190	190	190	195	190	191	192	194	191	191	191	
The QLN formula: $qln = -23 - (\text{value}/2)$ (dBm/Hz). The Quiet Line Noise measurement per carrier over the Downstream passband. (Far-END)																																
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0-31	146	230	230	228	220	224	226	226	226	226	224	226	226	226	226	214	215	224	222	208	210	222	224	222	220	218	218	214	212	210	208	
32-63	206	204	200	196	198	193	192	192	192	192	190	190	190	190	190	195	190	189	190	189	188	189	190	195	195	195	195	195	195	195	195	195
64-95	192	174	194	194	194	186	194	194	194	194	194	194	192	192	192	192	192	192	192	192	192	192	192	190	192	152	174	180	190	190	190	190
96-127	192	190	190	190	190	192	190	192	190	192	190	192	190	192	190	192	190	192	190	192	190	192	190	190	190	190	190	190	190	190	190	
128-159	178	178	178	178	178	176	176	176	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	176	178	178	178	178	178	178	
160-191	176	176	178	176	176	178	178	176	178	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	
192-223	176	176	176	176	174	176	176	176	176	176	176	176	174	178	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	178	
224-255	176	178	176	176	174	178	176	178	176	176	176	176	174	178	176	176	176	178	176	178	176	176	176	176	176	176	176	176	176	176	178	
256-287	178	190	190	190	178	190	190	192	190	192	190	190	190	192	190	192	190	192	190	190	190	190	190	190	190	190	190	190	190	190	190	
288-319	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	182	
320-351	182	182	182	180	182	182	182	182	182	180	182	184	180	182	182	182	182	182	182	182	182	182	182	182	182	184	182	182	180	182	182	
352-383	182	182	182	182	182	180	182	180	182	180	182	182	182	182	182	182	182	182	180	182	182	182	182	182	182	182	184	182	182	182	182	

HlinUpstream Scale=48654																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Carrier Type: TSS C SNR C QLN C HLN C HLOG C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
The HLN formula: hlin=(hlin.scale/32768)*(hlin.real+1j*hlin.imag)/32768.Complex values in linear scale for each carrier over the Upstream passband.(0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	329	330	331	332	333	334	335	336	337	338	339	339	340	340	341	341	342	342	343	343	344	344	345	345	346	346	347	347	348	348	349	349	350	350	351	351	352	352	353	353	354	354	355	355	356	356	357	357	358	358	359	359	360	360	361	361	362	362	363	363	364	364	365	365	366	366	367	367	368	368	369	369	370	370	371	371	372	372	373	373	374	374	375	375	376	376	377	377	378	378	379	379	380	380	381	381	382	382	383	383	384	384	385	385	386	386	387	387	388	388	389	389	390	390	391	391	392	392	393	393	394	394	395	395	396	396	397	397	398	398	399	399	400	400	401	401	402	402	403	403	404	404	405	405	406	406	407	407	408	408	409	409	410	410	411	411	412	412	413	413	414	414	415	415	416	416	417	417	418	418	419	419	420	420	421	421	422	422	423	423	424	424	425	425	426	426	427	427	428	428	429	429	430	430	431	431	432	432	433	433	434	434	435	435	436	436	437	437	438	438	439	439	440	440	441	441	442	442	443	443	444	444	445	445	446	446	447	447	448	448	449	449	450	450	451	451	452	452	453	453	454	454	455	455	456	456	457	457	458	458	459	459	460	460	461	461	462	462	463	463	464	464	465	465	466	466	467	467	468	468	469	469	470	470	471	471	472	472	473	473	474	474	475	475	476	476	477	477	478	478	479	479	480	480	481	481	482	482	483	483	484	484	485	485	486	486	487	487	488	488	489	489	490	490	491	491	492	492	493	493	494	494	495	495	496	496	497	497	498	498	499	499	500	500	501	501	502	502	503	503	504	504	505	505	506	506	507	507	508	508	509	509	510	510	511	511	512	512	513	513	514	514	515	515	516	516	517	517	518	518	519	519	520	520	521	521	522	522	523	523	524	524	525	525	526	526	527	527	528	528	529	529	530	530	531	531	532	532	533	533	534	534	535	535	536	536	537	537	538	538	539	539	540	540	541	541	542	542	543	543	544	544	545	545	546	546	547	547	548	548	549	549	550	550	551	551	552	552	553	553	554	554	555	555	556	556	557	557	558	558	559	559	560	560	561	561	562	562	563	563	564	564	565	565	566	566	567	567	568	568	569	569	570	570	571	571	572	572	573	573	574	574	575	575	576	576	577	577	578	578	579	579	580	580	581	581	582	582	583	583	584	584	585	585	586	586	587	587	588	588	589	589	590	590	591	591	592	592	593	593	594	594	595	595	596	596	597	597	598	598	599	599	600	600	601	601	602	602	603	603	604	604	605	605	606	606	607	607	608	608	609	609	610	610	611	611	612	612	613	613	614	614	615	615	616	616	617	617	618	618	619	619	620	620	621	621	622	622	623	623	624	624	625	625	626	626	627	627	628	628	629	629	630	630	631	631	632	632	633	633	634	634	635	635	636	636	637	637	638	638	639	639	640	640	641	641	642	642	643	643	644	644	645	645	646	646	647	647	648	648	649	649	650	650	651	651	652	652	653	653	654	654	655	655	656	656	657	657	658	658	659	659	660	660	661	661	662	662	663	663	664	664	665	665	666	666	667	667	668	668	669	669	670	670	671	671	672	672	673	673	674	674	675	675	676	676	677	677	678	678	679	679	680	680	681	681	682	682	683	683	684	684	685	685	686	686	687	687	688	688	689	689	690	690	691	691	692	692	693	693	694	694	695	695	696	696	697	697	698	698	699	699	700	700	701	701	702	702	703	703	704	704	705	705	706	706	707	707	708	708	709	709	710	710	711	711	712	712	713	713	714	714	715	715	716	716	717	717	718	718	719	719	720	720	721	721	722	722	723	723	724	724	725	725	726	726	727	727	728	728	729	729	730	730	731	731	732	732	733	733	734	734	735	735	736	736	737	737	738	738	739	739	740	740	741	741	742	742	743	743	744	744	745	745	746	746	747	747	748	748	749	749	750	750	751	751	752	752	753	753	754	754	755	755	756	756	757	757	758	758	759	759	760	760	761	761	762	762	763	763	764	764	765	765	766	766	767	767	768	768	769	769	770	770	771	771	772	772	773	773	774	774	775	775	776	776	777	777	778	778	779	779	780	780	781	781	782	782	783	783	784	784	785	785	786	786	787	787	788	788	789	789	790	790	791	791	792	792	793	793	794	794	795	795	796	796	797	797	798	798	799	799	800	800	801	801	802	802	803	803	804	804	805	805	806	806	807	807	808	808	809	809	810	810	811	811	812	812	813	813	814	814	815	815	816	816	817	817	818	818	819	819	820	820	821	821	822	822	823	823	824	824	825	825	826	826	827	827	828	828	829	829	830	830	831	831	832	832	833	833	834	834	835	835	836	836	837	837	838	838	839	839	840	840	841	841	842	842	843	843	844	844	845	845	846	846	847	847	848	848	849	849	850	850	851	851	852	852	853	853	854	854	855	855	856	856	857	857	858	858	859	859	860	860	861	861	862	862	863	863	864	864	865	865	866	866	867	867	868	868	869	869	870	870	871	871	872	872	873	873	874	874	875	875	876	876	877	877	878	878	879	879	880	880	881	881	882	882	883	883	884	884	885	885	886	886	887	887	888	888	889	889	890	890	891	891	892	892	893	893	894	894	895	895	896	896	897	897	898	898	899	899	900	900	901	901	902	902	903	903	904	904	905	905	906	906	907	907	908	908	909	909	910	910	911	911	912	912	913	913	914	914	915	915	916	916	917	917	9

Figure 85. ADSL Loop Test Results(2)

Carrier Type: TSS C SNR C QLN C HLN C HLOG C																																			
The HLOG formula: 6-(value/10)(dB). Real values in dB for each carrier over the Upstream passband.(Near-END)																																			
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
0~31	251	1023	776	776	673	262	138	39	39	35	27	23	23	25	28	34	40	46	53	61	70	79	87	96	105	113	122	130	137	144	152				
32~63	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023				
The HLOG formula: 6-(value/10)(dB). Real values in dB for each carrier over the Downstream passband.(Far-END)																																			
Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
0~31	450	450	400	400	520	520	520	520	560	560	560	560	560	560	560	560	560	560	610	620	520	570	510	490	470	430	410	390	370	340	320	300	280		
32~63	260	250	230	210	200	190	170	160	150	140	140	130	120	120	120	110	110	100	100	100	90	90	90	90	90	90	90	90	90	90	90	90	90	90	70
64~95	70	70	70	70	70	60	60	60	60	60	60	60	60	60	60	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
96~127	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
128~159	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
160~191	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
192~223	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
224~255	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
256~287	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
288~319	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
320~351	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
352~383	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
384~415	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
416~447	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
448~479	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120			
480~511	160	170	170	170	170	180	180	180	180	190	190	190	190	200	200	210	210	210	220	220	220	220	240	240	240	250	250	250	250	250	250	250			

Figure 86. ADSL Loop Test Results(3)

Carrier Data

This option allows you to view the ADSL line carrier data. From the **ADSL** menu, click on **Data & Inventory** and then **Carrier Data**. The following page displays.

Select the line port (1 ~ 24) and carrier type (LOAD or GAIN). Then click on **Query** button. Note that if the line port is still in loop testing status, you cannot query the carrier data.

Carrier	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0~31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32~63	0	6	6	7	8	8	9	9	10	10	11	10	11	11	12	12	12	12	13	13	13	13	14	13	14	14	14	14	15	14	15	
64~95	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
96~127	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
128~159	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
160~191	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
192~223	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
224~255	14	15	15	15	2	15	15	15	15	15	15	14	15	15	15	15	14	15	15	15	15	15	14	15	15	15	15	15	15	15	14	
256~287	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
288~319	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
320~351	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	14		
352~383	15	15	15	15	15	15	14	15	15	15	15	15	14	15	15	15	14	15	15	15	14	15	15	15	14	15	15	14	15	14		
384~415	0	0	15	14	15	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	15	14	14		
416~447	15	14	14	15	14	15	14	15	14	15	14	14	15	14	14	14	14	15	14	14	14	15	14	14	14	14	14	15	14	14		
448~479	0	0	15	14	14	14	14	14	14	14	14	14	14	14	13	14	14	14	13	14	14	13	13	14	13	13	13	13	14	13		
480~511	13	13	13	13	12	13	12	12	12	12	12	12	12	12	12	11	11	11	10	11	10	10	9	9	7	7	6	6	3	2	0	

Port:	2	Type:	LOAD	GAIN	Query
The GAIN formula: gain=value*(1/512).The GAIN allocation over the Downstream passband.(Near-END)					
Carrier	0	1	2	3	4
5	6	7	8	9	10
11	12	13	14	15	16
17	18	19	20	21	22
23	24	25	26	27	28
29	30	31			
0~31	0	0	0	0	0
32~63	0	482	394	469	541
64~95	573	482	526	496	482
96~127	405	405	405	394	405
128~159	469	402	482	482	402
160~191	455	455	455	455	455
192~222	469	469	482	482	482
224~255	372	511	526	526	511
256~287	394	482	482	496	482
288~319	455	469	482	482	482
320~351	496	496	511	496	511
352~383	526	526	526	541	526
384~415	557	405	573	405	573
416~447	603	430	430	603	430
448~479	482	482	681	496	496
480~511	496	511	526	541	394
The GAIN formula: gain=value*(1/512).The gain allocation over the Upstream passband.(Far-END)					
Carrier	0	1	2	3	4
5	6	7	8	9	10
11	12	13	14	15	16
17	18	19	20	21	22
23	24	25	26	27	28
29	30	31			
0~31	0	0	0	0	0
32~63	0	0	0	0	0

Figure 87. Carrier Data table

OP Data

This option allows you to view the ADSL line/channel operational data and carrier data. From the ADSL menu, click on **Data & Inventory**, and then **OP Data**.

Line Operational Data

Click on **ADSL OP Data** drop-down list and select the item **Line (OP)**. Then select the line port (1~24). Click on **Query** button. The following page displays:

ADSL OP Data: Line (OP) Port-1 Query		
ADSL LINE OP Data	NE US	FE DS
Rel Capacity Occupation	109(%)	100(%)
Noise Margin	3.5(db)	8.0(db)
Signal Attenuation	1.5(db)	0.0(db)
Loop Attenuation	1.8(db)	0.0(db)
ADSL LINE OP Data	NE DS	FE US
Output Power	12.1(dBm)	9.5(dBm)
Actual PSD	-50.0(dBm/Hz)	-38.0(dBm/Hz)
ADSL LINE OP Data	NE	FE
Line Status	Run Showtime L0	N/A
Actual Op Mode	(992.1_A_Pots_NonOverlapped)	N/A
ATUC Op Mode Capabilities	(ANSI_T1413) (ETSI_DTS_TM06006) (992.1_A_Pots_NonOverlapped) (992.1_B_Isdn_NonOverlapped) (992.2_A_Pots_NonOverlapped) (992.3_A_Pots_NonOverlapped) (992.3_B_Isdn_NonOverlapped) (992.3_L_Pots_NonOverlapped_Mode1) (992.3_L_Pots_NonOverlapped_Mode2) (992.3_M_Pots_Extend_US_NonOverlapped) (992.5_A_Pots_NonOverlapped) (992.5_B_Isdn_NonOverlapped) (992.5_M_Pots_Extend_US_NonOverlapped)	

Figure 88. ADSL Line Operational Data page

Channel Operational Data

Click on **ADSL OP Data** drop-down list and select the item **Channel (OP)**. Then select the port (1~24). Click on **Query** button. The following page displays:

ADSL OP Data: Channel(OP) Port-1 Query		
ADSL LINE OP Data	NE US	FE DS
Actual Bitrate(kbps)	1120	8128
Attainable Bitrate(kbps)	1024	8128
ADSL LINE OP Data	NE DS	FE US
Actual Interleaving Delay(ms)	0	0
Actual Impulse Noise Protection(Symbol)	0.0	0.0

Figure 89. ADSL Channel Operational Data page

Line Config & Info

Line Configuration

This option allows you to setup the ADSL line configuration and line information. From the ADSL menu, click on Line Config & Info. The following page displays:

The screenshot shows the ADSL Line Configuration page. At the top, there are fields for 'ADSL Port from' (1) and 'to' (1), and a 'Modify' button. Below this is a dropdown menu for 'Operational Mask Mode' containing options like (0)ANSI_T1413, (1)ETSI_DTS_TM06006, and (2)992.1_A_Pots_NonOverlapped. There are also dropdowns for 'Carrier Data Mode' (OFF) and 'FORCE L3 Mode' (OFF). Below these controls is a 'Query' button. The main area contains a table with columns: Port, OP MASK ID, Op Mode Board Capability, Carrier Data, Loop Diagnostics, and Force L3 Mode. The table lists various port configurations, such as ANSI_T1413, ETSI_DTS_TM06006, and several 992.x variants.

Port	OP MASK ID	Op Mode Board Capability	Carrier Data	Loop Diagnostics	Force L3 Mode
1	ANSI_T1413 ETSI_DTS_TM06006 992.1_A_Pots_NonOverlapped 992.1_B_Isdn_NonOverlapped 992.2_A_Pots_NonOverlapped 992.3_A_Pots_NonOverlapped 992.3_B_Isdn_NonOverlapped 992.3_L_Pots_NonOverlapped_Mode1 992.3_L_Pots_NonOverlapped_Mode2 992.3_M_Pots_ExtUS_NonOverlapped 992.5_A_Pots_NonOverlapped 992.5_B_Isdn_NonOverlapped 992.5_M_Pots_ExtUS_NonOverlapped		OFF	OFF	OFF

Figure 90. ADSL Line Configuration page

Table 56. ADSL Line Configuration Settings

Label	Description
ADSL Port From...To...	Type in the line port range. Valid circuit number: 1 ~ 24.
Operational Mask Mode	Select the Operational Mode(s) to be masked. Select the modes in the block by using mouse and Shift or Ctrl key. Select the check box and then click on Modify button.
Carrier Data Mode	Click on this drop-down list and select the carrier data mode. Select the check box and then click on Modify button. OFF - Carrier data won't vary during show time. ON - Carrier data collection is active. The carrier data will be refreshed during show time. ON INIT - The ADSL facility is re-initialized and carrier data collection is active (will be refreshed).
FORCE L3 Mode	Click on this drop-down list and select ON to force the ADSL port to enter power management L3 mode (Idle state). Select the check box and then click on Modify button.
Modify	Click on this button to submit modification.
Query	Click on this button to display current line configuration.

Line Information

This option allows you to setup the ADSL line information. From the **ADSL** menu, click on **Line Config & Info** and then **Line Information**. The following page displays:

ADSL Port from 1 To 5			
		Modify	Query
Port	Identifier	Phone No	Description
<input checked="" type="checkbox"/> 1	ADSL-1	886-32826433	Mak Office
<input type="checkbox"/> 2			
<input type="checkbox"/> 3			
<input type="checkbox"/> 4			
<input type="checkbox"/> 5			

Figure 91. ADSL Line Information page

Table 57. ADSL Line Information Settings

Label	Description
ADSL Port From...To...	Type in the line port range. Valid circuit number: 1 ~ 24.
Modify	Click on this button to submit the modification once you have entered new value for the ADSL line information. Note that to modify an entry, you must select the check box on the leftmost column before you click on Modify.
Query	Once you have typed in the port number range, click on this button to display the ADSL line information of these ports.
Identifier	Type in the ADSL line identifier. Up to 63 characters is allowed.
Phone No	Type in the phone number. Up to 63 characters is allowed.
Description	Type in any comment of this line. Up to 63 characters is allowed

Chapter 5 **Traffic Configuration**

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------------------------------	----

ATM Traffic Descriptor

This option allows you to modify the traffic table. From the Traffic menu, click on ATM Traffic Descriptor. The following page displays:

PCR	CDVT	SCR	MBS	TYPE
20000	10000	0	0	Policed

Descriptor: (2) [Policed CBR]atm<CLP> <Transparent> [NoSCR]

Delete Select	Row No.	ATM Traffic Descriptor	PCR	CDVT	SCR	MBS	TYPE
<input checked="" type="radio"/>	DEF	[Unshaped]atmNoTrafficDescriptor	0	0	0	0	SHAPED

[ADSL PVC CONFIGURATION]

Figure 92. ATM Traffic Descriptor page

Table 58. ATM Traffic Settings

Label	Description
PCR	PCR stands for Peak Cell Rate (cells/second).
CDVT	CDVT stands for Cell Delay Variation Tolerance (microseconds).
SCR	SCR stands for Sustained Cell Rate (cells/second).
MBS	MBS stands for Maximum Burst Size (cells).
TYPE	This field will show Shaped or Policed depending on the descriptor type you select.

See the following page for more table information.

Table 58. ATM Traffic Settings

Descriptor	Click on this drop-down list and select a descriptor type. After you select a descriptor type, the supported parameters will be displayed in the following columns. Valid descriptor types are: [Unshaped] atmNoTrafficDescriptor: This identifies no ATM traffic descriptor type. This traffic descriptor type can be used for best effort traffic. [Policed CBR] atmCLPTransparentNoScr / [Shaped CBR] atmCLPTransparentNoScr: This traffic descriptor type is for the CLP-transparent model and no Sustained Cell Rate. This traffic descriptor type is applicable to connections following the CBR.1 conformance definition. Connections specifying this traffic descriptor type will be rejected at UNI 3.0 or UNI 3.1 interfaces. For a similar traffic descriptor type that can be accepted at UNI 3.0 and UNI 3.1 interfaces, see "atmNoClpNoScr". [Policed VBR1] atmNoCLPScrCdvt: This traffic descriptor type is for no CLP with Sustained Cell Rate and CDVT. This traffic descriptor type is applicable to VBR connections following the UNI 3.0/3.1 conformance definition for PCR CLP=0+1 and SCR CLP=0+1. These VBR connections differ from VBR.1 connections in that the CLR objective applies only to the CLP=0 cell flow. [Policed VBR2] atmCLPNoTaggingScrCdvt / [Shaped UBRNRT] atmCLPNoTaggingScrCdvt: This traffic descriptor type is for CLP with Sustained Cell Rate and CDVT and no tagging. This traffic descriptor type is applicable to connections following the VBR.2 conformance definition. [Policed VBR3] atmCLPTaggingScrCdvt: This traffic descriptor type is for CLP with tagging and Sustained Cell Rate and CDVT. This traffic descriptor type is applicable to connections following the VBR.3 conformance definition. [Policed UBR1] atmNoCLPNoScrCdvt: This traffic descriptor type is for no CLP with CDVT and no Sustained Cell Rate. This traffic descriptor type is applicable to CBR connections following the UNI 3.0/3.1 conformance definition for PCR CLP=0+1. These CBR connections differ from CBR.1 connections in that the CLR objective applies only to the CLP=0 cell flow. This traffic descriptor type is also applicable to connections following the UBR.1 conformance definition. [Policed UBR2] atmNoCLPTaggingNoScr: This traffic descriptor type is for no CLP with tagging and no Sustained Cell Rate. This traffic descriptor type is applicable to connections following the UBR.2 conformance definition. [Shaped UBR] atmNoCLPNoScr: This traffic descriptor type is for no CLP and no Sustained Cell Rate [Shaped VBR] atmCLPTransparent: This traffic descriptor type is for the CLP-transparent model with Sustained Cell Rate. This traffic descriptor type is applicable to connections following the VBR.1 conformance definition. Connections specifying this traffic descriptor type will be rejected at UNI 3.0 or UNI 3.1 interfaces. For a similar traffic descriptor type that can be accepted at UNI 3.0 and UNI 3.1 interfaces, see "atmNoClpScr".
------------	--

Table 58. ATM Traffic Settings

Create	Click on this button to create a new traffic descriptor.
Delete	When you want to delete a traffic descriptor, click on the radio button beside the row number to select the traffic descriptor and then click on the Delete button.

Chapter 6 **SNMP Configuration**

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SNMP Community

This option allows you to configure the SNMP community that is the group that Model 3124s and management stations running SNMP belong to. It helps define where information is sent. The community name is used to identify the group and serve as form of authentication. From the SNMP menu, click on **SNMP Community**. The following page displays:

Select modify/delete	No.	Community Name	Access Mode
<input checked="" type="radio"/>	1	public	Read/Write

Figure 93. SNMP Community page

Table 59. SNMP Community Options

Label	Description
New	Click on this button to create a new SNMP community. After you click on New, the following page displays. Type in the name of the SNMP community (up to 63 characters; note that community names beginning with a digital number are not allowed) and select the access mode (Read only or Read/Write). Then, click on Apply button.
Access Mode	Select the SNMP community access mode: Read only or Read/Write.
Modify	Click on this button to modify the community name.
Delete	Select an index and then click on this button to delete a community.

SNMP Target

This option allows you to configure the SNMP target to control where the SNMP traps (notifications) are sent. Traps are used to report an alarm or other asynchronous event about a managed Model 3124 system. From the SNMP menu, click on **SNMP Target**. The following page displays:

The screenshot shows a configuration page for an SNMP target. At the top, there are buttons for 'Next No [2] New' (disabled), 'Target No: No.1 (Addr:192.168.7.243)', 'Query', 'Delete', and 'Modify'. Below this, the target is identified as 'No.1'. The configuration fields are as follows:

- IP Address**: 192 . 168 . 7 . 243
- Target Name**: 123
- Target Tag**: 123_Tag
- Address Port**: 162
- Trap Version**: V1 V2c

Figure 94. SNMP Target page

Table 60. SNMP Target Options

Label	Description
New	Click on this button to create a new SNMP target. After you click on New, the following page displays. Type in the IP address, name and tag of the SNMP target, and address port (Usually SNMP uses UDP port 161 for general SNMP messages and UDP port 162 for SNMP trap messages), and select Trap version (V1 or V2c). Then, click on Apply button.  The screenshot shows a configuration page for creating a new SNMP target. It includes fields for Target Address (0 . 0 . 0 . 0), Target Name (SnmpTargetName1), Target Tag (radio button selected for SnmpTargetList1), Address Port (162), and Trap Version (radio buttons for V1 and V2c, with V1 selected). At the bottom, there is a 'Use Notify Tag' field with a radio button selected, and a list of related SNMP NOTIFY TAGs: (1)123_Tag and (2)abc_Tag.
Target No.	Click on this drop-down list and select the SNMP target number.
Query	Select the target number and then click on this button to retrieve the information.
Delete	Select the target number and then click on this button to delete a target.
Modify	Select the target number and then click on this button to modify the target setting.

SNMP Notify

This option allows you to setup the SNMP Notification (In SNMPv1, asynchronous event reports are called traps while they are called notifications in later versions of SNMP). From the **SNMP** menu, click on **SNMP Notify**. The following page displays:

Select modify/delete	Notify#	Notify Name	Notify Tag
<input checked="" type="radio"/>	No.1	123	123_Tag
<input type="radio"/>	No.2	abc	abc_Tag

Figure 95. SNMP Notify page

Table 61. SNMP Notify Options

Label	Description								
Notify No.	This field shows the Notify number you select.								
New	<p>Click on this button to create a new SNMP Notify. After you click on New, the following page displays. Type in the name and tag of the SNMP Notify and click on Apply button.</p> <p>By specifying the Notify tag, you can bind the Notify name to the SNMP target address table. When the Notify tag is the same with the Target Tag in a target table, the Notify is sent to the corresponding Target address.</p> <table border="1"> <tr> <td>Apply</td> <td>Back</td> </tr> <tr> <td colspan="2">SNMP Notify No.3</td> </tr> <tr> <td>Notify Name</td> <td>SnmpNotifyName3</td> </tr> <tr> <td>Notify Tag</td> <td>SnmpNotifyTag3</td> </tr> </table>	Apply	Back	SNMP Notify No.3		Notify Name	SnmpNotifyName3	Notify Tag	SnmpNotifyTag3
Apply	Back								
SNMP Notify No.3									
Notify Name	SnmpNotifyName3								
Notify Tag	SnmpNotifyTag3								
Delete	Select a row and then click on this button to delete a Notify.								
Modify	Select the row and type in new notify tag and then click on this button to submit the modification.								

Chapter 7 Maintenance

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SYS Log Server

This option allows you to configure the IP address of the SYS Log server which listens for incoming Syslog messages. From the Maintenance menu, click on **SYS Log Server**. The following page displays:

System Log Server	
Modify	Action Stop
Current Server IP	192.168.1.1
Change Server Address	192 . 168 . 1 . 1

Figure 96. System Log Server page

Table 62. SYS Log Server Settings

Label	Description
Current Server IP	This field shows the IP address of current Sys Log server.
Change Server Address	Type in the new IP address of Sys Log server. The server must be a remote host.
Modify	To change SYS Log server address, click on this button once you have type in a new server IP address.
Action	Click on this drop-down list and select Start to start sending the Syslog messages to the server or Stop to stop sending the Syslog messages to the server.

Database

This option allows you to import/export the configuration data. From the Maintenance menu, click on Database. The following page displays. Select the database configuration action you want to perform.

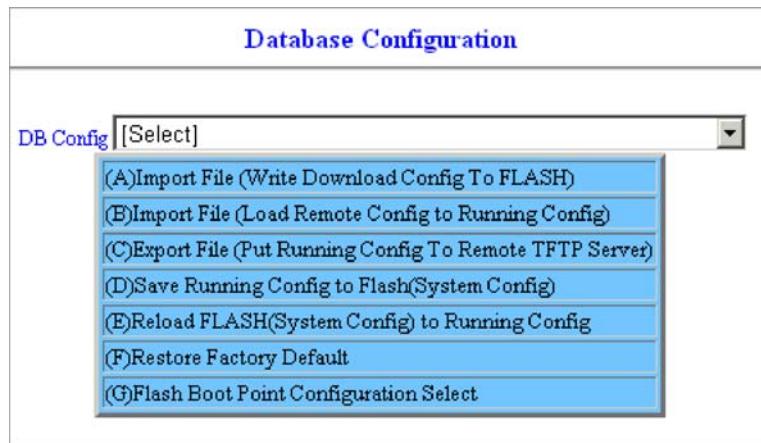


Figure 97. Database Configuration menu

Database Configuration Concept.

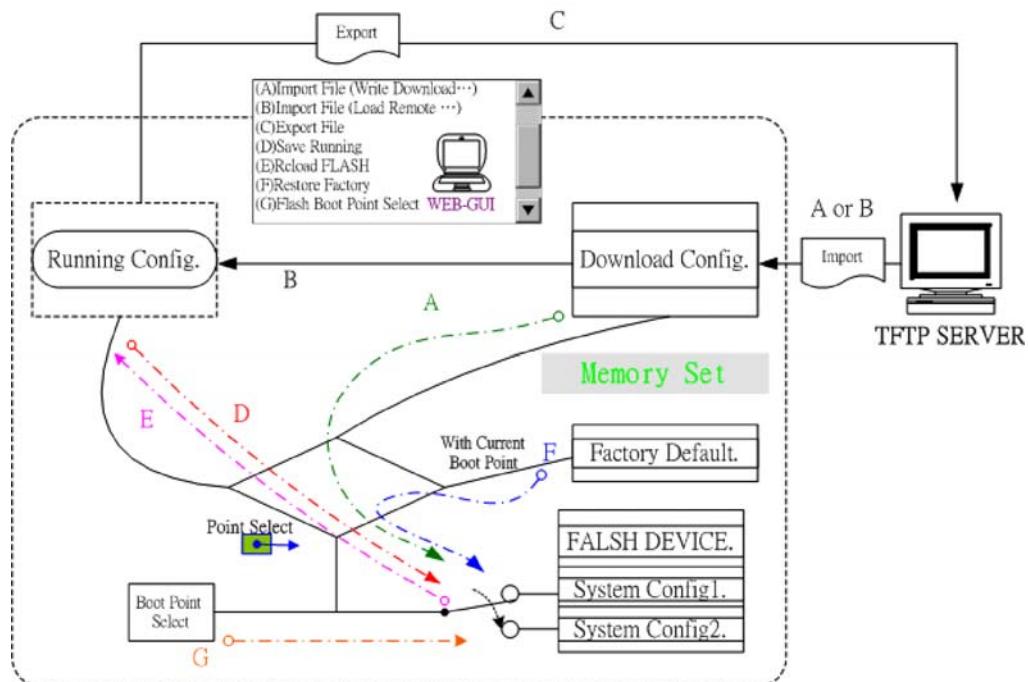


Figure 98. Database Configuration concept

(A) Import File (Write Download Config To Flash)

Type in the TFTP Server IP address and the name of the file you want to download. Then click on Get File button.

Database Configuration

DB Config: (A)Import File (Write Download Config To FLASH)

Write flash at: Partition1

TFTP Server IP: 172.16.100.181 File Name: config1 Get File

Figure 99. Database Configuration - Import File - Get File

Write downloaded Config to Flash in progress:

Database Configuration

DB Config: (A)Import File (Write Download Config To FLASH)

Write flash at: Partition1

TFTP Server IP: 172.16.100.181 File Name: config1 Get File

Action Name	GET_LOCAL
Action Status	TFTP GET SUCCESS
Import File In Progress..	

Figure 100. Database Configuration - Import File - Write to Flash

Write to memory successfully:

Database Configuration

DB Config: (A)Import File (Write Download Config To FLASH)

Write flash at: Partition1

TFTP Server IP: 172.16.100.181 File Name: config1 Get File

Action Name	WRITE_DOWNLOAD
Action Status	MEMORY WRITE SUCCESS

Figure 101. Database Configuration - Import File - Write Successful

Fail to Get File:

The screenshot shows the 'Database Configuration' interface with the sub-menu '(A)Import File (Write Download Config To FLASH)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'configDB1'. The 'Action Name' is set to 'GET_LOCAL' and the 'Action Status' is 'TFTP GET FAIL'.

Figure 102. Database Configuration - Import File - Fail to Get File

(B) Import File (Load Remote Config to Running Config)

Type in the TFTP Server IP address and the name of the file you want to download. Then click on Get File button.

The screenshot shows the 'Database Configuration' interface with the sub-menu '(B)Import File (Load Remote Config to Running Config)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'config1'. The 'Get File' button is visible.

Figure 103. Database Configuration - Import File (Remote Config) - Get File

Write to Running Config successfully:

The screenshot shows the 'Database Configuration' interface with the sub-menu '(B)Import File (Load Remote Config to Running Config)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'config1'. The 'Action Name' is 'LOAD_REMOTE' and the 'Action Status' is 'TFTP GET SUCCESS'.

Figure 104. Database Configuration - Import File (Remote Config) - Write Successful

Fail to Get File:

The screenshot shows the 'Database Configuration' interface with the 'DB Config' dropdown set to '(B)Import File (Load Remote Config to Running Config)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'configdB1'. Below these fields are two buttons: 'Action Name' (highlighted in blue) containing 'GET_LOCAL' and 'Action Status' (highlighted in red) containing 'TFTP GET FAIL'.

Figure 105. Database Configuration - Import File (Remote Config) - Write Failed

(C) Export File (Put Running Config to Remote TFTP Server)

Type in the TFTP Server IP address and the name of the file you want to export. Then click on Put File button.

The screenshot shows the 'Database Configuration' interface with the 'DB Config' dropdown set to '(C)Export File (Put Running Config To Remote TFTP Server)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'config1'. Below these fields is a 'Put File' button.

Figure 106. Database Configuration - Export File - Put File

TFTP put file successfully:

The screenshot shows the 'Database Configuration' interface with the 'DB Config' dropdown set to '(C)Export File (Put Running Config To Remote TFTP Server)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'config1'. Below these fields are two buttons: 'Action Name' (highlighted in blue) containing 'PUT_REMOTE' and 'Action Status' (highlighted in green) containing 'TFTP PUT SUCCESS'.

Figure 107. Database Configuration - Export File - Put File Successful

TFTP put file fail:

The screenshot shows the 'Database Configuration' interface with the 'DB Config' dropdown set to '(C)Export File (Put Running Config To Remote TFTP Server)'. The 'TFTP Server IP' field contains '172.16.100.181' and the 'File Name' field contains 'configdB1'. Below these fields are two buttons: 'Action Name' (highlighted in blue) containing 'PUT_REMOTE' and 'Action Status' (highlighted in red) containing 'TFTP PUT FAIL'.

Figure 108. Database Configuration - Export File - Put File Failed

(D) Save Running Config to Flash (System Config)

Click on the drop-down list and select partition, and then click on Write_Running button to write running configuration to Flash.

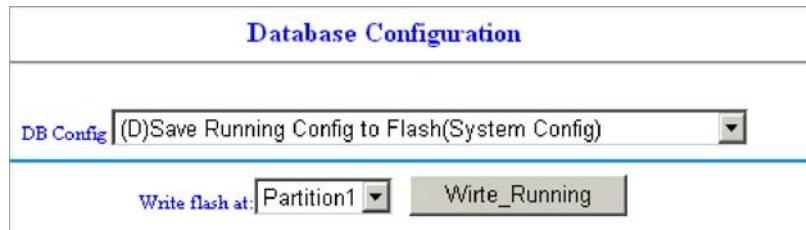


Figure 109. Database Configuration - Save Running Config to Flash

Write running config to Flash successfully:

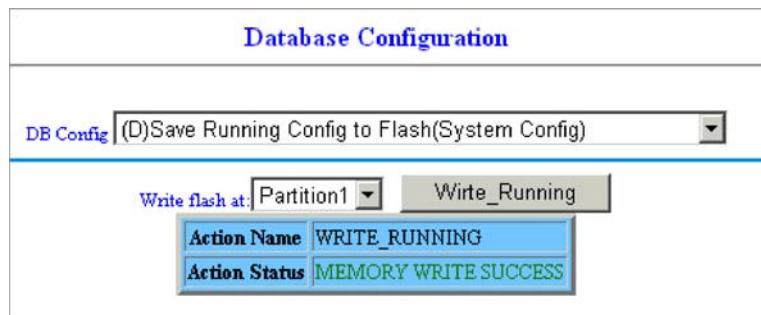


Figure 110. Database Configuration - Save Running Config to Flash Successful

(E) Reload Flash to Running Config

Click on the drop-down list and select partition, and then click on LOAD_FLASH button to load configuration from Flash to Running Config.

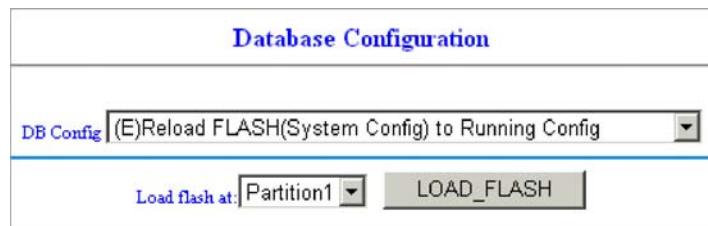


Figure 111. Database Configuration - Reload Flash

Load configuration from Flash to Running Config successfully:

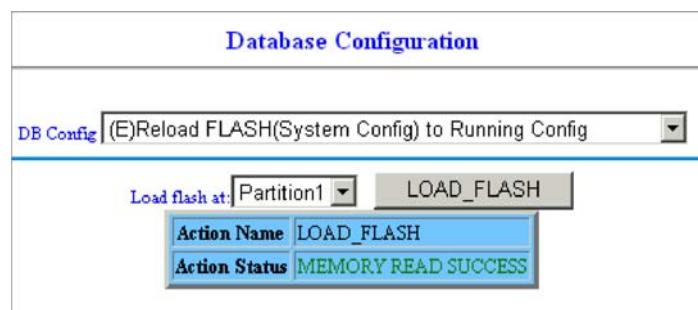


Figure 112. Database Configuration - Reload Flash Successful

(F) Restore Factory Default

Except out-band IP address and user account, all other configuration will be restored to factory default.

Click on **Factory_Default** button to restore factory default configuration.

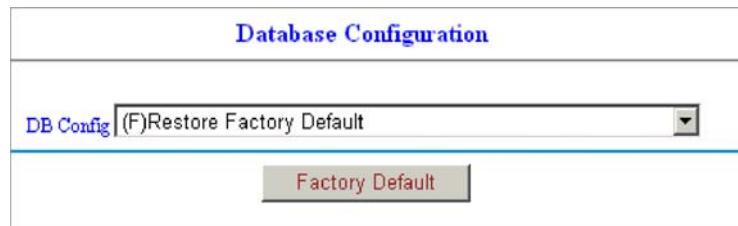


Figure 113. Database Configuration - Restore Factory Default

After loading default configuration to Flash successfully, you must click on **RESTART** button to restart the system so that the configuration can take effect:

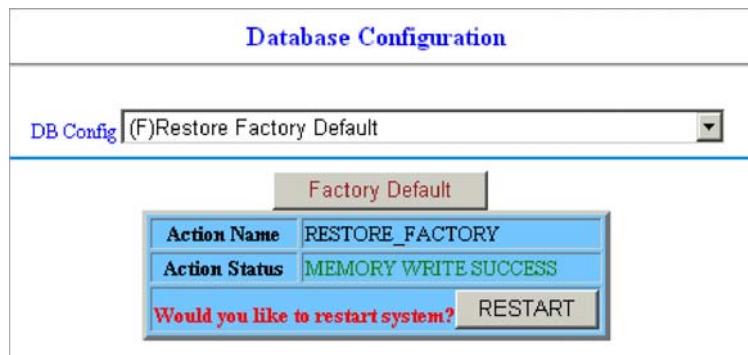


Figure 114. Database Configuration - Restore Factory Default Successful

(G) Flash Boot Point Configuration Select

Click on the Boot Config drop-down list and select the partition (Partition1 or Partition2) as the boot point. Click on **Apply** button and then restart the system. The system will restart and load the configuration in the partition you select into the running configuration.

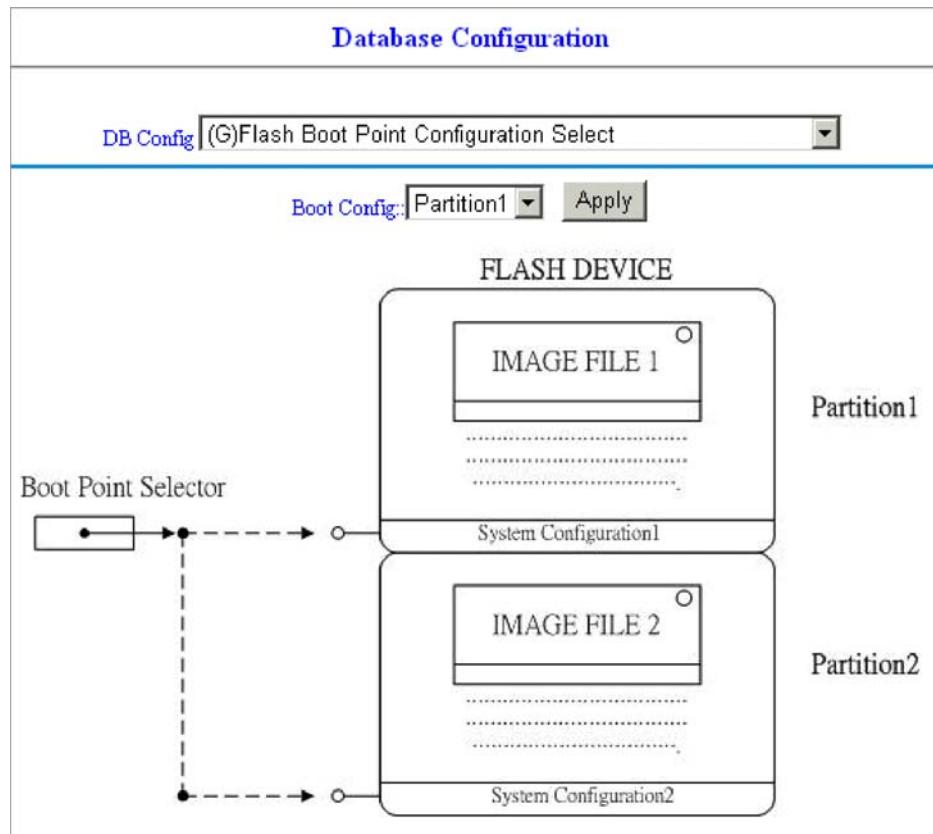


Figure 115. Database Configuration - Boot Configuration

Firmware Update

This option allows you to ftp get the firmware from a server and write to flash for updating the system firmware. From the Maintenance menu, click on **Firmware Update**. The following page displays:

Firmware Update			
Remote FTP Server IP	172 . 16 . 10 . 219 : 21		
Server User Name	[share]		
Server Password	[*****]		
File Name	[vmlinux_u2112_1.00B05]		
Firmware Update Status	No Action[0]		
Firmware Partition Select: Partition 2 <input type="button" value="▼"/> <small>Once system has 2 versions, an operator can use Partition Select from 1 to 2, vice versa. (e.g)Partition changes from version A.a to version B.b</small>			
Partition Location	Version	Build Date	Status
Partition:1	1.00B05	2008/6/18	-----
Partition:2	1.00B05	2008/8/29	Active
Current Version	1.00B05		
1.[Warning]Upgrading firmware may take a few minutes, please don't turn off or reset the system. 2.Once the system has upgraded already, please restart it!			

Figure 116. Firmware Update page

Table 63. Firmware Update Options

Label	Description
Firmware Update	Once you have typed in the parameter values, click on this button to start the firmware update.
Remote FTP Server IP	Type in the IP address of the FTP server.
Server User Name	Type in the ftp user name.
Server Password	Type in the ftp password.
File Name	Type in the firmware filename.
Firmware Update Status	This field shows current status of firmware update process.
Partition Select	Select firmware memory partition (Partition 1 or 2). If you change to the non-active partition, system will restart immediately.
Partition Information	This section displays the partition information including firmware version, updating date, and status (active or not). When you update the firmware, new firmware will be updated to the non-active partition.

FTP Get successfully: The following message displays while getting file from FTP server.

```

incoming cluster id 0
FTP SERVER IP=172.16.10.219
Waiting for FTP Session (about 30 sec..)

```

Firmware Write in progress: The Flash Write process may take a few minutes; you must not turn off or reset the system during the process.

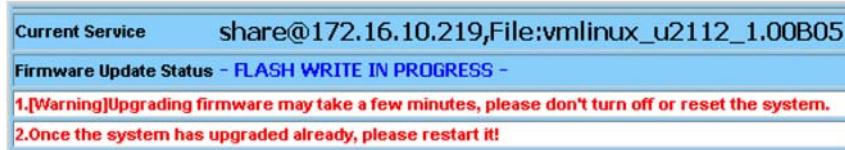


Figure 117. Firmware Update - Flash Write In Progress

Write image to FLASH successfully: When the Flash Write process has completed successfully, the Firmware Update Status shows “Firmware has upgraded already”. You can now restart the system.

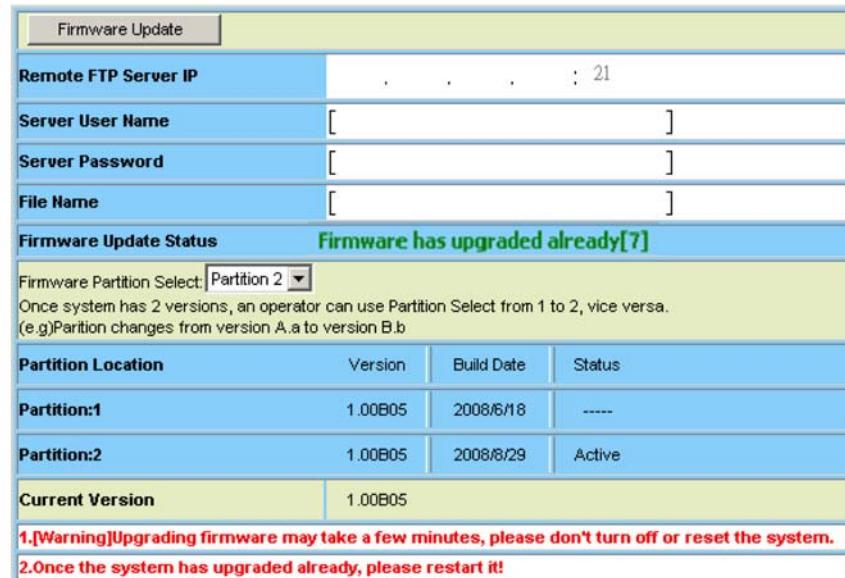


Figure 118. Firmware Update - Flash Write Successful

ATM Loopbacks

This option allows you to modify the ATM F4/F5 entries or send the diagnostic entry. From the Maintenance menu, click on ATM Loopbacks. The following page displays:

ATM Loopback Settings						
Select	Port	LoopBack ID	Test Type	Status		
<input checked="" type="checkbox"/>	ADSL Port1-PVC1	00000000	00000000	00000000	F5 E2E	FAIL
<input type="checkbox"/>	ADSL Port2-PVC1	00000000	00000000	00000000	--Select--	----
<input type="checkbox"/>	ADSL Port3-PVC1	00000000	00000000	00000000	--Select--	----
<input type="checkbox"/>	ADSL Port4-PVC1	00000000	00000000	00000000	--Select--	----
<input type="checkbox"/>	ADSL Port5-PVC1	00000000	00000000	00000000	--Select--	----
<input type="checkbox"/>	ADSL Port6-PVC1	00000000	00000000	00000000	--Select--	----

Figure 119. ATM Loopback page

Table 64. ATM Loopback Settings

Label	Description
OAM Cell Generation	Click on the radio button to Disable/Enable OAM Cell Generation. Then click on Apply button to submit the setting.
Port List	Click on the drop-down lists to select port range (1 ~ 24) and PVC (1 ~ 8).
Create	Click on this button to create a loopback setting. <i>Note:</i> Make sure the interface has been setup and the service state of the circuit is turned on.
Query	Click on this button to query the loopback status.
Delete	Click on this button to delete a loopback entry.
Select	Click on the check box to select the PVC you want to create or delete the loopback setting for.
Port	This field shows the port and PVC number.
LoopBack ID	Type in a loopback ID (32 digit).
Test Type	Select the loopback type: F5 E2E or F5 Segment.
Status	This field shows current loopback testing status. Possible values are: Fail, Success, In Progress, or —.

Fault Management

Alarm/Event

This option allows you to query current alarm, history alarm, and event log. From the Maintenance menu, click on Fault Management and then Alarm/Event. The Current Alarm page displays. Click on the Alarm/Event Select drop-down list and select Current Alarm, History Alarm, or Event Log to view.

Current Alarm

Type in the range of rows (1 ~ 1024) and then click on the Query button.

Alarm/Event Select						
Current Alarm						
Row	ID	Description	Level	State	Sequential	Time
1	116	[INT-SLOT]SYS_FAN	MN	Set	1	2008/06/04 01:44:28
2	117	[INT-SLOT]SYS_FAN	MN	Set	2	2008/06/04 01:44:28

Figure 120. Current Alarm page

Table 65. Current Alarm Table Description

Label	Description
Query	Click on this button to get the most recent data.
Row	This field shows the row number (1~256).
ID	This field shows the alarm ID.
Description	This field shows the description for the alarm.
Level	This field shows the alarm level. Valid values are: MU: major alarm. MN: minor alarm.
State	This field shows the alarm state: Set or Clear.
Sequential	Sequential number.
Time	Alarm occurring date and time.

History Alarm

Alarm/Event Select						
History Alarm						
Query		Clear History				
Row	ID	Description	Level	State	Sequential	Time
71	620	[Port:17],ADSL_NOPEER_FE	MN	Set	327	2008/06/23 04:23:49
70	620	[Port:48],ADSL_NOPEER_FE	MN	Set	326	2008/06/23 04:23:49
69	620	[Port:47],ADSL_NOPEER_FE	MN	Set	325	2008/06/23 04:23:49

Figure 121. History Alarm page

Table 66. History Alarm Table Description

Label	Description
Query	Click on this button to query history alarms.
Clear History	Click on this button to clear the alarm history table.
Row	This field shows the row number.
ID	This field shows the alarm ID.
Description	This field shows the description for the alarm.
Level	This field shows the alarm level. Valid values are: MJ: major alarm. MN: minor alarm.
State	This field shows the alarm state: Set or Clear.
Sequential	Sequential number.
Time	Alarm occurring date and time.

Event Log

Type in the range of rows and then click on the **Query** button.

The screenshot shows a software interface titled "Event Log". At the top, there is a dropdown menu labeled "Alarm/Event Select" with "Event Log" selected. Below the menu are two buttons: "Query" and "Clear Event". The main area displays a table with the following data:

Row	ID	Description	Sequential	Time
0	14	[System]TRUNK_CARD_SOFTWARE_ACO_BUTTON_CLEAR	2	2008/04/02 03:47:33
1	1	TRUNK_CARD_RESTART	1	2008/04/02 03:47:33

Figure 122. Event Log page

Table 67. Event Log Table Description

Label	Description
Query	Click on this button to query the most recent event log.
Clear Event	Click on this button to clear the event log.
Row	This field shows the row number.
ID	This field shows the event ID number.
Description	This field shows the description for the event.
Sequential	Sequential number.
Time	Event occurring date and time.

Alarm Profile

This option allows you to view and update the alarm profiles. From the Maintenance menu, click on Fault Management and then Alarm profile. The Alarm Profile page displays. Click on the Select Page drop-down list and select a page to display.

To modify an alarm profile, click on the radio button beside the alarm ID, select the Level (Major/Minor), Mask/Unmask, and then click on the **Modify** button. You can also select the ALL ID checkbox to modify all alarm types at a time.

Alarm Profile								
Select Page: ---Page 1 of 1---								
Selected Alarm ID: [104 SYS_FAN]								
Level	MINOR	UnMask	ALL ID:	<input type="checkbox"/>	Modify			
104	SYS_FAN	MN	UnMask	<input checked="" type="radio"/>	105	SYS_SELFTESTFAILED	MN	UnMask
106	SYS_ABOVETEMP	MN	UnMask	<input type="radio"/>	107	SYS_BELOWTEMP	MN	UnMask
118	SYS_DSP	MN	UnMask	<input type="radio"/>	601	ADSL_LOS	MN	UnMask
602	ADSL_LOF	MN	UnMask	<input type="radio"/>	603	ADSL_LOM	MN	UnMask
610	ADSL_LCD	MN	UnMask	<input type="radio"/>	612	ADSL_NCD	MN	UnMask
613	ADSL_LOS_FE	MN	UnMask	<input type="radio"/>	614	ADSL_LOF_FE	MN	UnMask
615	ADSL_LOM_FE	MN	UnMask	<input type="radio"/>	616	ADSL_LOPWR_FE	MN	UnMask
619	ADSL_COMMF_FE	MN	UnMask	<input type="radio"/>	620	ADSL_NOPEER_FE	MN	UnMask
622	ADSL_LCD_FE	MN	UnMask	<input type="radio"/>	624	ADSL_NCD_FE	MN	UnMask

Figure 123. Alarm Profile page

Hardware Temperature

This page allows you to:

- View current system temperature
- Set several temperature and time thresholds (see description in [table 68](#))

From the Maintenance menu, click on Fault Management and then Hardware Temp. The following page displays:

Temperature Threshold

Modify						
Current Temperature (°C)	Up Shift Threshold (°C)	Up Shift Time (Sec)	Down Shift Threshold (°C)	Down Shift Time (Sec)	Fan ON Threshold (°C)	Fan Shift Time (Sec)
70	65	10	-40	10	-40	64590
If current temperature exceeds/descends Up/Down Shift Threshold, Alarm Manager will declare that there is a high/lower temperature alarm after Up/Down ShiftTime seconds.						
[ALARM/EVENT]						

Figure 124. Hardware Temperature page

Table 68. Hardware Temperature Settings

Label	Description
Modify	Click on this button to submit the update once you have entered all the new threshold values.
Current Temperature °C	This field shows the current system temperature.
Up Shift Threshold °C	The system will produce notification (alarm) when the monitored system temperature is higher than Up Shift TH (-55~85 °C) for over Up Shift Time (1~255 sec).
Up Shift Time (Sec)	Refer to the description for Up Shift TH.
Down Shift Threshold °C	The system will produce notification (alarm) when the monitored system temperature is lower than Down Shift TH (-55~85 °C) for over Down Shift Time (1~255 sec).
Down Shift Time (Sec)	Refer to the description for Down Shift TH.
Fan ON Threshold °C	FAN Enable temperature threshold (-40~15 °C). When the system temperature is higher than the threshold, the fan will be turned on automatically.
Fan Shift Time (Sec)	This field shows the elapsed time since the FAN was turned on.

Performance Monitoring

System Utilization

This option allows you to monitor the memory utilization and network processor utilization. From the **Maintenance** menu, click on **Performance Monitoring** and then **System Utilization**. The following page displays.

Current Memory Utilization	
(0)Parameter Bus(ZBT)	21.0%
(1)Packet Bus(SDRAM)	0.0%
(2)Host Bus(SDRAM)	0.0%
Current CPU Utilization	
(3)WinGine1	41.6%
(4)WinGine2	8.3%
(5)Average Loading	25.0%
(6)Idle	75.0%

Figure 125. System Utilization

Ethernet Statistics

This option allows you to view the Gigabit Ethernet counter values for the trunk or line interface. From the **Maintenance** menu, click on **Performance Monitoring** and then **Ethernet Statistics**. Click on the leftmost drop-down list to select interface (giga port or DSL line port); if line interface is selected, you must further click on the middle and rightmost drop-down list to select the line port number and PVC number. At last, click on **Query** to get data of that interface.

GBE Interface

GIGA Port	XDSL Port-1	PVC-1	Query
Statistics Name			Giga Port 1
MTU Size			1536
Queue LEN			0
Last Change			0
Specification			D
Description			Giga Ethernet
Input Bytes			0
Input Broadcast Packets			101827
Input Discard Packets			911
Input Multicast Packets			1472
Input Unicast Packets			4575
Input Not Unicast Packets			103299
Input Error Packets			0
Input Unknown Protocol Packets			0
Output Bytes			0
Output Broadcast Packets			11
Output Discard Packets			0
Output Multicast Packets			0
Output Unicast Packets			4549
Output Not Unicast Packets			11
Output Error Packets			0

Figure 126. Ethernet Statistics - GBE Interface

ADSL Line PVC

XDSL Port	XDSL Port-1	PVC-1	Query
Statistics Name			XDSL Port
MTU Size			1536
Queue Length			0
Last Change			0
Specification			L
Description			ATM
Input Bytes			0
Input Broadcast Packets			0
Input Discard Packets			0
Input Multicast Packets			0
Input Unicast Packets			0
Input Not Unicast Packets			0
Input Error Packets			0
Input Unknown Protocol Packets			0
Output Bytes			1749
Output Broadcast Packets			66
Output Discard Packets			27102
Output Multicast Packets			0
Output Unicast Packets			0
Output Not Unicast Packets			66
Output Error Packets			0

Figure 127. Ethernet Statistics - ADSL Line PVC

ATM Statistics

This option allows you to query the ATM Statistics. From the Performance Monitoring menu, click on ATM Statistics. The following page displays:

ADSL Port	Show	Tx Cells	Query
<input type="checkbox"/> Auto Update			
ATM Cell Name			Port:1
(12)Tx_cells			0000000000000001
(13)Tx_clp1_cells			0000000000000000
(14)Tx_efci_cells			0000000000000000
(15)Tx_oam_cells			0000000000000001
(16)Tx_rm_cells			0000000000000000
(17)Tx_clp0_cells			0000000000000001

Figure 128. ATM Statistics page

Table 69. ATM Statistics

Label	Description
ADSL Port	Click on this button to select the line port.
Auto Update	Select this check box to auto update the displayed statistics.
Show	Click on this drop-down list to select Tx, Rx, or All (Tx & Rx) data.
Query	Click on this button to query current statistics.

RMON

This option allows you to configure and query the RMON Statistics. The Model 3124 supports performance statistics defined in RMON MIB groups 1 (Ethernet statistics), 2 (history control), 3 (alarm), and 9 (event) per RFC 2819 for all network uplink ports. From the **Performance Monitoring** menu, click on **RMON**. The following page displays: Select statistics type in the drop-down list.

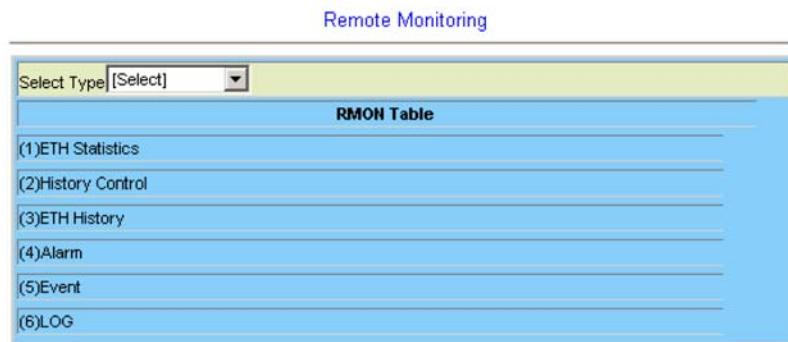


Figure 129. Remote Monitoring (RMON) page

ETH Statistics

This option is for displaying the Ethernet interface RMON data. Click on the Data Source drop-down list and select GBE1 or GBE2. Type in an owner name and then click on **New** button to create a new ETH statistics entry. To modify an entry, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**. The following parameters are monitored in this table:

Table 70. RMON ETH Statistics

Variable	Description
DropEvents	Monitoring rx dropped packets
Octets	Monitoring rx bytes packets
Pkts	Monitoring rx packets
BroadcastPkts	Monitoring rx broadcast packets
MulticastPkts	Monitoring rx multicast packets
CRCAccErrors	Monitoring rx error alignment packets
UndersizePkts	Monitoring rx undersize packets
OversizePkts	Monitoring rx oversize packets
Fragments	Monitoring rx fragments packets
Jabbers	Monitoring rx jabber packets
Collisions	Monitoring tx single collision packets
Pkts64Octets	Monitoring tx 64 octets
Pkts65to127Octets	Monitoring tx 65 to 127 octets
Pkts128to255Octets	Monitoring tx 128 to 255 octets
Pkts256to511Octets	Monitoring tx 256 to 511 octets
Pkts512to1023Octets	Monitoring tx 512 to 1023 octets
Pkts1024to1518Octets	Monitoring tx 1024 to 1518 octets

Remote Monitoring - ETH Statistics			
Select Type: ETH Statistics <input type="button" value="New"/> Next No.: 4 Data Source: GBE1 <input type="button" value="New"/> Owner: RMON4 <input type="button" value="New"/>			
<input type="button" value="Query"/> <input type="button" value="Modify"/> <input type="button" value="Delete"/>			
Index (Delete/Modify)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
Data Source	GBE1 <input type="button" value="New"/>	GBE1 <input type="button" value="New"/>	GBE1 <input type="button" value="New"/>
Owner	RMON1	RMON2	RMON3
Rx DropEvents	00000000	00000000	00000000
Rx Bytes	00000000	00000000	00000000
Rx Packets	00000000	00000000	00000000
Rx BroadcastPkts	00000000	00000000	00000000
Rx MulticastPkts	00000000	00000000	00000000
Rx CRC Align Errors	00000000	00000000	00000000
Rx Undersize Pkts	00000000	00000000	00000000
Rx Oversize Pkts	00000000	00000000	00000000
Rx Fragments	00000000	00000000	00000000
Rx Jabbers	00000000	00000000	00000000
Tx Collisions	00000000	00000000	00000000
Tx/Rx Pkts 64bytes	00008200	00008200	00008200
Tx/Rx Pkts 65~127bytes	00000000	00000000	00000000
Tx/Rx Pkts 128~255bytes	00000000	00000000	00000000
Tx/Rx Pkts 256~511bytes	00000000	00000000	00000000
Tx/Rx Pkts 512~1023bytes	00000000	00000000	00000000
Tx/Rx Pkts 1024~1518bytes	00000000	00000000	00000000
Tx Bytes	0C208000	00208000	00208000
Tx Packets	0C008200	00008200	00008200
Tx Multicast Pkts	0C000000	00000000	00000000
Tx Broadcast Pkts	0C008200	00008200	00008200

Figure 130. Remote Monitoring - ETH Statistics

History Control

This table is for controlling the ETH History table (see next section). History Control 1 is for controlling ETH History table 1; History Control 2 is for controlling ETH History table 2; etc. Type in the Requested value and Interval (sec) and then click on **New** to create a History Control entry. Up to 10 History Control entries can be created. To modify an entry, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**.

Index (Delete/Modify)	1
Data Source	GBE1
Owner	RMON1
Requested	50
Granted	50
Interval	1800

Figure 131. Remote Monitoring - History Control

Table 71. RMON History Control

Label	Description
Data Source	Data source identifies the source of the data for which historical data was collected and placed in a table on behalf of this HistoryControl entry. Here the source is GBE1 interface.
Owner	An owner is the entity that configured this entry and is therefore using the resources assigned to it.
Requested	Requested value is the requested number of intervals over which data is to be saved in the part of the media-specific table associated with this HistoryControl entry.
Granted	The number of sampling intervals over which data shall be saved in the part of the media-specific table associated with this HistoryControl entry.
Interval	The interval in seconds over which the data is sampled for each bucket in the part of the media-specific table associated with this HistoryControl entry. The value range is 1 to 3600 (sec).

ETH History

This option is for displaying Ethernet interface RMON history data. Before a history table is available, you have to create a History Control entry in advance (see previous section). To query the History table, click on the History Index drop-down list and select a history table and then click on **Query**.

Remote Monitoring - ETH History	
Select Type	ETH History
History Index	History1
	Query
HistIndex	1
SampleIndex	8354
IntervalStart	13818days 06:27:31
Rx DropEvents	00000000
Rx Bytes	00000318
Rx Packets	0000000c
Rx Broadcast Pkts	0000000c
Rx Multicast Pkts	00000000
Rx CRC Align Errors	00000000
Rx Undersize Pkts	00000000
Rx Oversize Pkts	00000000
Rx Fragments	00000000
Rx Jabbers	00000000
Tx Collisions	00000000
Tx Bytes	000008c0
Tx Packets	00000023
Tx Multicast Pkts	00000023
Tx Broadcast Pkts	00000000
Utilization	0000001f

Figure 132. Remote Monitoring - ETH History

Table 72. RMON Eth History

Label	Description
HistIndex	This field shows the History Table index. The history identified by this index is the same history as identified by the same value of History Control index.
SampleIndex	The Sample index uniquely identifies the particular Sample among all samples associated with the same History Control entry.
IntervalStart	The value of System Up Time ^a at the start of the interval over which this sample was measured.

a. System Up Time is the time since the network management portion of the system was last re-initialized.

Table 73. RMON ETH History Variables

Variable	Description
Rx DropEvents	Monitoring rx dropped packets
Rx Bytes	Monitoring rx bytes packets
Rx Packets	Monitoring rx packets
Rx Broadcast Pkts	Monitoring rx broadcast packets
Rx Multicast Pkts	Monitoring rx multicast packets
Rx CRC Align Errors	Monitoring rx error alignment packets
Rx Undersize Pkts	Monitoring rx undersize packets
Rx Oversize Pkts	Monitoring rx oversize packets
Rx Fragments	Monitoring rx fragments packets
Rx Jabbers	Monitoring rx jabber packets
Tx Collisions	Monitoring tx single collision packets
Tx Bytes	Monitoring tx bytes
Tx Packets	Monitoring tx packets
Tx Multicast	Monitoring tx multicast
Tx Broadcast	Monitoring tx broadcast
Utilization	Monitoring tx utilization

Alarm

This option allows you to configure the RMON alarm setting. This table controls the conditions on which alarms occur. Click on New to create an entry. To modify an entry, click on the index to select the entry, type in new value, and then click on Modify. To delete an entry, click on the index to select the entry and then click on Delete.

Remote Monitoring - Alarm

Select Type		Alarm					
Next No:	3	Interval:	1800	Owner:	RMON3		
OID:	DropEvents	.1	SampleType:	ABSOLUTE	StartupAlarm:	RISING	
Rise Threshold:	0	Rise Event Index:	0	Fall Threshold:	0	Fall Event	
Index:	0	NEW					
		Modify	Delete	Query			
Index (Delete/Modify)		1	2				
Interval	1800		1800				
Owner	RMON1		RMON2				
OID Variable	DropEvents	1	DropEvents	1			
SampleType	Sampling ABSOLUTE		Sampling ABSOLUTE				
StartupAlarm	Startup By RISING		Startup By RISING				
Value	0		0				
RisingThreshold	0		0				
FallingThreshold	0		0				
RisingEventIndex	0		0				
FallingEventIndex	0		0				

Figure 133. Remote Monitoring - Alarm

Table 74. RMON Alarm Options

Variable	Description
Interval	Alarm Interval. Value range: 0~2147483647 (0: disable)
owner	RMON alarm owner (max 31 characters).
OID	Click on the drop-down list to select variable and index of ETH Statistics table entries.
SampleType	RMON alarm sample type (Compared directly with the thresholds or Difference compared with the thresholds).
StartupAlarm	Options are Rising, Falling, Both.
RisingThreshold	RMON alarm rising threshold (0~4294967295).
FallingThreshold	RMON alarm falling threshold (0~4294967295).
RisingEventIndex	Rising Event entry index.
FallingEventIndex	Falling Event entry index.

The following figure shows an example of RMON alarm for ABSOLUTE sample type. As shown in the figure, the counting value keeps increasing. But when the value overflows, the system will count from zero again. The sample in T2 is the first one crossing the Rising Threshold, so an alarm occurs. No alarms will be generated afterwards unless the counting value overflows and count from zero again (the sample in T10 causes an alarm again).

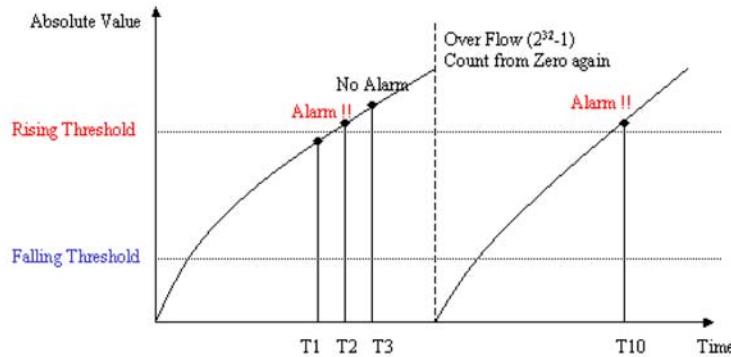


Figure 134. Example: RMON Alarm for ABSOLUTE Sample Type

Another figure shows the example of RMON alarm for DELTA sample type. As shown in the following figure, the delta value varies high and low. The sample in T1 is the first one crossing the Rising Threshold, so an alarm occurs. No alarms will be generated afterwards until T5 sample which is crossing the Falling Threshold (note that the value of the previous sample, T4 sample, is greater than the Falling Threshold and the value of T5 sample). Alarm is not generated for T7 sample since an alarm is already generated for T5 sample and the curve is not in a downward trend around T7. A Rising Threshold crossing alarm is generated again for T10 sample, because a Falling Threshold crosses previous Rising Threshold crossing alarm (T1).

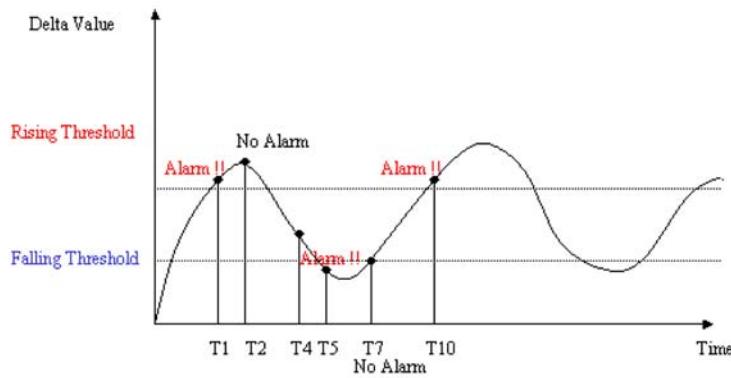


Figure 135. Example: RMON Alarm for DELTA Sample Type

Event

This option allows you to configure the RMON event setting. Click on New to create an entry. To modify an entry, click on the index to select the entry, type in new value, and then click on **Modify**. To delete an entry, click on the index to select the entry and then click on **Delete**.

Remote Monitoring - Event					
Select Type	Event				
Next No:	4	Description:	Description4	Community:	Community4
Owner:	RMON4	Event Type:	NONE	<input type="button" value="NEW"/>	
<input type="button" value="Modify"/> <input type="button" value="Delete"/> <input type="button" value="Query"/>					
Index (Delete/Modify)	1	2	3		
Description	Description1	Description2	Description3		
eventType	LOG	SNMPTRAP	LOGANDTRAP		
Community	Community1	Community2	Community3		
LastTimeSent	0	0	0		
Owner	RMON1	RMON1	RMON2		

Figure 136. Remote Monitoring - Event

Table 75. RMON Event Options

Variable	Description
Description	Type in a comment describing the event.
Community	If an SNMP trap is to be sent, it will be sent to the SNMP community specified in this column.
Owner	Type in the RMON event owner.
Event Type	Click on the drop-down list and select event type. Options are NONE, LOG (an entry is made in the log table for each event), SNMPTRAP (an SNMP trap is sent to one or more management stations), LOGANDTRAP (log and send trap).
LastTimeSent	The value of System Up Time at the time this event entry last generated an event.

LOG

This option allows you to query the RMON LOG. Click on Query button to display the log. Only the event indices with LOG or LOGANDTRAP event type (see previous section) are possible to appear in the log.

Remote Monitoring - LOG			
Select Type	LOG		
<input type="button" value="Query"/>			
Index	EventIndex	Time	Description

Figure 137. Remote Monitoring - LOG

ADSL Day/Interval

This option allows you to query the ADSL PM 15-Min and Day Statistics. The Model 3124 provides Today and Previous 1 day for Day PM, and also provides Current and Previous 1 ~ 96 interval for 15-Min PM. From the Maintenance menu, click on Performance Monitoring and then ADSL Day/Interval. The following page is displayed. You can select to display one interval or all intervals data of a single port; you can also select to display one interval data for twelve ports (1~12, 13~24) at the same time.

PM Counter	Near End	Far End
LOS	0	0
LOF	0	0
LOM	0	0
LPR	N/A	0
LOL	0	N/A
ES	0	0
SES	0	0
UAS	766	766
Re-Initialize(s)	0	N/A
Initialize fail(s)	0	N/A
User Cell(CU)	0	N/A
Delineate Cell(CD)	0	N/A
HEC	0	0
IIE	0	0
Channel-CVs	0	0
Channel-FECCs	0	0

[TCA PROFILE]

15-Min Previous PM number between 1 and 96

Figure 138. ADSL Line Performance Statistics

Table 76. ADSL Line Performance Statistics

Variable	Description
More Port	Click on the drop-down list and select the port range. Options are: 01~12, 13~24. This drop-down list is available only when All is selected in the Port drop-down list.
Port	Click on the drop-down list and select a line port number (1 ~ 24). You can also select All and then click on More Port to select a port range to view the data of twelve ports at the same time.
All Interval	When you select to view a single port PM data, you can click on this checkbox to display the data of all intervals.
Query	Click on this button to get the most recent data.
Clear PM	Click on this button to clear current PM data of the port you select.
LOS	Loss of Signal
LOF	Loss of Frame

Table 76. ADSL Line Performance Statistics

LOM	Loss of Margin
LPR	Loss of Power (only for Far End)
LOL	Loss of Link (only for Near End)
ES	Errored Seconds
SES	Severely Errored Seconds
UAS	Unavailable Seconds
Re-Initialize	Modem Re-Initialization events (only for Near End)
Initialize fail (s)	Modem Failed Initialization events (only for Near End)
User Cell (CU)	User Total Cell Count (only for Near End)
Delineate Cell (CD)	Delineated Total Cell Count (only for Near End)
HEC	ATM Header Error Count
IBE	Idle Cell Bit Error Count
Channel-CVs	Channel PM - Code Violations
Channel-FECCs	Channel PM- Forward Error Corrections

Chapter 8 **Contacting Patton for assistance**

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Introduction

This chapter contains the following information:

- “**Contact information**”—describes how to contact PATTON technical support for assistance.
- “**Warranty Service and Returned Merchandise Authorizations (RMAs)**”—contains information about the RAS warranty and obtaining a return merchandise authorization (RMA).

Contact information

Patton Electronics offers a wide array of free technical services. If you have questions about any of our other products we recommend you begin your search for answers by using our technical knowledge base. Here, we have gathered together many of the more commonly asked questions and compiled them into a searchable database to help you quickly solve your problems.

- Online support—available at www.patton.com.
- E-mail support—e-mail sent to support@patton.com will be answered within 1 business day
- Telephone support—standard telephone support is available Monday through Friday, from 8:00 A.M. to 5:00 P.M. EST (8:00 to 17:00 UTC-5), Monday through Friday by calling +1 (301) 975-1007

Warranty Service and Returned Merchandise Authorizations (RMAs)

Patton Electronics is an ISO-9001 certified manufacturer and our products are carefully tested before shipment. All of our products are backed by a comprehensive warranty program.

Note If you purchased your equipment from a Patton Electronics reseller, ask your reseller how you should proceed with warranty service. It is often more convenient for you to work with your local reseller to obtain a replacement. Patton services our products no matter how you acquired them.

Warranty coverage

Our products are under warranty to be free from defects, and we will, at our option, repair or replace the product should it fail within one year from the first date of shipment. Our warranty is limited to defects in workmanship or materials, and does not cover customer damage, lightning or power surge damage, abuse, or unauthorized modification.

Out-of-warranty service

Patton services what we sell, no matter how you acquired it, including malfunctioning products that are no longer under warranty. Our products have a flat fee for repairs. Units damaged by lightning or other catastrophes may require replacement.

Returns for credit

Customer satisfaction is important to us, therefore any product may be returned with authorization within 30 days from the shipment date for a full credit of the purchase price. If you have ordered the wrong equipment or you are dissatisfied in any way, please contact us to request an RMA number to accept your return. Patton is not responsible for equipment returned without a Return Authorization.

Return for credit policy

- Less than 30 days: No Charge. Your credit will be issued upon receipt and inspection of the equipment.
- 30 to 60 days: We will add a 20% restocking charge (crediting your account with 80% of the purchase price).
- Over 60 days: Products will be accepted for repairs only.

RMA numbers

RMA numbers are required for all product returns. You can obtain an RMA by doing one of the following:

- Completing a request on the RMA Request page in the *Support* section at www.patton.com
- By calling +1 (301) 975-1000 and speaking to a Technical Support Engineer
- By sending an e-mail to returns@patton.com

All returned units must have the RMA number clearly visible on the outside of the shipping container. Please use the original packing material that the device came in or pack the unit securely to avoid damage during shipping.

Shipping instructions

The RMA number should be clearly visible on the address label. Our shipping address is as follows:

Patton Electronics Company

RMA#: xxxx

7622 Rickenbacker Dr.

Gaithersburg, MD 20879-4773 USA

Patton will ship the equipment back to you in the same manner you ship it to us. Patton will pay the return shipping costs.

Appendix A **Abbreviations**

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Abbreviations

Table 77. Abbreviations

Abbreviation	Description
ACL	Access Control List
ADSL	Asymmetric Digital Subscriber Line
ADSLx	ADSL or ADSL2 or ADSL2+
ATM	Asynchronous Transfer Mode
CBR	Constant Bit Rate
CDVT	Cell Delay Variation Tolerance
CLI	Command Line Interface
DHCP	Dynamic Host Configuration Protocol
IGMP	Internet Group Management Protocol
IP	Internet Protocol
LACP	Link Aggregation Control Protocol
NE	Network Element
PCR	Peak Cell Rate
PPPoE	Point-to-Point Protocol over Ethernet
RMON	Remote Monitoring
SNMP	Simple Network Management Protocol
SNTP	Simple Network Time Protocol
STP	Spanning Tree Protocol
UBR	Unspecified Bit Rate
VBR	Variable Bit Rate
VCI	Virtual Channel Identifier
VLAN	Virtual Local Area Network
VPI	Virtual Path Identifier