Oct 2006 Release 1.3



ADSL2+ IP DSLAM BAS-8124/BAS-8124c

Release 1.3

Management Guide



Table of Content

TABLE OF CONTENT	2
1. INTRODUCTION	6
1.1 Features	7
1.2 BASIC OPERATING INFORMATION	8
1.2.1 Default username and Password	8
1.2.2 Default IP addresses	8
1.3 Getting started	8
1.3.1 Basic settings for Data transmission	8
1.3.1.1 VC profile settings	
1.3.1.2 DSL profile settings	
2. CONFIGURING THE SWITCH BY WEB INTERFACE	14
2.1 System	
2.1.1 System Info	
2.1.2 system log	
2.1.3 General setup	
2.1.4 Reboot	
2.1.5 User Management	
2.1.6 Log out	
2.1.17 Server services	
2.1.18 Alarm	
2.2 ADSL	
2.2.1 xDSL port status	
2.2.1.1 Map profile	
2.2.2 xDSL profiles	
2.2.2.1 Port profile	
2.2.2.2 VC profile	
2.2.2.3 PVC Мар	
2.2.2.4 PVC show	
2.2.2.5 Alarm profile	24
2.2.2.6 Map alarm profile	25
2.3 Switch	
2.3.1 VLAN	
2.3.2 Ethernet Port Setting	
2.3.3 MAC management	
2.4 Status	
2.4.1 Channel status	

2.4.2 Line status	
2.4.4 Line state	
2.5 IP	
2.5.1 IP setup	
2.5.2 ARP table Display and flush	
2.5.3 PING function	
2.5.4 VLAN (For management)	
2.6 STATISTICS	
2.6.1 Gigabit Ethernet port counters	
2.7 Performance	
2.7.1 ADSL performance	
2.8 CONFIGURATION	
2.8.1 Configuration save	
2.8.2 restore	
2.8.3 Software upgrade and Configuration backup	
3. CONFIGURING THE SWITCH BY CLI INTERFACE	
Log in Process	41
COMMAND FORMAT	43
SYSTEM:	44
daisycontrol	
Update	
Info	
User	
Reboot	
Server	47
Syslog	
<i>Time</i>	
Date	
Timeserver	
Alarm	51
ADSL:	
Enable	
Disable	
Profile	53
Name	
Line diagnostic	55
Vcprofile	55
Alarmprofile	

<i>PVC</i>	
STATUS:	
Chstatusget	
Linestatusget	
Linestateget	
SWITCH:	
Queuemap	
VLAN	
<i>MAC</i>	
<i>Eth</i>	61
Looptest	61
IP:	
Show	
Arp	
Set	
Gateway	
Route	
Ping	65
STATISTICS:	65
Adsl	
Ethuto	
CONFIG:	67
Save	
Restore	
. VLAN FEATURE	69
4.1 ADSL PORT VLAN	
Using the WEB interface	
4.1.1 Simple VLAN setup	
4.1.2 Advance VLAN setup	
4.1.3 VLAN frame rule	
4.1.4 VLAN enable and Disable	
4.2 MANAGEMENT VLAN	72
DAISY CONTROL – MANAGEMENT CASCADE (ONLY FOR BA	S-8124)74
. SOFTWARE UPGRADE AND CONFIGURATION BACKUP	77
6.1 Upgrade procedure	77
6.2 BACK UP - CONFIGURATION FILE	

BAS-8124/BAS-8124c Management Guide

7. TROUBLESHOOTING	79
TROUBLESHOOTING GUIDE	79
8. RELATED DOCUMENTATION	80
9. GLOSSARY	81

1. Introduction

This document is intended for First Office Acceptance test plan for HITRON's **ADSL2+ Broadband Access Switch solution (BAS-8124/BAS-8124c)**. The HITRON's BAS-8124/BAS-8124c Broadband Access Switches contains 24 ADSL2/2+ circuits to deliver high-speed data, video and voice service over traditional twisted copper pairs by using DSL technology.

To meet the increasing demand for high-speed internet access and triple play application services. The next generation network offers a feasible functionality of integrated services with the most cost effective architecture. Next generation broadband access networks are designed to provide rich video contents, DSL, POTS and VoIP services over traditional copper wire infrastructure. These types of services will be supported on NGN architecture simultaneously. DSL is used as the data service platform for video and VoIP and traditional POTS technology is used for voice services. The multimedia and local content-rich applications can also be easily implemented on this NGN architecture.

xDSL (Digital Subscriber Line) is a technology for delivering high-bandwidth information over copper telephone lines. xDSL service can deliver POTS and high date rate services simultaneously over a single twisted-wire pair. The POTS and data service are simultaneous and independent; the xDSL data service does not affect the POTS service. xDSL uses the bandwidth above the 4-kHz POTS frequency to transmit duplex data using digital modulation techniques from the C.O side to the Customer Premises Equipment (CPE).

ADSL is a form of xDSL service that delivers an asymmetric data rate over a twisted copper pair. ADSL delivers a higher rate downstream, towards the customer premises and lower rate upstream, from the customer premises. ITU standard compliant Full-Rate ADSL2+ can deliver data rates up to 25 Mbps downstream and 1 Mbps upstream; Full-Rate ADSL can deliver data rates up to 8 Mbps downstream and 800 kbps upstream; GLite ADSL can deliver up to 1.5 Mbps downstream and 512 kbps upstream. The actual data rate depends on the length, gauge, and condition of the twisted-wire pair, the bandwidth of the uplink depends on the data network, and the capacity of the network service provider.

Digital Subscriber Line (DSL) dominates broadband market. The position of national telecom operators in most countries has given the advantage in reaching out to customers with broadband services over DSL.

The BAS-8124/BAS-8124c Access system contains 24 ADSL2/2+ circuits to deliver high-speed data service over twisted copper pairs using industry standard Discrete Multi-Tone (DMT) line coding technology. The BAS-8124/BAS-8124c complies with full-rate ADSL in accordance with ANSI

T1.413 Issue 2, ITU-T G.992.1 (G.dmt), ITU-T G.992.2 (G.lite)ITU-T G.992.3 (ADSL2) and ITU G.992.5 (G.ADSL2+) protocols.

The BAS-8124/BAS-8124c products greatly expand broadband capabilities in the access network, enhancing the infrastructure for emerging services. With simple in-service upgrades, service providers obtain the capacity and Quality of Service (QoS) to support larger populations of narrowband and broadband users. For management, BAS-8124/BAS-8124c can be easily configured by element management system (EMS). The EMS system covers topology, configuration, deployment, security, performance, alarm management and backup storage.

1.1 Features

- Complete Intelligent L2 switch feature
- Intelligent DSL interworking feature
 - ♦ RFC2684 MpoA
 - ♦ VPN pass-through
 - ◆ RFC2516 PPPoE packet forwarding.
- Advanced L2+/higher layer protocol & policy control
 - GVRP/GARP/GMRP (IEEE 802.1q) (phase2)
 - ◆ STP/RSTP (IEEE 802.1d/w) (phase2)
 - ♦ IGMP Snooping
 - DHCP relay and relay agent option 82
 - Packet inspection and do policy control (filtering, forwarding..)
- Security of authentication mechanism and encryption
 - ♦ SSH/SSL
- Rich user interface for management including security
 - CLI/Telnet/SSH/SNMP/HTTP/S-HTTP
- Variety of uplink interface
 - SFP for 1000 Base-SX, LX, LHX and ZX.
 - RJ45 for 1000 Base-TX. (Default)
- Remote software upgrade

1.2 Basic operating information

1.2.1 Default username and Password

User name : admin Password : admin

1.2.2 Default IP addresses

MGMT : (Management Ethernet port) – 192.168.0.210 UPLINKs : 192.168.1.210 – at the moment Uplink can support only 1000BASE-T (gigabit Ethernet ONLY)

1.3 Getting started

1.3.1 Basic settings for Data transmission

1.3.1.1 VC profile settings

Setting VPI and VCI, these two values depend on the modems settings. The VPI and VCI should be same on both the DSLAM channel and the Modem connected to it. The LLC mode and the VC-MUX mode can be selected depending on the requirement.

EncapsulationType(0|1) 0 – LLC 1 – VC-MUX

Step 1 – create a Vcprofile Step 2 – set PVC

Example – VPI – 8 / VCI – 35 Mode – LLC

CLI commndand

Command format – vcprofile set vcprofilename EncapsulationType(0|1) VPI(0~4095) VCI(0~65535)

BAS/ADSL> vcprofile set default 0 8 35

Command format - pvc set minPortId(1~24) maxPortId(1~24) vcprofileName

BAS/ADSL>PVC set 1 24 default

In web interface – PVC setting

1. create Vcprofile Broadband Access Switch - Microsoft Internet Explorer _ 7 🗙 <u>File Edit View Favorites Tools Help</u> . 🌀 Back 🔹 🕤 🔹 🛃 🏠 🔎 Search 🤸 Favorites 🤣 😥 🎍 🔟 🔹 🛄 🦓 Address 🕘 http://192.168.1.210/main.html 🔽 🔁 Go 🛛 Links 🎽 📆 🗸 Broadband Access Switch Home 🔁 Home VC Profile 🖷 🚞 System Port Profile Alarm Profile PVC MAP adsl 🖣 🚞 Switch 🗖 🚞 Status E 💼 IP Profile: 🔽 🛛 Delete 🌢 🚞 Statistics 🔹 🚞 Performance 🇯 🚞 Configuration VC Profile Name Default EncapsulationType (0 | 1) 0 (0:LLC, 1:VCM VPI (0~4095) 8 VCI (0~65535) 35 Add ど Done 🥝 Internet

2. set PVC



1.3.1.2 DSL profile settings

This profile is to set the link rates for Upstream and Downstream of the ADSL link . The Latency mode can be Interleaved or Fast if the ADSL standard used is G.dmt , G.lite or t1.413 , for ADSL2 and ADSL2+ the latency mode is always Interleaved.

Example –	
-----------	--

latency mode : interleaved			
	DownStream	UpStream	
Minimum Data Rate:	4000000	512000	
Maximum Data Rate:	26000000	1280000	
Maximum Interleave Delay Downstream	m: 20	20	
Minimum Impulse Noise Protection:	0	0	
Target Noise Margin :	50	50	
Minimum Noise Margin:	10	10	
Maximum Noise Margin:	310	310	

Using CLI commands

1. Profile create

BAS/ADSL> profile set Please input the profile name to set: test Please enter latency mode :fast(1) or interleave(0): 0 Minimum Data Rate DownStream: 4000000 Minimum Data Rate UpStream: 512000 Maximum Data Rate DownStream: 26000000 Maximum Data Rate UpStream: 1280000

Maximum Interleave Delay Downstream : 20 Maximum Interleave Delay Upstream : 20 Minimum Impulse Noise Protection DownStream: 0 Minimum Impulse Noise Protection UpStream: 0 Target noise margin DownStream: 50 Target noise margin UpStream: 50 Minimum noise margin DownStream: 10 Minimum noise margin UpStream: 10 Maximum noise margin DownStream: 310 Maximum noise margin UpStream: 310

2. Profile map

Profile can be mapped to individual ports or to all 24 ports , the ADSL standard (glite|gdmt|t1413|auto|adsl2) has to be specified when mapping the ADSL profile. The mode can be set as Auto so that BAS-8124/BAS-8124c will decide the best mode to linkup.

Example - map the test profile to all 24 ports using the mode as auto

profile map portlist (1~24) profile <glite|gdmt|t1413|auto|adsl2>

BAS/ADSL> profile map 1~24 test auto

Using the web interface

1. create profile

Broadband Access Switch - Microsoft Inte	rnet Explore	eл					- 7 🛛
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp							R
🚱 Back 🝷 🕥 🗧 👔 🚱 🖉 Search 🧙 Favorites 🤣 😥 + چ 📝 🝷 🗾 🎇 👪							
Address 🕘 http://192.168.1.210/main.html						💌 🄁 Go	Links 🎽 📆 🗸
Broadband Access Switch							
						<u></u>	<u>^</u>
		Port Pro	ofile				
 System ADSL 						VC Profile Ala	m Profile
🖸 xDSL Port Setup							
xDSL Profiles	Index	ex Name Latency Mode Down/Up			n/Up Stream Ra	ate(kbps)	Select
Status				Modify Delete			
IP IP							
Statistics		Name	test				
Configuration			Down Str	eam	Up Strea	m -	
	N	/Iin Rate	4000000	(32000~32736000kbps)	512000	(32000~2048000k	bps)
	N	/Iax Rate	26000000	(32000~32736000kbps)	1280000	(32000~2048000k	bps)
	Inter	rleave Delay	20	(0~63)	20	(0~63)	
	Impulse	e Noise Protect	0	(0~3)	0	(0~3)	
	Ta	urget SNR	50	(0~310)	50	(0~310)	
	N	Min SNR	0	(0~310)	0	(0~310)	
	N	/Iax SNR	310	(0~310)	310	(0~310)	
Latency Mode interleave 💌							
							✓
Cone						🔮 Interr	iet

2. map profile – when using the web interface the profile can only be mapped to one port in the first mapping , after mapping the profile to one port it can be copied to other port ,

Broadband Access Switch - Microsoft Int	ernet Explorer		
Eile Edit View Favorites Iools Help			A.
Ġ Back 🔹 🕥 🐇 📓 🏠 🔎 S	earch 🤺 Favorites 🚱 🔗 🖓 🔹	<u>, (1 🐼 📓 </u>	
Address 🗃 http://192.168.1.210/main.html			🔽 🋃 Go 🛛 Links 🎽 📆 🔹
	Broadband Acce	ss Switch	Ноте
 ➡ Home ■ System ➡ ADSL D xDSL Port Setup XDSL Profiles 	xDSL Port Setup Port 1		<u>Last Page</u>
• Switch	General Setup		
• IP	Active	Enable 💌	
Statistics	Port Name		
Performance	Profile	tesi 🕶	
Configuration	Mode	auto 🔽	
	Alarm Profile		
	Apply Cancel		

3. Copy the same profile to all the 24 ports ,

Broadband Access Switch - Microsoft In:	ternet Explorer				
<u> E</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp					<u></u>
🚱 Back 🝷 🕥 🗧 📓 🐔 🔎 S	iearch 🥂 Favorites 🥝	🗟 • 头 💌 • 🧾	🛍 👺 📓 🦓		
Address 🕘 http://192.168.1.210/main.html				~	🔁 Go 🛛 Links 🎽 📆 🔹
	Broadba	nd Acces	s Switch		Home
 Home System ADSL xDSL Port Setup xDSL Profiles 	xDSL Po	ort Setup			
Switch	Active	Profile&Mode	AlarmProfile	None	None
📲 🗖 Status	⊻ j@	⊻ i@	⊠ i@	i@	i@
* 🗀 IP	None	None	None	None	None
📲 🗖 Statistics	i@	i@	i@	i@	i@
 Performance Configuration 			Paste		

🗿 Broadband Access Switch - Microsoft Int	ernet Explorer						- 7 🛛
Eile Edit View Favorites Tools Help							
🚱 Back 🔹 🐑 💌 📓 🏠 🔎 S	earch	🚱 🔗 🌺	w • 🗾 🛍	🏽 🐼 🚳			
Address 🗃 http://192.168.1.210/main.html						💌 🔁 Go 🛛 Lin	ks » 📆 🔹
Broadband Access Switch							
 ➡ Home ■ System ➡ ADSL 	xDSL	Port Set	up				
• xDSL Port Setup	Select port	s and click	Apply	Select ALL	None		
Switch	1	2	3	4	5	6	7
🔹 🛄 Status	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@
🏽 💼 IP	9	10	11	12	13	14	15
Statistics	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@
Performance	17	18	19	20	21	22	23
• Configuration	⊻ i@	<mark></mark> i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@	⊻ i@
				Ap	ply		

NOW BAS-8124/BAS-8124c is ready for Data transmission as a basic DSLAM !!!

2. Configuring the Switch by Web Interface

Log in	
🗿 http://192.168.1.210/cgi-bin/Baslogin.cgi - Microsoft Internet Explorer	PX
Elle Edit View Favorites Iools Help	.
🔆 Back + 💿 - 🖹 🖉 🏠 🔎 Search 👷 Favorites 🤣 😥 - 🌺 🔟 - 🛄 🎇 🖓	
Address 🕘 http://192.168.1.210/cgi-bin/Baslogin.cgi	🔁 Go
Links 🕘 Flow Systems(Hsinchu)] 💩 GP	
	<u>^</u>
Tear Login	
L 435WU U	
Login	

2.1 System

2.1.1 System Info

Broadband Access Switch - Microsoft Interest	ernet Explorer				- 7 🗙	
Eile Edit View Favorites Iools Help						
G Back ▼ ▼ ℝ Ω √ Se Address </th <th>earch 🤺 Favorites 🍕</th> <th>3 🔗 · 嫨 🗷 · 🧾</th> <th>🛍 🕅 🚳</th> <th></th> <th>v 🔁 Go</th>	earch 🤺 Favorites 🍕	3 🔗 · 嫨 🗷 · 🧾	🛍 🕅 🚳		v 🔁 Go	
Links 👸 Flow Systems(Hsinchu)] 🐻 GP						
Broadband Access Switch						
🖨 Home 🚔 System 🗿 System Info.	System Info					
Syslog	Switch Name	Location Information	Contact Infromation	Phone Number	Part Number	
General Setup	BAS-8124				1340100001	
Nepoot	Serial Number	MGMT MAC	DATA MAC	HW version	CPLD version	
J Logout	3401004200	00:05:ca:00:42:00	00:05:ca:00:42:01	00.0B	·	
Server Service	SW version	Model No.	Made Date			
• 💼 ADSL	2.00.12	BAS-8124	0631			
📲 🛄 Switch			Bootloader			
• Status		1.00	.07 (base UBoot 1.1.3)			
<pre>IF Statictice</pre>			Kernel			
 Performance Configuration 	Linux BAS8124	4 2.6.10_mvl401-ixdp42x-a	rm_xscale_be #3 Mon Ju unknown	ul 24 16:27:47 CST	2006 armv5teb	
			Ramdisk			
			2.00.12			
		Con	vergate(TM)-C driver			
	V	ersion 5.3.1, Compiled on	Jun 27 2006, 09:34:26 fo	r Linux kernel 2.6.1	10	
		G	eminaxd Product ID		✓	
http://192.168.1.210/cgi-bin/Bas5ysInfo.cgi					🔮 Internet	

This page displays the basic system information

BAS-8124/BAS-8124c HW Version:

BAS-8124/BAS-8124c software version:

Chipset version:

MAC address :

2.1.2 system log

When you enter to the syslog page the first function visible is enable and disable , default is enabled.

Broadband Access Switch - Microsoft Interpretention	ernet Explorer	
<u>File Edit View Favorites Tools Help</u>		
🔇 Back 🔹 🜔 🐇 📓 🏠 🔎 Se	earch 🤺 Favorites 🚱 🔗 - 🌺 🔟 - 📴 🎇 騷 📓 🦓	
Address 🕘 https://192.168.1.210/main.html		💌 🛃 Go 🛛 Links 🎽 📆 🔹
	Broadband Access Switch	
		Home Logout
🖹 Home	Syslog	
- 🗃 System		Setting & Display
System Info.		<u>orning to propring</u>
Systog		
General Setup	Turn on or Turn off syslog logging	
Nepoot		
	enable disable	
Server Service		
Alarm		
ADSL		
• Switch		
Status		
• 🚞 IP		
🖣 🚞 Statistics		
🔹 🚞 Performance		
🔹 🚞 Configuration		
Attps://192.168.1.210/syslog.php		🔒 🥹 Internet

There are three types of syslogs,

- 1) Error log
- 2) Warning log
- 3) Message log

Show – display the syslog

Clean - The syslog can be cleaned using the syslog CLEAN option,

Config – shows the current configuration of the syslog

Broadband Access Switch - Microsoft Interest	ernet Explorer				- 7 🛛
<u>E</u> ile <u>E</u> dit ⊻jew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp					
🚱 Back 🔹 🕥 🖌 💌 📓 🏠 🔎 Se	earch 🤺 Favorites 🤣 🔗	· 🎍 🗹 · 🛄 🛍	😻 📓 🦓		
Address 🖉 https://192.168.1.210/main.html				💌 🄁 Go	Links » 📆 🗸
	Broadband	l Access	Switch	Ноте	Logout
 Home System System Info. Systeg 	Sysle	pg	I1		<u>Syslog</u>
0 General Setup 0 Reboot 0 User	Log Facility	Show 💌	Message Type	error	
 Logout Server Service Alarm 	Message				
ADSL Switch Status					
 IP Statistics Performance 					
* 🚞 Configuration					

2.1.3 General setup

Broadband Access Switch - Microsoft Int	ernet Explorer							
Eile Edit View Favorites Tools Help	Elle Edit View Fgvorites Iools Help 🄊							
🚱 Back 🔹 🐑 💌 😰 🏠 🔎 Se	earch 👷 Favorites 🚱 🔗 - 🌺 📝	• 🔜 🎇 📓 4	8					
Address 🚳 http://192.168.1.210/main.html				🔽 🄁 Go				
Links 👸 Flow Systems(Hsinchu)] 🔞 GP								
	Broadband Aco	cess Sw	ritch	Home				
🖨 Home 🚔 System	General Setup							
System into.	Switch Name	BAS-8124						
General Setup	Location Information							
Reboot	Contact Information							
User D Logout	Phone Number							
Server Service		Apply	y					
• ADSL								
 Switch Status IP 	SNTP : Time Se	erver IP Address	2	20.130.158.52				
 Statistics Performance Configuration 		Sync						
	Current Time		16 : 52 : 16					
	New Time(hh:mm:	ss)						
	Current Date		2006 - 9 - 29					
	New Date(yyyy-mm	-dd)						
http://192.168.1.210/cgi-bin/BasGenSetup.cgi				Internet				

Display and Edit General information

Host Name: BAS-8124/BAS-8124c Host name Location: BAS-8124/BAS-8124c location Contact Person's Name: maintainer's name Model: BAS-8124/BAS-8124c model User Time Server When Bootup: Select time service protocol during bootup. Time Server IP Address: IP address of Time server Current Time: current time New Time (hh:min:ss): enter new time in hh:mm:ss format Current Date (yyy-mm-dd): enter current date in yyyy-mm-dd format Time Zone: current time zone

2.1.4 Reboot

Broadband Access Switch - Microsoft Int	iernet Explorer	- 7 🛛
Eile Edit View Favorites Tools Help		A
Ġ Back 🝷 🐑 💌 📓 🚮 🔎 S	earch 🤺 Favorites 🤣 😥 - 🌄 🎇 🚺 🦓	
Address 🕘 http://192.168.1.210/main.html		💌 🄁 Go
Links 💰 Flow Systems(Hsinchu)] 💰 GP		
	Broadband Access Switch	Home
🖹 Home System	Reboot System	
 System Info. System Info. System Setup General Setup Reboot Usar Logout Server Service ADSL Switch Status IP Statistics Performance Configuration 	Warning: If you click the reboot button, the system will restart!!	
Attp://192.168.1.210/cgi-bin/ConReboot.cgi		🥝 Internet

Reboot the system

2.1.5 User Management

Broadband Access Switch - Microsoft Inter	rnet Explorer			
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp				
🔇 Back 🔹 🛞 - 💌 📓 🏠 🔎 Se	arch 🤺 Favorites 🚱 🔗 - 💺	💌 • 🔜 🏭 📓 🍇	6	
Address 🕘 http://192.168.1.210/main.html				💙 🄁 Go
Links 💰 Flow Systems(Hsinchu)] 💰 GP				
	Broadband A	Access Swi	ltch	Home
 ➡ Home ➡ System O System Info. 	User Management User Account			
• Syslog • General Setup	User Name	Add		
Reboot	root	Modify		
User	user	Modify	DEL	
Logout	hitron	Modify	DEL	
Server Service	admin	Modify	DEL	
+ ADSL			, <u> </u>	
Switch Status				
IP				
📲 🗖 Statistics				
* 🚞 Performance				
Configuration				
http://192.168.1.210/cgi-bin/User.cgi				S Internet

Add , delete and Modify user information

2.1.6 Log out



2.1.17 Server services

Broadband Access Switch - Microsoft Internet Explorer						
Elle Edit View Favorites Iools Help						
🔇 Back 🔹 📀 🕤 📓 🏠 🔎 Search 👷 Favorites 🤬 🎯 🔹 🌄 🕅 🔹 🛄 🦓						
Address 🕘 http://192.168.1.210/main.html					💌 🛃 Go	
Links 👸 Flow Systems(Hsinchu)] 🛛 👸 GP						
Broadband Access Switch						
🔁 Home	Server Service					
= 🔁 System						
System Info.	Service					
O Syslog	Service Name	Status	Port			
Beboot	Telnet	Running	23	Enable 🖌	Apply	
J User	Web Server	Running	80	Enable 🖌	Apply	
Logout	FTP	Running	21	Enable 💌	Apply	
Server Service	SSH			Enable 🔽	Apply	
ADSL						
• Switch						
Status						
Performance						
Configuration						

2.1.18 Alarm

This page is used for displaying current alarms and alarm history,

Display current alarms,

🛿 Broadband Access Switch - Microsoft Internet Explorer 📃 🖻 🔀							
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp	jle Edit View Favorites Iools Help 🧗						
😋 Back 🔹 🐑 - 🖹 😰 🏠 🔎 Search 🤺 Favorites 🤣 🎯 - 🌉 💓 - 🛄 🎇 🎆 📓 🦓							
Address 🗃 http://172.25.103.33/main.html		▼	🗲 Go Links » 📆 🔹				
	Broadband Acces	s Switch	ome Logout				
 Home System System Info. Svslog 	Alarm	>					
General Setup							
Reboot	Apply						
0 User							
Logout	Alarm Type	Alarm Level	Alarn				
Server Service							
Alarm							
Daisy Control							

Display alarm history

Broadband Access Switch - Microsoft Interpretention	rnet Explorer	- 7 🛛
Eile Edit View Favorites Iools Help		
🚱 Back 🔹 🕥 - 💌 📓 🏠 🔎 Se	arch 📌 Favorites 🤣 😥 - چ 😥 - 🗔 🏭 🌺 🚺 🔏	
Address 🛃 http://172.25.103.33/main.html	•	🖌 🔁 Go 🛛 Links 🎽 📆 🔹
	Broadband Access Switch	
		<u>Home</u> Logout
➡ Home - ➡ System I System Info.	Alarm	
Syslog	Alarm current 🗸	
 General Setup Reboot 	Apply	
0 User		
Logout	Alarm Message	
Server Service	*** Logs below are from process whose PID=437, PPID=25 *	**
Alarm	PID=437 Sat Nov 18 14:43:56 2006 1163832236.612366 Line	6 FE LOS Set!
	PID=437 Sat Nov 18 14:43:56 2006 1163832236.615226 Line	6 Channel 1 NE I
Switch	PID=437 Sat Nov 18 14:43:57 2006 1163832237.210411 Line	6 Channel 1 NE I
• Status	PID=437 Sat Nov 18 14:43:57 2006 1163832237.811054 Line	6 FE LOS Clear!
IP	PID=437 Sat Nov 18 14:43:58 2006 1163832238.313253 Line	2 FE LOS Set!
💶 Statistics	PID=437 Sat Nov 18 14:43:58 2006 1163832238.910962 Line	5 FE LOS Set!
🕨 🚞 Performance	PTD=437 Sat Nov 18 14:43:58 2006 1163832238 919588 Line	3 FE LOS Set
🛎 🚞 Configuration	DTD-437 Sat New 18 14-43-59 2006 1163832239 613158 Line	5 FF LOS Cloard
	TT 427 Set Nov 10 14.42.50 2000 1103032239.013130 Lille	J FE LOS Clear!
	PID-457 Sat Nov 18 14:45:55 2006 11658532259.614046 Line	FE LOS SEL!
	PID=437 Sat Nov 18 14:43:59 2006 1163832239.614846 Line	Z FE LOS Clear!
		>
Cone Cone		🥝 Internet

2.2 ADSL

2.2.1 xDSL port status

🚰 Broadband Access Switch - Microsoft Inte	ernet Explorer				_ # X		
Eile Edit View Favorites Iools Help					A .		
😋 Back 🔹 💿 🕤 🗾 🐔 🔎 Search 👷 Favorites 🤣 😥 - 🌉 💹 - 🛄 🏭 🦓							
Address 🕘 http://192.168.0.210/main.html	ddress 截 http://192.168.0.210/main.html						
Links 💰 Flow Systems(Hsinchu)] 🔞 GP							
	Broad	dband Ac	cess Swi	.tch	Ноте		
🔁 Home	DOL D				^		
 Nome System 	XDSL PO	rt Setup					
= 🔁 ADSL					<u>Map Profile</u>		
xDSL Port Setup	Action: Enable	<mark>⊻</mark> MinPort: <mark>1 ⊻</mark> MinI	Port: 1 🔽 Set				
Switch	Port	Active	Profile	Mode	Channels		
💼 Status	1	Enable	adsl	auto	0		
• 🚞 IP	2	Enable	adsl	auto	0		
📮 🚞 Statistics	3	Enable	adsl	auto	0		
* 🚞 Performance	4	Enable	adsl	auto	0		
Configuration	5	Enable	adsl	auto	0		
	6	Enable	adsl	auto	0		
	7	Enable	adsl	auto	0		

Enable and Disable ADSL ports

2.2.1.1 Map profile



Map ADSL profiles to ADSL ports

2.2.2 xDSL profiles

2.2.2.1 Port profile

Broadband Access Switch - Microsoft Interpretent - Microsoft Interpretent	ernet Explorer							
<u>File E</u> dit <u>Y</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp	Elle Edit View Favorites Iools Help							
Ġ Back 🝷 🐑 💌 📓 🏠 🔎 Se	earch 👷 Favorites 🙆 🔗 •	چ 🗹 • 🧾 🎉 📓 🦀						
Address 🗃 http://192.168.1.210/main.html			💌 🔁 Go					
Links 👩 Flow Systems(Hsinchu)] 🛛 🙆 GP								
	Broadband	Access Swite	ch					
_								
Home	Port Profile							
ADSI.			VC Profile Alarm Profile					
xDSL Port Setup								
xDSL Profiles	Index Name	Latency Mode	Down/Up Stream Rate(kbps)					
🗖 🧰 Switch	<u>4 inter10</u>	interval	5000000/256000					
📲 🛄 Status								
IP	Drofile Indey: 4 💙 Dele	te						
- Statistics								
Configuration		_						
	Profile Index: 4 🛛 Show	<u>_</u>						
	Name	Default						
		Down Stream	Up Stream					
	Min Rate	32000 (32000~32736000kbps)	32000 (32000~2048000kbps)					
	Max Rate	32736000 (32000~32736000kbps)	2048000 (32000~2048000kbps)					
	Interleave Delay	0 (0~63)	0 (0~63)					
	Turnulas Maine Ductoot		· · · · · · · · · · · · · · · · · · ·					
🕘 Done			Internet					

ADSL profiles can be added and deleted using this page

2.2.2.2 VC profile

🗿 Broadband Access Switch - Microsoft Internet Explorer 🗧 🗊 🔀									
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp							A.		
🔾 Back 🔻 🔊 🐇 😰 🏠 🔎 Search 👷 Favorites 🊱 🔗 - 🌺 🗹 - 🕞 🏭 🖓									
Address 🙆 http://192.168.1.210/main.html									
Links 👸 Flow Systems(Hsinchu)] 🔞 GP									
	Bro	adba	and Access	Swit	ch		Home		
		C 1					^		
Svstem	VC Pro	ofile							
P 🚔 ADSL					<u>Port Profi</u>	<u>e_Alarm Profile</u>	<u>PVC MAP</u>		
xDSL Port Setup									
• xDSL Profiles	Index	Name	EncapsulationType	VPI/VCI	VLAN	VLAN_Enable	Priority		
Status									
• 🗖 IP	D 01 -	Del	ete						
Statistics	Profile:						_		
Performance	1								
		VC	Profile Name	835					
		Encaps (0:L1	ulationType (0 1) LC, 1:VCMUX)	0					
		V	/PI (0~4095)	8					
		V	CI (0~65535)	35					

VC profile can e added using this page

2.2.2.3 PVC Map



PVC can be set to a range of ports or to Individual ports using this page.

2.2.2.4 PVC show

Broadband Access Switch - Microsoft Int	ernet Explorer				
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp					an 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19
Ġ Back 🝷 🕥 🗧 📓 🐔 🔎 S	earch 🥎 Favorites 🛛	🚱 🔗 🌺	w • 🧾 🎉	📓 🚜	
Address 🗃 http://192.168.1.210/main.html					💌 🔁 Go
Links 💩 Flow Systems(Hsinchu)] 🔞 GP					
	Broadl	band A	ccess	Switch	Tome
Home	PVC				
ADSI.					<u>VC Profile</u> <u>PVC MAP</u>
• xDSL Port Setup • xDSL Profiles • Switch	MinPortId: <mark>1 💌</mark> I	MaxPortId <mark>1 🗸</mark>	VC profile name: <mark>8</mark>	35 🗸 Show	
Status	Port	VPI	VCI	Entry	VCC_ID
🕈 🚞 IP					
Statistics					
Performance					
- Configuration					

The PVC profile of an individual port or a range of ports can e displayed using this page.

2.2.2.5 Alarm profile

Broadband Access Switch - Microsoft Int File Edit View Eavorites Tools Help	ernet Explorer				
		44			46
😋 Back 👻 🐑 🔺 🛃 🏠 🔎 S	earch 🌟 Favorites 🚱 🖾 • 🤤 🛛	w • 🧾 🔯	🕅 🥸		
Address 🚳 http://192.168.1.210/main.html					💌 🄁 Go
Links 👸 Flow Systems(Hsinchu)] 🦉 GP					
	Broadband Ac	cess	Swit	ch	Ноте
- ···					
Home Svetem	Alarm Profile				
			Por	t Profile VC Profile	<u>Map Alarm Profile</u>
xDSL Port Setup	Name: Default	Add			
xDSL_Profiles	Threshold	ATU-C	ATAU-R	Threshold	
Switch	15Min Coding Violation (sec)	0	0	15Min Failed Shrt Int	0
TP	15Min Corrected (sec)	0	0	15Min Failed Full Int	0
• 🗖 Statistics	15Min Fecs (sec)	0	0		
🖡 🧰 Performance	15Min Es (sec)	0	0		
Configuration	15Min Ses (sec)	0	0		
	15Min Loss (sec)	0	0		
	15Min Uas (sec)	0	0		
	Profile Index: 💌 Show Profile Index: 💌 Delete				v
					Internet

SET alarm profile

2.2.2.6 Map alarm profile

🗿 Broadband Access Switch - Microsoft In	ternet Explorer	
<u>F</u> ile Edit ⊻iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		A.
🚱 Back 🝷 🛞 🖌 📓 🐔 🔎 S	search 🬟 Favorites 🚱 🙆 - 🌺 🔟 - 📙 🎇 📓 🦓	
Address 🕘 http://192.168.1.210/main.html		🖌 🄁 Go
Links 🙋 Flow Systems(Hsinchu)] 🖉 GP		
	Broadband Access Switch	
		Ноте
🔁 Home	Map Alarm Profile	
ADSI.		<u>Alarm Profile</u>
 ADSL xDSL Port Setup xDSL Profiles Switch Status IP Statistics Performance Configuration 	MmPort <mark>1 v</mark> MazPort <mark>1 v</mark> Map Alarm Profile: vMode auto v Map	
Done		

Map the Alarm profile

2.3 Switch

2.3.1 VLAN

Broadband Access Switch - Microsoft In	iernet Explorer		
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp			
🕒 Back 🝷 🐑 💌 📓 🏠 🔎 S	iearch 🤺 Favorites 🧭 🔗 🏹 🔹 🚺	J 🛍 📓 🚳	
Address 🗃 http://192.168.1.210/main.html			💌 🄁 Go
Links 🙋 Flow Systems(Hsinchu)] 🛛 🙋 GP			
	Broadband Acce	ss Switch	lione
			·
Home	VLAN		
System			
ADSL Switch	VLAN Set		
	Default VLAN (0~4095)	0	Priority (0~7)
Status	Stacked VLAN (0~4095)	0	Priority (0~7)
🖲 IP	RX VLAN StripMode (0~2)	0	RX VLAN TagMode (0~3)
🔎 🧰 Statistics	TX VLAN StripMode (0~2)	0	TX VLAN TagMode (0~3)
Performance	MinPortID	1 💌	MaxPortID
* Configuration	StripMode 0:no VLAN tag is stripped 1:top VLAN	V tag is stripped 2:all VLAN tag	gs are stripped
	TagMode 0:no VLAN tag is added 1:top VLAN t 3:default VLAN tag is added	ag is added 2:default VLAN ar	ıd stacked VLAN tags are added
	Apply		
	VLAN SwitchMode		
	Forwarding by MAC only		
	Apply		
			>
ど Done			Internet

Default VLAN

Stack VLAN

Priority

Tag mode

Strip mode

Forwarding method

Frame types

2.3.2 Ethernet Port Setting

Broadband Access Switch - Microsoft Inter	rnet Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		an a
🚱 Back 🝷 🕥 🔺 📓 🐔 🔎 Se	arch 🤺 Favorites 🚱 🔗 - 🌺 📝 🛛 💭 鑬 🐼	📓 🚜
Address 🗃 https://192.168.1.208/main.html		💌 🄁 Go 🛛 Links 🎽 📆 🗸
	Broadband Access Sw	vitch
 Home System ADSL xDSL Port Setup xDSL Profiles Switch VLAN Ethernet Port Setting MAC Status IP Statistics Performance Configuration 	Ethernet Port Setting GE Port Control Port 0 Disabled Enable Apply Port 1 Disabled Enable Apply Flow Enable GE Port Disabled Disabled Disabled Apply Flow Control PauseFrameStopThreshold 0 (0~8191)	PauseFrameStartThreshold 0 (0~8191)
æ)		A S Internet

Uplink 1 and 2 enable and disable

➡ Home ■ System	Ethernet Port Setting
🖣 🔁 ADSL	
xDSL Port Setup	GE Port Control
xDSL Profiles	
🖣 🔁 Switch	Port 0 Disabled <mark>Enable v</mark>
VLAN VLAN	Apply
Ethernet Port Setting	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
MAC MAC	Port 1 Disphlod English
🖣 🧰 Status	
🖲 🧰 IP	Apply
Statistics	

Flow control configuration

 Status IP Statistics Performance Configuration 	Flow Enable GE Port Disabled Disabled V Apply Flow Control	
	PauseFrameStopThreshold	PauseFrameStartThreshold
	0	0
	0 (0~8191)	0 (0~8191)
	Apply	-

2.3.3 MAC management

This page is used for setting the MAC aging time for the L2 switch feature in BAS-8124/BAS-8124c and for setting up the MAC filter ,

MAC aging time setting - Default is NO MAC ageing

🗃 Home • 🖻 System	MAC	Î
🗖 🔁 ADSL		
xDSL Port Setup	AgingTime	
xDSL Profiles		
🗖 🔁 Switch	MAC TableAgingTime:0 1 🗸	
VLAN		
Ethernet Port Setting	<pre>[1(immediately),2(20 sec),3(5 mins),4(15 mins),5(1 hour),6(4 hours),7(1 day),8(none)]</pre>	
L MAC		
🖣 🚞 Status	Apply	
🕴 🧰 IP		
📩 😋 Charlester		

MAC filter settings , up to 20 MAC addresses can be added to the filter list.

MAC Status TD	Mac Filter	
IF Statictice	Add 11:22:33:44:55:66	
 Derformance Configuration 	Арру	=
	Delete Apply Mac Filter Entries Table	
	Mac filter entry 1 11:22:33:44:55:66 Mac filter entry 2 11:22:33:44:55:67	
	a a a a a a a a a a a a a a a a a a a	

2.4 Status

2.4.1 Channel status

BAS-8124/BAS-8124c Management Guide

🕘 Broadband Access Switch - Microsoft I	nternet Expl	lorer			- 7 🛛
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp					
🌀 Back 🝷 🐑 💌 😰 🏠 🔎	Search 🤸	Favorites 🥝 🔗	- 🍓 🗷 - 🗾 🎇	📓 🚳	
Address 🕘 http://192.168.1.210/main.html					💌 🄁 Go
Links 🙋 Flow Systems(Hsinchu)] 🛛 🙋 GP					
	Br	oadban	d Access	Switch	Home
➡ Home • ■ System • ■ ADSL	Char	nnel Status			
• 🗖 Switch	Port	Direction	ActualDataRate	PreviousDataRate	ActualInterleaveDelay
Status	1	DownStream	0	4999608	0
Unannel Status	1	UpStream	0	252972	0
Ine State	2	DownStream	0	4999029	0
+ 🖬 IP	2	UpStream	0	252972	0
🖷 🗖 Statistics	3	DownStream	0	4999608	0
Performance	3	UpStream	0	252972	0
🖷 🗖 Configuration	4	DownStream	0	4999608	0
	4	UpStream	0	252972	0
	5	DownStream	0	1764285	0
	5	UpStream	0	252972	0
	6	DownStream	0	0	0
	6	UpStream	0	0	0
	7	DownStream	0	4994052	0
	7	UpStream	0	252972	0
	8	DownStream	0	0	0
http://192.168.1.210/cgi-bin/ChGeminaxD.cgi					Internet

Display the channel status of each port Upstream and Downstream.

2.4.2 Line status

Cile Enir Alem Lavourez Toolz Delh									
🕞 Back 🔹 🛞 🗧 🐔 🔎 Search 🤺 Favorites 🚱 🔗 🔌 💹 🖣 🔛 😓									
Address 🗿 http://192.168.0.210/								× >	Go
Links 🙆 Flow Systems(Hsinchu)] 🙆 GP									
	AD	SL2+ Bro	oadband	d Acce	ess Sv	vitch			
	1								
2006/08/07 14:25:47									
	Line S	tatus							
+System +ADSL									
-Status			Note: Eurotic	n is only a	usilahla if	line is in shewtin			
Channel Status			Note: Function	JII IS UILLY A		inte is in showing	le		
Line State	Port	Direction	LATN	SATN	SNR	ATTNDR	ACTPS	ACTATP	
+IP	2	UpStream	0	0	81	1340000	-418	106	
+Statistics -Configuration	2	DownStream	0	1	61	26988000	-194	36	
-	3	UpStream	0	0	88	1356000	-408	116	
	3	DownStream	0	1	61	27008000	-191	39	
	4	UpStream	0	0	84	1352000	-419	106	
	4	DownStream	0	1	61	26992000	-188	42	
	5	UpStream	0	0	77	1340000	-409	116	
	5	DownStream	0	1	61	26956000	-184	46	
	6	UpStream	0	0	72	1312000	-420	104	
	6	DownStream	0	1	61	26984000	-209	21	
	7	UpStream	0	0	69	1292000	-420	104	
	7	DownStream	0	1	61	27084000	-207	24	
	8	UpStream	0	0	66	1296000	-420	104	
e								Internet	

Displays the Line status for each line.

2.4.4 Line state

Elle Enir Mew Lavoures Tools Delh			v
🔇 Back 🔹 🐑 - 💌 😫 🏠 🔎	Search 🤺 Favorites 🥝 🍰 🕹	🔟 🝷 🔜 🏭 📓 🦓	
Address 🗃 http://192.168.0.210/		• • • • • • • • • • • • • • • • • • •	50
Links 👸 Flow Systems(Hsinchu)] 🗿 GP			
		1 4 6 4 1	
	ADSL2+ Broad	band Access Switch	
2006/08/07 14:28:33	T. 01.1		^
+ Sugtom	Line State		
+ADSL			
-Status Chappel Statug	Port	Line State	
Line Status	1	200	
Line State	2	801	
+IP +Statistics	3	801	
-Configuration	4	801	
	5	801	
	6	801	
	7	801	
	8	801	
	99	801	
	10	801	
	11	801	
	12	200	
	13	801	
	14	801	
	15	801	~
http://192.168.0.210/cgi-bin/steLiGeminaxD.cgi		🥥 Internet	

This page display the current state of the line .

2.5 IP

2.5.1 IP setup

Broadband Access Switch - Microsoft Int	ernet Explorer			- 2 🛛
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp				AL
Ġ Back 🔹 🕥 🕤 🗾 🛃 🏠 🔎 S	earch 🤺 Favorites 🥝 💈	3• 🌺 🗹 • 🗾 🎎 🛛	¥] 🔏	
Address 🕘 http://192.168.1.210/main.html				💌 🄁 Go
Links 💰 Flow Systems(Hsinchu)] 🛛 🙆 GP				
	Broadban	d Access S	Switch	Rome
a Home • 🗖 System	ETH IP Setup			
🖣 🚞 ADSL	IP Setup			
• Switch	Device	eth0		
Status	P	192.168.1.210		
IP Setup	IP Mask	255.255.255.0		
ARP Table	Default Gateway	0.0.0.0	Apply	
PING				
Statistics				
Performance				
Configuration	IP Setup			
	Device	ixp0		
	P	192.168.0.210		
	IP Mask	0.0.0.0		
	Default Gateway	0.0.5.202	Apply	
E Done				Internet

For Setting IP, Net mask and Default gateway for Two 1000base uplink ports .

For setting IP, Net mask and Default gateway for the Management 100base Ethernet port.

2.5.2 ARP table Display and flush



For display and Flush ARP table

2.5.3 PING function

🗿 Broadband Access Switch - Microsoft Internet Explorer						
<u>F</u> ile <u>E</u> dit ⊻jew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp						
🌀 Back 🝷 🕥 👻 📓 🚮 🔎 Se	earch 🤺 Favorites 🕢 🔗 -	🍇 💌 • 🔜 🎉	📓 🚜			
Address 🕘 http://192.168.1.210/main.html				💌 🄁 Go		
Links 👸 Flow Systems(Hsinchu)] 🛛 👸 GP						
	Broadband	Access	Switch	Home		
➡ Home • ■ System	PING					
ADSL	Host IP	0.0.0.0				
 Switch Status 	Times	3				
 IP IP Setup ARP Table PING Statistics Performance Configuration 			Apply			
Attp://192.168.1.210/cgi-bin/AdvPing.cgi				🔮 Internet		

For pinging any IP address for diagnostic purposes

2.5.4 VLAN (For management)

2.6 Statistics

2.6.1 Gigabit Ethernet port counters

🗿 Broadband Access Switch - Microsoft Internet Explorer							×		
Elle Edit View Favorites Iools Help						_	7		
🚱 Back 🝷 🕥 - 💌 😰 🏠 🔎 Search 🤺 Favorites 🤣 😥 - چ 🔟 - 🛄 🏭 🚳									
Address 🗃 http://192.166.1.210/main.html						💌 🔁 Go	o		
Links 👩 Flow Systems(Hsinchu)] 🛛 🙆 GP									
	Broad	lban	d Ac	cess	Swite	ch		Ноте	
- ···									^
Home	GE Port 7	[x and]	Rx Cou	nters					
					E O Counterr				
Switch	brterTr	ne Dict Tay	mcDletTre	hePletTre	drep Tr	CPC ErrorTr	ne Dict Tax	og Plet Ty	
🖲 🗖 Status	1110	Q	0	0	0	O O			
🛎 🧰 IP	up PletTr	2 apPlrtTr	on Dict Tay	v 64DletTre	vel 27DL+Tar	ne255PletTer	v SlipletTar	v 1022 Plet Ty	
🗖 🔁 Statistics		O	o	15041 KUIX	1512/1KUX	152551 KUIX	0	1	
GE Counters	ve1519DetTr	<u> </u>		-	-	, v	<u> </u>		
Performance									
	brtesPr	na Dirt Dar	we Dirt Day	h a Dirt Day	nouse Dirt Day				
	2260	10		O	n n				
		10			E 1 Counters				
	hytesTx	ucPktTx	mcPktTx	hcPktTx	dronTx	CRC ErrorTx	nøPktTx	ngPktTx	
	0	0	0	0	0	Û	Û	0	
	uePktTx	oePktTx	goPktTx	rs64PktTx	rs127PktTx	rs255PktTx	rs511PktTx	rs1023PktTx	
	0	0	0	0	0	0	0	0	
	rs1518PktTx								
	0								
	bytesRx	ucPktRx	mcPktRx	bcPktRx	pausePktRx				~
E Done								Internet	

For 15 minutes to 1days performance data for BAS-8124/BAS-8124c

2.7 Performance

2.7.1 ADSL performance

🗿 Broadband Access Switch - Microsoft Internet Explorer					
Elle Edit View Favorites Iools Help					
🌀 Back 🔹 🐑 💌 📓 🏠 🔎	5earch 📌 Favorites 🚱 🔗 - 🌺 🗹 - 📜 鑬 🔯 🚳				
Address 🕘 http://192.168.1.210/main.html		💌 🔁 Go			
Links 💰 Flow Systems(Hsinchu)] 🛛 🙆 GP					
	Broadband Access Switch	Ноте			
- Home					
ADSI					
• 🗖 Switch	15 Mimitues Performance				
📲 🧰 Status	Catao Day 1 w Get				
🖲 🧰 IP	Select Port V Con				
Statistics					
 Performance ADSL Performance 	1 Day Performance				
Configuration	Select Port <mark>1 🗸 Get</mark>				
		3			
	15 Min Datapath Counters				
	Select Port <mark>1 🗸 Get</mark>				
	l Day Datapath Counters				
	Select Port: 1 🔽 Get				
E Done		🔮 Internet			

15 minutes ADSL performance

1day ADSL performance
2.8 Configuration

2.8.1 Configuration save

🚰 Broadband Access Switch - Microsoft Inte	rnet Explorer	- 7 🗙
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		
🕒 Back 🔹 🐑 👻 📓 🏠 🔎 Se	arch 📌 Favorites 🚱 🔗 - 🌺 🕅 - 📙 🏭 📓 🦓	
Address 🕘 http://192.168.1.210/main.html		💌 🄁 Go
Links 💰 Flow Systems(Hsinchu)] 💰 GP		
	Broadband Access Switch	
		Ноте
🔁 Home	Sava Changes to Flash	
📲 🗖 System	Save Changes to Flash	
• 🗖 ADSL		
📮 Switch	Save	
Status		
Performance		
ADSL Performance		
🗏 🚔 Configuration		
Save		
• Restore		

SAVE the current configuration of BAS-8124/BAS-8124c in to non volatile Memory

2.8.2 restore



Set the current configuration to last saved or factory default settings

2.8.3 Software upgrade and Configuration backup

Page for setting the FTP server settings

Undate Setting	Setting Value
	Seture value
User Name	root
Format	Login user name of remote-host(FTP user)
Password	•••••
Format	Login password of remote-host(FTP password)
Port	21
Format	Port number(Default is 21)
Remote Host IP	192.168.0.120
Format	IP of the remote host
Remote Path	/opt/
Format	[FTP PATH]/path/of/update/ =type=path=> /path/of/
Apply	

Page for selecting which file to upgrade

Save	Update Setting	Item	
D Upgrade and Backup	System	ramdisk 💌	
	Apply	ramdisk	
		kernel	
	Backup Files		
	ADSL2	811	

Page to back the files

	Backup Files	_
	ADSL2	
	vcprotile Apply	
E Done	Internet	~

3. Configuring the Switch by CLI Interface

If the user uses "super terminal" software to get into CLI interface, a configuration need to be set as the method below:

GOTO -

Start > Programs > Accessories > Communications > HyperTerminal

Creating a New connection

🍫 New Connection - HyperTerminal		
File Edit View Call Transfer Help		
□☞ ☞ 🖇 🚥 🗃		
-	Connection Description Image: Connection Image: Connection Name: Connection Icon: Connection Connection Image: Connection Connection Icon: Connection Connection Image: Connection Connection Icon: Connection Connection Image: Connection Connection	

Give a Name to the connection

Connection Description	?×
New Connection	
Enter a name and choose an icon for the connection:	
Name:	
BAS	
	2
OK Ca	ncel

Select the comport the device is connected to - (if you are using a computer with a built in comport the port number will be COM1 or COM2 but if you are using a RS232 to USB converter the number of com-port can be any other number)

Connect To	? 🔀		
🧞 IP2000			
Enter details for the phone number that you want to dial:			
<u>C</u> ountry/region:	Taiwan (886) 🛛 👻		
Ar <u>e</u> a code:	00886		
<u>P</u> hone number:			
Co <u>n</u> nect using:	СОМ5 💌		
	OK Cancel		

Set the port settings as shown in the image below

COM5 Properties ? 🔀
Port Settings
<u>B</u> its per second: 115200 ✓
Data bits: 8
Parity: None
Stop bits: 1
Elow control: None
<u>R</u> estore Defaults
OK Cancel Apply

After completing the initial setup,

GOTO – **File > Properties > settings**

And do the settings according to the window below.

RS232 Properties
Connect To Settings
Function, arrow, and ctrl keys act as
Backspace key sends <u>C</u> trl+H <u>D</u> el O Ctrl+ <u>H</u> , Space, Ctrl+H
Emulation:
VT100 VT100
Tel <u>n</u> et terminal ID: VT100
Backscroll buffer lines: 500
Play sound when connecting or disconnecting
Input Translation ASCII Setup
OK Cancel

Log in Process

When connected to the CLI for the first time, the following commands have to be given in order to log in to the system. (commands are in NON bold letters)

BAS login: admin

Password: admin

BAS>

This chapter introduces the command line interface and lists the available commands.

It is divided into 7 topics:

- 1. **System:-** Deal with system configuration and maintenance.
- 2. **ADSL:-** Introducing and configuring ADSL parameters.
- 3. Status :- Display the system status
- 4. **Switch:-** Deal with Switch functions, such as activates and configures IGMP, RSTP and other protocol parameters. (NOTE: some of the functions describe in this topic is still under development).
- 5. **IP:-** Deal with IP (Internet Protocol) parameters configuration.
- 6. **Statistics:-** Deal with Error performance and statistic counters.
- 7. Config:- Deal with system parameters and display settings.

After login, help command can be accessed at any time. Help command can be accessed by typing "help" or a "h". Help command lists all the available commands that are accessible to the user. The following is a screenshot of the system.

help	Display command list
?	Display command list
\langle sys \rangle	
< adsl >	
< status >	
< switch >	
< ip >	
< statistics >	
< config >	
exit	Return to upper level

Figure 1: Help menu under root directory

Figure 1 showed all the commands under root directory. User can access different directory by typing the corresponding directory name. For example, to enter *system* directory, just type "system" or simply "sys". To return to parent directory, just type

"exit". To end CLI session, type "end" under root directory.

Command format

Some commands required parameter(s). The number of parameter required is different for each command. To know each command's parameters, just type the command name. For example, to know the command format for *XXX*, you can type *XXX*; the screen will show something like this:

XXX <aaa/bbb/ccc/ddd> <eee/fff> [ggg]

Each set of "<>" bracket represent a parameter and the possible options are enclosed within the bracket, separated by "|". The option enclosed in the square bracket "[]" means this parameter is optional. In this example, we can see that command *XXX* has three parameters. There are 4 possible options for 1st parameter, namely *aaa*, *bbb*, *ccc* and *ddd*, and two possible option for 2nd parameter, namely *eee* and *fff*, and an optional 3rd parameter. For the command to be executed, you can either type:

XXX aaa eee ggg

or

XXX aaa eee

Both of them are valid input, since this command takes two OR three parameters.

SYSTEM:

These are the commonly used commands that belong to the sys (system) group of commands as the figure 2. You can input "help" or "?" for help.

BAS/sys>help	
help	Display command list
?	Display command list
daisycontrol	The management of daisy chain
update	update system version
info	Show general system information
user	Setup user information
userpasswd	Password of administrator
reboot	Reboot the system
server	The device's service status and port numbers information
syslog	Log the system status and exception
time	The system's current time
date	The system's current date
timeserver	The system's time server
exit	Return to upper level

Figure 2 : sys command

daisycontrol

syntax : daisycontrol <show|setdevice|settarget|tsetslavenum|tshowslavenum>

- > show Display the settings of daisy chain management.
- > setdevice Set the local device ID.
- > settarget Set the target ID.
- > setslavenum Set the max slave number.
- > showslavenum Show the max slave number.

BAS0/sys>daisy	
----------------	--

The management of daisy chain.

Usage:

daisycontrol <show|setdevice|settarget|tsetslavenum|tshowslavenum>

show Display the settings of daisy chain management.

setdevice	Set the local device ID.
settarget	Set the target ID.
setslavenum	Set the max slave number.
showslavenum	Show the max slave number.

Update

Syntax : update <system|setting|backup>

- > system Update the system into new version.
- setting Update parameters setting.
- > backup Backup the config files (ADSL/vcprofile) into remote .

command usage

BAS0/sys>update usage: update <system|setting|backup> system Update the system into new version. setting Update parameters setting. backup Backup the config files (ADSL/vcprofile) into remote .

Info

This command shows general system setting about switch name, switch location, contact person and contact phone number.

Syntax: info <show| switchname <switchname>| location| contact| phone>

- \blacktriangleright show list all the settings of the info menu
- ➢ switchname − switch name
- Iocation switch location, you can set this device location into the system
- contact contact person that you maybe contact to
- ➢ phone − contact phone number

Command usage:

Example:

BAS/sys>info

Show get	Show general system information.		
T			
Usage:			
info <sho< td=""><td>ow switchname lo</td><td>cation contact phone></td></sho<>	ow switchname lo	cation contact phone>	
	show	Display general system information.	
	switchname	Set the switch name.	
	location	Set the location information.	
	contact	Set the contact person information.	
	phone	Set the contact phone number.	

Figure 3 : info command

User

The commands can add/del/list users in the system. It provides several methods of user management .

Syntax: user <add <username>|del <username>|list |online| passwd <username>>

- > add add an account and assign it's group to management or browse system.
- del delete an account from the system
- ➢ list − list all registered users in the system
- online list all online users in the system
- > passwd set or change users password in the system

Command usage:

- > add <username> username is the name you want add into the system.
- del <username> you must specify the username that you want delete from the system, otherwise system will ignore this action

Example:

BAS/sys>user		
Setup user information.		
Usage:		
user <add del ="" list ="" online ="" passwd=""></add >		
add	Add an account and assign it's group.	
del	Delete an account.	
list	List all registered users in the system	

onl	ine	List all online users in the system
pas	sswd	Set the user's password.

Figure 4: user command

Reboot

This command let user reboot the system.

Syntax: reboot <now >

Command useage:

reboot <now >

Example:

BAS/sys>reoot	
Reboot the system.	
Usage:	
reboot < now >	
now	Reboot the system immediately.

Figure 6 : reboot command

Server

Syntax: server <show| enable <telnet| ftp| web| ssh>|disable <telnet |ftp| web| ssh>| port>

- \blacktriangleright show display current server service status.
- enable open the telnet, ftp, web or ssh server service
- disable close the telnet, ftp, web or ssh server service
- \blacktriangleright port show the port of a service

Command usage:

- default setting are
 - telnet enable

ftp-enable

web-disable

ssh-disable

Example:

BAS/sys>	3AS/sys>server		
The devic	The device's service status and port numbers information		
Usage:			
server <s< td=""><td>how enal</td><td>ble disable port><telnet ftp ="" ssh="" web =""></telnet ></td></s<>	how enal	ble disable port> <telnet ftp ="" ssh="" web =""></telnet >	
	show	Display the device's service status and port numbers.	
	enable	Turn on a service.	
	disable 7	Furn off a service.	
	port	Show the port of a service.	

Figure 7: server command

Syslog

syslog is a utility for tracking and logging all manner of system messages from the merely informational to the extremely critical. Each system message sent to the syslog server has two descriptive labels associated with it that makes the message easier to handle

- The first describes the function (facility) of the application that generated it. For example, applications such as mail and cron generate messages with easily identifiable facilities named mail and cron
- > The second describes the degree of severity of the message

Syntax: syslog <show|config|enable|disable|clean>

show Display the system log.
config Display the syslog settings.
clean Clean the syslog show.
enable Turn on the syslog logging.
disable Turn off the syslog logging.

Example:

BAS/sys>syslog		
Log the system status and exception.		
Usage:		
syslog <show config enable disable clean server></show config enable disable clean server>		
show	Display the system log.	

BAS-8124/BAS-8124c Management Guide

config	Display the syslog settings.	
clean	Clean the syslog show.	
enable	e Turn on the syslog logging.	
disable	e Turn off the syslog logging.	
server	Log message to remote log server.	

Figure 8 : syslog command

Time

This command can display and set system's time.

Syntax: time <show | set>

- \blacktriangleright show display system time
- \succ set set system time

Command usage:

- set time use this format hh:mm:ss
- ▶ BAS-8124/BAS-8124c uses 24 hours format

Example:

BAS/sys	>time	
The syste	The system's current time	
Usage:		
time <show set=""></show >		
	show	Display the system's current time.
	set	Set the system's time.

Figure 9: time command

Date

This command can display and set system's date.

Syntax: date <show | set>

 \succ show – display system date

 \blacktriangleright set – set system date

Command usage:

set date use this format yyyy:mm:dd

Example:

BAS/sys2	>date		
The syste	The system's current date		
Usage:			
date <show set=""></show >			
	show	Display the system's current date.	
	set	Set the system's date.	

Figure 10: date command

Timeserver

This command can display and use system's time server.

Syntax: timeserver <show | set>

- ➤ show display system's time server
- \blacktriangleright sync retrieves the date and time from the timeserver

Example:

BAS/sys>timeserver

Usage:

timeserver <show|sync|setting>

show Display the system's time server.

sync Retrieves the date and time from the timeserver.

setting Set the IP of timeserver, Set the periods of sync.

Figure 11: timeserver command

Alarm

Syntax : alarm <show>

show Display the recorded system alarm.

alarm show <current|history>

Command usage:

BAS0/sys>alarm

The recorded system alarm.

Usage:

alarm <show>

show Display the recorded system alarm.

BAS0/sys>alarm show

Usage:

alarm show <current|history>

ADSL:

This chapter explains how to configure BAS-8124/BAS-8124c system's ADSL ports. It also covers how to configure virtual channels and virtual channel profiles.

A profile is a table that contains a list of pre-configured ADSL settings. Each ADSL port has one profile assigned to it. The profile defines the latency mode and upstream/downstream latency delay maximum and minimum upstream/downstream rates, the target upstream/downstream signal noise margins, and the maximum and minimum upstream/downstream acceptable noise margins of all the ADSL ports that have this profile. You can configure multiple profiles, including profiles for troubleshooting.

help	Display command list
?	Display command list
enable	Turn on the specified ADSL ports
disable	Turn off the specified ADSL ports
profile	Display, create, modify, delete, or copy an ADSL line profile
name	Set the name of the port
linediag	set,get line diagnostics
vcprofile	display, create, modify, delete a virtual channel profile
alarmprofile	Display, create, modify, delete, or copy an ADSL line alarmprofe
pvc	Display, create, modify, and remove a PVC setting
exit	Return to upper level

Figure 12: adsl command

Enable

Syntax: enable <port>
> enable an ADSL port

Command usage:

 \triangleright port – the default

Example:

BAS/adsl>enable

Turn on the specified ADSL ports

Usage:

enable portlist (1-24)

BAS/adsl>enable 1~24 (will enable all the ports)

Figure 13 : enable command

Disable

Syntax: disable <port>

disable an ADSL port

Command usage:

 \succ port – the default

Example:

BAS/adsl>disable

Turn off the specified ADSL ports

Usage:

disable portlist (1-24)

BAS/adsl>disable 1~24 (will disable all the ports)

Figure 14 : disable command

Profile

Syntax: profile <show| set| delete| map>

- ➢ show −show an ADSL profile
- set create an ADSL line profile downstream max rate downstream minimum rate
- delete remove an ADSL profile
- > map assign a specified profile to a port and set the port's ADSL mode

Command usages:

- \succ set the default
- ➢ delete − the default
- map <portlist> <profile> <glite| gdmt| t1413| auto| adsl2>

Example:

BAS/adsl>profil	e
Display, create, modify, delete, or copy an ADSL line profile	
Usage:	
profile <show se<="" td=""><td>et delete map></td></show >	et delete map>
show	Show an ADSL profile.
set	Create an ADSL line profile.
delete	Remove an ADSL profile.
map	Assign a specified profile to a port and set the port's ADSL
	mode.

Figure 15: profile command

Name

Syntax: name <port> <name>

Give a name for ADSL port profile

Example:

BAS/adsl>name

Enter port number you want to set

Figure 16: name command

Line diagnostic

Syntax : linediag <port number>

Run line diagnostic on the specified port

Example :

BAS/adsl>linediag

Usage:

linediag

Set the specified port to line diagnostics and display the result.

Vcprofile

Syntax: vcprofile <show| set| delete>

- ➤ show show a virtual channel profile's contents
- set create a VBR virtual channel profile (with encapsulation)
- delete remove a virtual channel profile (with encapsulation)

Example:

BAS/ads	S/adsl>vcprofile				
display, c	display, create, modify, delete a virtual channel profile				
Usage:	Isage:				
vcprofile	<list sho< td=""><td>pw set delete></td></list sho<>	pw set delete>			
	list	List all exist vcprofiles.			
	show	Show a virtual channel profile's contents.			
	set	Create a VBR virtual channel profile (with encapsulation).			
	delete	Remove a virtual channel profile (with encapsulation).			

Figure 17 : vcprofile command

Vcprofile set,

Syntax :

vcprofile set vcprofilename EncapsulationType(0|1) VPI(0~4095) VCI(0~65535)

Alarmprofile

Syntax: alarmprofile <show| set| delete| map>

- ➤ show display alarm profiles and their settings
- ➢ set − configure an alarm profile
- delete remove an alarm profile
- map map specified ADSL ports to an alarm profile

Example:

BAS/ads	al>alarmprofile		
Display,	Display,create,modify,delete,or copy an ADSL line alarmprofile		
Usage:			
alarmpro	ofile <list se<="" show ="" td=""><td>et delete map></td></list >	et delete map>	
	list	List all alarm profiles.	
	show	Display alarm profiles and their settings.	
	set	Configure an alarm profile.	
	delete	Remove an alarm profile.	
	map	Map specified ADSL ports to an alarm profile.	
	showmap	Showmap Display alarm profile to ADSL mapping	
	showport	Showport Display which alarm profile parameterst	

Figure 18 : vcprofile command

PVC

Syntax: pvc <show| set| delete>

- ➤ show –display PVC settings
- ➢ set −create or modify a PVC setting
- delete –remove a PVC setting

Example:

BAS/adsl>p	pvc	
Display, cre	eate, mo	odify, and remove a PVC setting
Usage:		
pvc <show < td=""><td>set de</td><td>lete></td></show <>	set de	lete>
sł	how	Display PVC settings.
se	et	Create or modify a PVC setting.
de	elete	Remove a PVC setting.

Figure 19: pvc command

Status:

This chapter will guide user to show some system status.

help	Display command list
?	Display command list
exit	Return to upper level
chstatusget	channel status get
inestatusget	line status get
inestateget	line state get

Figure 20: status command list

Chstatusget

Syntax: chstatusget

Example:

BAS/status>chstatusget

channel status get

Usage:

chstatusget nLine(1-24) nChannel(0) nDirection(0-1)

Figure 21 : Chstatusget command

Linestatusget

This command will list the line status.

Syntax: linestatusget

Example:

BAS/status>linestatusget

line status get

Usage:

linestatusget nLine(1-24) nDirection(0-1)

Figure 22: linestateget command

Linestateget

This command will list the line states.

Syntax: linestateget

Example:

BAS/status>linestateget

line state get

Usage:

linestateget nline(1-24)

Figure 23: linestatusget command

SWITCH:

This chapter will guide user how to configure the BAS-8124/BAS-8124c switch features.

help	Display command list
?	Display command list
queuemap	The system's priority level to physical queue mapping
vlan	Vlan setup
eth	The Ethernet port settings
looptest	The loop setting
exit	Return to upper level

Figure 24: switch command list

Queuemap

This command display system related physical queue map and set a degree to a physical queue.

Syntax: queuemap <show | set <priority> <queue>>

Example:

BAS/swi	tch>queu	iemap
The syste	em's prior	rity level to physical queue mapping
Usage:		
queuema	p <show < td=""><td>set></td></show <>	set>
	show	Display the system's priority level to physical queue mapping.
	set	Map a priority level to a physical queue.

Figure 25 : queuemap command

VLAN

Usage:

 $vlan <\!\!show|portshow|basicset|advset|switchmode|frametype\!>$

- ➢ show Display VLAN settings.
- portshow Display the port(s) VLAN settings.

BAS-8124/BAS-8124c Management Guide

- basicsetBasic Configuration of a VLAN entry.
- ➢ advset Advanced Configuration of a VLAN entry.
- ➢ switchmode Set forwarding mode.
- Frametype Set the specified DSL port to accept tagged, untagged or

Ethernet frames (or both).

BAS/switc	ch>vlan	
Usage:		
vlan <shov< td=""><td>w portshow basics</td><td>et advset switchmode frametype></td></shov<>	w portshow basics	et advset switchmode frametype>
s	show	Display VLAN settings.
I	portshow	Display the port(s) VLAN settings.
t	basicset	Basic Configuration of a VLAN entry.
ĩ	advset	Advanced Configuration of a VLAN entry.
S	switchmode	Set forwarding mode.
f	frametype	Set the specified DSL port to accept tagged, untagged or
		Ethernet frames (or both).

MAC

Syntax : mac <agingtime|agingtimeshow|filter>

- agingtime Set MAC table aging time
- > agingtimeshow Show MAC table aging time
- filterSet MAC filter table

BAS/switch>mac	
Usage:	
mac <agingtime agingtime< td=""><td>eshow filter></td></agingtime agingtime<>	eshow filter>
agingtime	Set MAC table aging time
agingtimeshow	Show MAC table aging time
filter	Set MAC filter table

Eth

Syntax: eth <show| speed| enable| disable>

- ➤ show display the Ethernet port settings
- speed set the Ethernet port(s) connection speed
- enable Turn on the specified Ethernet port
- disable Turn off the specified Ethernet port

Example:

BAS/switch>et	1
The Ethernet po	rt settings
Usage:	
eth <show spee<="" td=""><td>d enable disable></td></show >	d enable disable>
show	Display the Ethernet port settings.
speed	Set the Ethernet port(s) connection speed.
enabl	Turn on the specified Ethernet port(s).
disab	e Turn off the specified Ethernet port(s).

Figure 26 : eth command

Looptest

Using this command you can diagnostic this device through four ways loops.

Syntax: looptest <ingutopia|egutopia|ingge0|egge0|disable>

- > ingutopia LoopLine Interface, UTOPIA Ingress Loop enable
- > egutopia LoopLine Interface, UTOPIA Egress Loop enable
- > ingge0 System Interface, LAN Interface Ingress Loop enable
- egge0 System Interface, LAN Interface Egress Loop enable
- disable All Loop disable

Example:

BAS/switch>looptest

The loop setting

Usage:		
looptes	t <ingutopia egutoj<="" th=""><th>pia ingge egge disable></th></ingutopia >	pia ingge egge disable>
	ingutopia	LoopLine Interface, UTOPIA Ingress Loop enable.
	egutopia	LoopLine Interface, UTOPIA Egress Loop enable.
	ingge	System Interface, LAN Interface Ingress Loop enable.
	egge	System Interface, LAN Interface Egress Loop enable.
	disable	All Loop disable.

Figure 27: loop command

IP:

Γ

A set of IP commands may be used for management access to BAS-8124/BAS-8124c over your network.

help	Display command list
?	Display command list
show	Display the management ip address settings
arp	Display, flush the device ARP table
set	Set the management ip address and subnet mask and mac address
gateway	Set the default gateway of the device's default gateway
route	The routing table.
ping	Ping a remote host
exit	Return to upper level

Figure 28: IP command list

Show

Syntax: show

➢ show − displays the IP settings for this device

Example:

BAS/ip	>show			
ixp0	ip addr:	192.168.0.210		
	mac addr:	00:aa:aa:aa:aa:aa		
	gateway:	0.0.0.0		
	net mask:	255.255.255.0		

BAS-8124/BAS-8124c Management Guide

eth0	ip addr:	172.168.1.210		
	mac addr:	00:05:ca:00:04:10		
	gateway:	0.0.00		
	net mask:	255.255.255.0		

Figure 29: show command

Arp

Syntax: arp <show | flush>

- \blacktriangleright show displays the ARP table
- ➢ flush − remove all of the entries from the ARP table

Example:

BAS/ip>arp	
Display, flush the	device ARP table
Usage:	
arp <show flush=""></show >	
show	Display the device ARP table
flush	Flush the device ARP table

Figure 30 : arp command

Set

Syntax: set <ip| netmask| mac>

- \blacktriangleright ip –set the management ip address
- netmask –set the management subnet mask
- mac –set the management mac address

Example:

BAS/ip>set

Set the management ip address and subnet mask and mac address

Usage:

set <ip| netmask| mac>

iţ	p	Set the management ip address
n	etmask	Set the management subnet mask
n	nac	Set the management mac address
v	lan	Set the request vlan

Figure 31: set command

Gateway

Use this command to establish a static route between this device and management stations that exist on another network segment.

Syntax: gateway <gateway ip>

gateway ip – the IP address of the gateway that you want to send the packets through

Example:

BAS/ip>gateway Set the default gateway of the device's default gateway Usage: gateway <gateway ip>

Figure 32: gateway command

Route

Use this command to display the routing table.

Syntax: route <show>

 \blacktriangleright show – display the routing table

Example:

BAS/ip>route

The routing table

Usage:

route <show>

show Display the routing table.

Figure 33: route command

Ping

This is an IP facility to check for network functionality by sending an echo request to another IP host and waiting for the replay

Syntax: ping <ip> [count]

- \succ ip the IP address of the target
- count the number of pings you want the BAS-8124/BAS-8124c to send

Example:

BAS/ip>ping		
Ping a remote host		
Usage:		
ping <ip> <count></count></ip>		



STATISTICS:

Use these commands to display ADSL statistics.

help	Display command list
?	Display command list
adsl	Display DSL statistics
ethuto	Display UTOPIA VCC ETHER GE data
exit	Return to upper level

Figure 35 : statistics command list

Adsl

Syntax: adsl < 15mperf|1dayperf|15mdpc|1daydpc>

- 15mperf display the line performance statistics for the current and previous 15-minute periods
- Idayperf –display the line performance statistics for the current and previous 24 hours
- 15mdpc display the data path counters statistics for the current and previous 15-minute periods
- Idaydpc display the data path counters statistics for the current and previous 24 hours

Example;

BAS/stati	stics>adsl	
Display D	OSL statistics	
Usage:		
adsl <15n	nperf 1dayperf 15m	dpc 1daydpc>
	15mperf	Display the line performance statistics for the current
		and previous 15-minute periods.
	1dayperf	Display the line performance statistics for the current
		and previous 24 hours.
	15mdpc	Display the data path counters statistics for the curren
t		and previous 15-minute periods.
	1daydpc	Display the data path counters statistics for the curren
t		and previous 24 hours.

Figure 36 : adsl command

Ethuto

Syntax: ethuto <utopia| vcc| ether| ge| vcencapgroup| exception>

- utopia –display UTOPIA port rx and tx counters
- vcc –display Vcc interface rx and tx counters
- ether –display ether interface rx and tx counters
- \triangleright ge display ge port rx and tx counters
- vcencapgroup display Vc EncapGroup rx and tx counters

exception – display exception rx and tx counters

Example;

BAS/stat	BAS/statistics>ethuto			
Display all counter data				
Usage:				
ethuto <u< td=""><td>topia vcc ether g</td><td>e vcencapgroup exception></td></u<>	topia vcc ether g	e vcencapgroup exception>		
	utopia	Display UTOPIA port rx and tx counters.		
	vcc	Display Vcc interface rx and tx counters.		
	ether	Display Ether interface rx and tx counters.		
	ge	Display GE port rx and tx counters.		
	vcencapgroup	Display Vc EncapGroup rx and tx counters.		
	exception	Display Exception rx and tx counters.		

Figure 37 : ethuto command

CONFIG:

These command let user save/restore/setdefault the configuration in system.

help	Display command list
?	Display command list
save	Save the current configuration
restore	Recover the specified configuration
exit	Return to upper level

Figure 38 : config command list

Save

This command saves all system configurations to nonvolatile memory. You must use this command to save any configuration changes that you make, otherwise the BAS-8124/BAS-8124c will ignore the changes. Save your changes after each configuration session.

Syntax: save

use this command to save your configuration when you are done with a configuration session

Example:

BAS/config>save

Do you want to save the current configuration? (y/n)

Figure 39: save command

Restore

This command will reload the last correct configuration in the system. Using this command you can

easily back to the latest successful configuration

Syntax: restore <current| last| factory>

- current recover by the current configuration
- ➤ last recover the by last saved configuration
- ➢ factory − recover by the factory default configuration

Example:

BAS/con	BAS/config>restore			
Recover	Recover the specified configuration			
Usage:				
restore	ore <current factory="" last =""></current >			
	current	Recover by the current configuration.		
	last	Recover by the last saved configuration.		
	factory	Recover by the factory default configuration.		

Figure 40: restore command

4. VLAN feature

VLAN can be set using both web interface as well as the Command line Interface through Console, Telnet or SSH shell. VLAND IDs can be set to each ADSL port as well as to the Management functions built in.

4.1 ADSL port VLAN

ADSL ports support both single VID as well as Double VID, to setup single VID (only the default VID) the command **basic VLAN set** is used, for setting two VIDs, that is to set default VLAN tag as well as a Stack tag the **Advanced Vlan** set is used.

Using CLI for seting up VLAN

BAS/switch>vlan

Usage:

vlan <show|portshow|basicset|advset|switchmode|frametype>

show	Display VLAN settings.
portshow	Display the port(s) VLAN settings.
basicset	Basic Configuration of a VLAN entry.
advset	Advanced Configuration of a VLAN entry.
switchmode	Set forwarding mode.
frametype	Set the specified DSL port to accept tagged, untagged or
	Ethernet frames (or both).

Using the WEB interface

Broadband Access Switch - Microsoft Int	ernet Explorer		
Eile Edit View Favorites Tools Help			AT
🔇 Back 🝷 🐑 - 💌 😰 🏠 🔎 Si	earch 🤺 Favorites 🧭 🔗 - 璗 🔟 - 🗾 🎇	. 💽 🦓	
Address 🗃 http://192.168.1.210/main.html			V 🔁 Go
Links 🕘 Flow Systems(Hsinchu)] 🙆 GP			
	Broadband Access	Switch	Home
~			
Home System ADSL	VLAN Basic Setting	VLAN Advance Setting	Display VLAN Setting
= 🖘 Switch	VI AN Advance Setting		
O VLAN	Default VLAN (0~4095)	n	Priority (0~7)
Status	MinPortID	1 🗸	MaxPortID
 IF Statistics 	Apply		
Performance Configuration	VLAN SwitchMode		
	Forwarding by MAC only		
	Apply		
	VLAN FrameType		
	Admit both untagged and tagged packets	×	
	MinPortID	✓ MaxPe	ortID
	Apply		٤
http://192.168.1.210/cgi-bin/SwitchVlan.cgi	1		Internet

4.1.1 Simple VLAN setup

Command : vlan basciset

Usage:

```
vlan basicset default_vlan(0~4095) prio(0~7) minPort_ID(1~24) maxPort_ID(1~24)
```

Example:

set port # 2 to port # 5 as a members if the VLAN with VID 100 priority 1

vlan basicset default_vlan(0~4095) prio(0~7) minPort_ID(1~24) maxPort_ID(1~24)

BAS/Switch > vlan basciset 100 1 2 5

4.1.2 Advance VLAN setup

Command : vlan advset

Usage:

vlan advset default_vlan(0~4095) prio(0~7) stacked_vlan prio RX_vlan_StripMode(

0~2) RX_vlan_TagMode(0~3) TX_vlan_StripMode TX_vlan_TagMode minPort_ID(1~24) max

Port_ID(1~24)

vlan_StripMode:

- 0 :no VLAN tag is stripped
- 1 :top VLAN tag is stripped
- 2 :all VLAN tags are stripped

vlan_TagMode:

- 0 :no VLAN tag is added
- 1 :top VLAN tag is added
- 2 :default VLAN and stacked VLAN tags are added
- 3 :default VLAN tag is added

Example:

set port # 2 to port # 5 to VLAN with,

- 1. default VID 200 priority 1
- 2. Stack VID 500 priority 1
- 3. pkt receive strip mode 0
- 4. pkt receive TAG mode 2
- 5. pkt Transmit Strip mode 2
- 6. pkt transmit TAG mode 0

vlan advset default_vlan(0~4095) prio(0~7) stacked_vlan prio RX_vlan_StripMode(0~2) RX_vlan_TagMode(0~3) TX_vlan_StripMode TX_vlan_TagMode minPort_ID(1~24) max Port_ID(1~24)

BAS/switch > vlan advset 200 1 500 1 0 2 2 0 2 5

4.1.3 VLAN frame rule

BAS/switch>vlan frame

Usage:

vlan frametype Frametype(0~3) minPort_ID(1~24) maxPort_ID(1~24)

Frametype:

- 1 :Admit tagged packets(both priority tagged and VLAN tagged) only
- 2 :Admit untagged and priority tagged packets only
- 3 :Admit untagged packets only

Example: if you want the ports from port # 2 to port # 5 to admit only VLAN tagged packets

BAS/switch > vlan frametype 1 2 5

4.1.4 VLAN enable and Disable

After setting required settings the Switch mode of the BAS-8124/BAS-8124c has to be set , if VLAN setting to take effect the packet forwarding mode has to be set to use both MAC address and VID for packet forwarding ,

Usage: vlan switchmode Mode(0~1) Mode: 0 :Forwarding by MAC only 1 :Forwarding by MAC and VLAN both

Example :

BAS/switch > vlan switchmode 1

4.2 Management VLAN

Setting a VID for management purposes is a not related to setting the VIDs of ADSL ports. A VID is set for Management if the in band Management is done using a VLAN, for example if the in band management is done using a separate VLAN with the VID 4080 and priority 1, that can be set in the IP setup for Uplink ports,
BAS/ip>set vlan

Usage: set vlan <enable|disable> vlanID(1~4094)

Example:

set the management VLAN ID to 4080 with priority 1

set vlan <enable|disable> vlanID(1~4094)

 $Bas/ip > set \quad vlan \quad enable \quad 4080$

5. Daisy control – Management cascade (only for BAS-8124)

Daisy control is used for managing a stack of BAS-8124 s (max - 5 devices) using a single IP address or using the console port of one device in the stack. One device should be set as the Master device and all other devices should be configured as slave individually.

Physical setup,

The connection marked in RED is cable with standard RJ 11 connecter and wire connection (this is as same as the cable used in connecting domestic telephones)



Step – 1

Connect the console and Ethernet to the master device Configure the device as the Master device

CLI command :

daisycontrol setDevice id(0~5)

BAS/sys> daisycontrol setdevice 0

step-2

Connect the console and Ethernet to the slave # 1 configure second device as slave # 1

CLI command :

daisycontrol setDevice id(0~5)

BAS/sys> daisycontrol setdevice 1

step - 3

Connect the console and Ethernet to the slave # 2 configure third device as slave # 2

CLI command :

daisycontrol setDevice id(0~5)

BAS/sys> daisycontrol setdevice 2

Step – 4

Reconnect the console and/or Ethernet management link to the Master device Select the device you want to control

Command:

BAS-8124/BAS-8124c Management Guide

daisycontrol setTarget id(0~5)

Device under control - MASTER

BAS0/sys> daisycontrol settarget 0

BAS0/sys>

Device under control – SLAVE # 1

BAS0/sys> daisycontrol settarget 1

BAS1/sys>

Device under control –SLAVE # 2

```
BAS0/sys> daisycontrol settarget 2
BAS2/sys>
```

After setting the target device, the BAS> prompt will display the target device number,

E.g. - if the target device is 2, BAS prompt will look like,

BAS2/sys>

When the target is set to device 2 the CLI interface will control the Device two.

6. Software upgrade and Configuration backup

For this feature you have to have a FTP server in your PC or in the network for BAS-8124 to access , when upgrading BAS-8124 will connect to the FTP server as a client and download the software from the FTP server.

6.1 Upgrade procedure

Step 1 :

In your FTP server , Create a directory named – update Create a directory named – backup

Step 2 :

Copy the two files – **newrandisk.image** and **newkernal.image**, new configuration files **adsl** and **vcprofile** in to the update directory in the FTP server

Step 3 :

Setup the FTP client in BAS-8124,

Update Setting	Setting Value
User Name	root
Format	Login user name of remote-host(FTP user)
Password	•••••
Format	Login password of remote-host(FTP password)
Port	21
Format	Port number(Default is 21)
Remote Host IP	192.168.0.120
Format	IP of the remote host
Remote Path	/op∜
Format	[FTP PATH]/path/of/update/ =type=path=> /path/of/
Apply	

Remote path - is the path to the update directory in the FTP server ,

E.g. - if update directory is in,

"Bas/software/update" you should enter "Bas/software/"

(always use a FTP client to obtain the path – internet explorer will not display the complete path)

Step 4 : select which file you want to upgrade and apply – select the option "all" if you want to update all the files.

 Save Restore Upgrade and Backup 	Update Setting Item		
	System	ramdisk 💌	L
	Apply	ramdisk kernel adsl	
	Backup Files	vcprofile all	
	ADSL2		L

6.2 Back up -configuration file,

Step – 1

Create a directory named "backup" in the same location where the update directory is created ,

Step – 2 – just click **apply** – the two configuration files **adsI** and **vcprofile** will be copied in to the backup directory. If you want to copy the configuration files to another device , copy the two files **adsI** and **vcprofile** in to the update folder and use the update command .

	Backup Files	
	ADSL2	
	vcprofile	
	Apply	
		×
E Done		🥥 Internet

7. Troubleshooting

Troubleshooting guide

Trouble	Possible cause	Solution
PWR indicator does not	Power outlet, power cord, or	• Check the power outlet by plugging in
light up after power on.	internal power supply may be	another device that is functioning properly.
	defective.	• Check the power cord with another device.
SYS indicator does not	Microprocessor, SDRAM,	• Verify that the switch are powered on.
light up after startup.	Flash or Software may be	• Check the boot-up statement from console.
	defective.	The boot up procedure is Boot ->
		kernel->application
		•
ADSL2+ LINK	BAS-8124/BAS-8124c	• Verify that the Access Switch and attached
indicator does not light	Switch, cabling, ADSL Line,	CPE are powered on.
up after making a	or ADSL Switch Ports may be	• Be sure the RJ-21 cables are plugged into the
connection.	defective.	Access Switch from ADSL2+ modem
		through the Phone-line punch-down block.
		• Verify that the cable length does not exceed
		specified limits.
		• Check the cable connections on the access
		Switch, punch-down block/patch panel, and
		the Extended Ethernet CPE for possible
		defects. Replace the defective cable if
		necessary.
UP LINK indicator	Network cable or Ethernet	• Verify that the access switch and attached
does not light up after	device attached to this port	device are powered on.
making a connection.	may be defective.	• Be sure an Ethernet cable is plugged into
		both the switch and attached device.
		• Verify that the proper cable type is used and
		its length does not exceed specified limits.
		• Check the network cable connections for
		possible defects. Replace the defective cable
		if necessary.

8. Related Documentation

Installation Guide for BAS-8124/Bas-8124c.	July. 2006	Release 1.0
Installation Guide for BAS-8124/BAS-8124c.	Oct. 2006	Release 1.1

Please contact your HITRON service representative for more information regarding to BAS-8124/BAS-8124c.

9. Glossary

10BASE-T

IEEE 802.3 specification for 10 Mbps Ethernet over two pairs of Category 3, 4, or 5 UTP cable.

100BASE-TX

IEEE 802.3u specification for 100 Mbps Fast Ethernet over two pairs of Category 5 UTP cable.

100BASE-FX

IEEE 802.3u specification for 100 Mbps Fast Ethernet over two strands of 50/125, 62.5/125 or 9/125 micron core fiber cable.

1000BASE-T

IEEE 802.3ab specification for Gigabit Ethernet over 100-ohm Category 5 or 5e twisted-pair cable (using all four wire pairs).

Auto-Negotiation

Signalling method allowing each node to select its optimum operational mode (e.g., 10 Mbps or 100 Mbps and half or full duplex) based on the capabilities of the node to which it is connected.

Bandwidth

The difference between the highest and lowest frequencies available for network signals. Also synonymous with wire speed, the actual speed of the data transmission along the cable.

Collision

A condition in which packets transmitted over the cable interfere with each other. Their interference makes both signals unintelligible.

Collision Domain

Single CSMA/CD LAN segment.

CSMA/CD

CSMA/CD (Carrier Sense Multiple Access/Collision Detect) is the communication method employed by Ethernet, Fast Ethernet, or Gigabit

Ethernet.

End Station

A workstation, server, or other device that does not forward traffic.

Ethernet

A network communication system developed and standardized by DEC, Intel, and Xerox, using baseband transmission, CSMA/CD access, logical bus topology, and coaxial cable. The successor IEEE 802.3 standard provides for integration into the OSI model and extends the physical layer and media with repeaters and implementations that operate on fiber, thin coax and twisted-pair cable.

Fast Ethernet

A 100 Mbps network communication system based on Ethernet and the CSMA/CD access method.

Gigabit Ethernet

A 1000 Mbps network communication system based on Ethernet and the CSMA/CD access method.

Full-Duplex

Transmission method that allows two network devices to transmit and receive concurrently, effectively doubling the bandwidth of that link.

IEEE

Institute of Electrical and Electronic Engineers.

IEEE 802.3

Defines carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications.

IEEE 802.3ab

Defines CSMA/CD access method and physical layer specifications for 1000BASE-T Fast Ethernet.

IEEE 802.3u

Defines CSMA/CD access method and physical layer specifications for 100BASE-TX Fast Ethernet.

IEEE 802.3x

Defines Ethernet frame start/stop requests and timers used for flow control on full-duplex links.

IEEE 802.3z

Defines CSMA/CD access method and physical layer specifications for 1000BASE Gigabit Ethernet.

Local Area Network (LAN)

A group of interconnected computer and support devices.

LAN Segment

Separate LAN or collision domain.

LED

Light emitting diode used for monitoring a device or network condition.

Local Area Network

A group of interconnected computers and support devices.

Media Access Control (MAC)

A portion of the networking protocol that governs access to the transmission medium, facilitating the

exchange of data between network nodes.

MDF (Main Distribution Frame)

Equipment where outside telephone lines are terminated at a building or site.

MIB

An acronym for Management Information Base. It is a set of database objects that contains information about the device.

MPOE (Minimum or Main Point of Entry)

The location in a building where cables from the telephone service provider are terminated.

Network Diameter

Wire distance between two end stations in the same collision domain.

Private Branch Exchange (PBX)

A telephone exchange local to a particular organization who use, rather than provide, telephone services.

POTS

Plain Old Telephone Service.

Redundant Power Unit (RPU)

A backup power supply that automatically takes over in case the primary power supply should fail.

RJ-45 Connector

A connector for twisted-pair wiring.

Splitter

A filter to separate DSL signals from POTS signals to prevent mutual interference.

Switched Ports

Ports that are on separate collision domains or LAN segments.

Transmission Control Protocol/Internet Protocol (TCP/IP)

Protocol suite that includes TCP as the primary transport protocol, and IP as the network layer protocol.

UTP

Unshielded twisted-pair cable.

ADSL

asymmetric data rate Digital Subscriber Line: A family of digital telecommunications protocols designed to allow high speed data communication at data rates deliver data rates up to 25 Mbps downstream and 1 Mbps upstream with corresponding maximum reach 18K feet of 24 gauge twisted pair cable over the existing copper telephone lines between end-users and telephone companies.

Virtual LAN (VLAN)

A Virtual LAN is a collection of network nodes that share the same collision domain regardless of their physical location or connection point in the network. A VLAN serves as a logical workgroup with no physical barriers, allowing users to share information and resources as though located on the same LAN.