ZyXEL

Firmware Release Note

P-660HW-T1
Standard Version

Release 3.40(ACI.6) C0

Date:	**May 08, 2006**
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Supported Platforms:

ZyXEL P-660HW-T1

Versions:
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ZyNOS Version: V3.40(ACI.6)| 05/08/2006  15:33:26
Bootbase Version: V1.06 | 01/11/2006 10:26:03
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Notes:

The P-660HW-T1, is 4th generation of ZyXEL ADSL product family. It is a high performance ADSL/ADSL2/ADSL2+ router for small/medium office to have Internet access and LAN-to-LAN application over the existing copper line. P-660HW-T1 takes advantage of much higher data rate than ADSL, speed up to 12Mbps (ADSL2) or 24Mbps (ADSL2+), greater reach, faster start-up, advanced diagnostics and better power management. This high performance ADSL router is a high integrated advanced Firewall, Bandwidth Management and IEEE 802.11g wireless features to meet the demand of high-end market.
P-660HW-T1 provides an embedded mini-PCI module for 802.11g Wireless LAN connectivity, four single auto-sensing, auto-detection 10/100BASE-T Ethernet ports for connection to the user's local network, and a single RJ-11/RJ-45 port for connection to ADSL/ADSL2/ADSL2+ line.

1.   Support Multiboot client V2.3
2.   Support ADSL2+ by TrendChip modem code 3.4.1.0

Features:
Modification in 3.40(ACI.6)C0| 05/08/2006
1.change to FCS

Modification in 3.40(ACI.6)b2| 04/18/2006
1. [Feature Enhancement]
    Support Aoriha 2230S
2. [Feature Enhancement]
    Modify Bootbase HW version, older f/w can't upload to current Bootbase.

Modification in 3.40(ACI.6)b1| 04/09/2006
 1.[Bug Fix] SPRID: 060409452

Problem Symptom: In SMT and GUI, timezone miss some items such as: GMT+9.5 (Adelaide, Central Australian Standard Time)The number of missed items is 50. The total should be 75 just like WinXP.

Problem Condition: In SMT and GUI, timezone miss some items such as: GMT+9.5 (Adelaide, Central Australian Standard Time) The number of missed items is 50. The total should be 75 just like WinXP.

2.[Bug Fix] SPRID: 060409453
Problem Symptom: Issue CI command "sys stdio 0",then issue CI command "exit", the DUT will hang

Problem Condition: Issue CI command "sys stdio 0",then issue CI command "exit", the DUT will hang

3.[Bug Fix] SPRID: 060409454
Problem Symptom: The RIP via IP alias 1 and IP alias 2 can not works correctly.
Problem Condition: Step1.in GUI, config the IP alias 1 and IP alias 2, set the RIP direction = Both or In only, the RIP   Version = RIP-2B or RIP-2M.
Step2.in LAN PC use tool generate RIP packet, the DUT can't receive the RIP packet.
Step3.use CI commands setup, have the same issue.

4.[Bug Fix] SPRID: 060409455
Problem Symptom: We config system name = 30 characters via SMT and use WPA in wireless security. If the wireless client try to associate to Router via WPA, then Router exception.
Problem Condition: We config system name = 30 characters via SMT and use WPA in wireless security. If the wireless client try to associate to Router via WPA, then Router exception.

5.[Bug Fix] SPRID: 060409456
Problem Symptom: set a filter, when apply it use CI command in WAN, it must fill 4 parameter, but apply it in LAN it need not to fill 4 parameter, it can be save when it have only 1 parameter.
Problem Condition: set a filter, when apply it use CI command in WAN, it must fill 4 parameter, but apply it in LAN it need not to fill 4 parameter, it can be save when it have only 1 parameter.

6.[Bug Fix] SPRID: 060409457
Problem Symptom: The packet which is from lan and processed by quickroute is not counted.
Problem Condition: 1. Make sure quick route is activated.
2. Dial up one remote node and make sure PC in LAN side can access WAN side.
3. Ping wan side IP in PC .
4. We can see :PC can ping wan IP, but the counter number in smt24.1 for ethernet RX packets does not increase .

7.[Bug Fix] SPRID: 060409458
Problem Symptom: set a schedule, when apply it use CI command "wan node callsch" it
                must fill 4 parameter, that is to say, you must type like this "wan node
                callsch 1 0 0 0", but not like "wan node callsch 1".
 Problem Condition: set a schedule, when apply it use CI command "wan node callsch" it
                must fill 4 parameter, that is to say, you must type like this "wan node
                callsch 1 0 0 0", but not like "wan node callsch 1".

8.[Bug Fix] SPRID: 060409459
 Problem Symptom: In Enet Encap routing mode, Lan PC can access internet. After enable
                tripleplay without any portmaping group set, ping url will fail.
Problem Condition: 1. Configure a routing remote node that will access internet.
                2. Just enable tripleplay without any portmaping group set.
                3. Ping url will fail, but ping ip address would success.

9.[Bug Fix] SPRID: 060409460
 Problem Symptom: After enable triple-play, the traffic from LAN to WAN will blocked in
                our device every time there is a MAC connected to the device
Problem Condition: 1. Enable triple-play
                2. Bound LAN ports 1,2,3 and wireless port to PVC 1 which uses
NAT and PPPoE encapsulation
                3. Bound LAN port 4 to PVC 2 for voice
                4. Just connect a PC to device, it works great. And then connect a
MAC to the device, the traffic dies, you can not access the Internet any more.

10.[Bug Fix] SPRID: 060409461
Problem Symptom: CI command "wlan scan" can't work properly, signal power always
                shows"0%"
 Problem Condition: CI command "wlan scan" can't work properly, signal power always
                shows"0%"

11. [Feature Enhancement]
    Support SDRAM test in HTP
12. [Change default rom file]
    Remove "wan adsl errorsecond shutdown 30" in autoexec.net
13. [Change default rom file]
    Add "wan dmt2 db tlb10" in autoexec.net
14. [Change default rom file]
    Add "ip nat sess 512" in autoexec.net
15. [Feature Enhancement]
     Change wlan channel setting fellow FCC
16. [Feature Enhancement]
      Support AD id for ADM6996i
17. [Feature Enhancement]
      Change modem code to 3.4.1.0

Modification in 3.40(ACI.5)C0| 02/27/2006
1.change to FCS

Modification in 3.40(ACI.5)b1| 02/27/2006
1.[Feature Enhancement]
   Support Samsung flash
2. [Feature Enhancement]
   Airoha AL2230 frequence will shift in several minutes after device boot

Modification in 3.40(ACI.4)C0| 12/26/2005
1.change to FCS

Modification in 3.40(ACI.4)b3| 12/19/2005
1.[Bug Fix] SPRID: 051118176
   [Symptom]Run FPT file transfer over night have problem
   [Condition]Run ftp file transfer, after several hours(run 7 times ,the longest time is
            8hrs)it will stop.when it stop ,the lan pc can't ping to the wan pc's ip
            address(the ftp server)
2.[Bug Fix] SPRID: 051216065
   [Symptom] P660H/HW-T1 WEB GUI allow no changement when two pvc have been
            edited in SMT
   [Condition]1.edit two remote modes in SMT menu 11.1 and 11.2.
            2.go to WEB GUI and can't change any parameters then.
3.[Bug Fix] SPRID: 051216066
   [Symptom] ADSL can't sync up if ADSL line is pulled out and plugged when eMule
            and BT runs on the PC connected to LAN.
   [Condition] ADSL can't sync up if ADSL line is pulled out and plugged when eMule
            and BT runs on the PC connected to LAN.
4.[Bug Fix] SPRID: 051216067
   [Symptom] It can't escape SMT24.1
   [Condition] When performing vc-hunt process, press ESC can't escape SMT24.1
5.[Bug Fix] SPRID: 051219098
   [Symptom] The"Connection testing"page will change to"conncetion testing fail"Page
            for only one brower.
   [Condition] 1.If there are no correct PVC in hunting table.
            2.Page will return to"Auto_Hunt_Fail".
            3.If there are two or more browers,only one page will
            display"Auto_Hunt_Fail",the other pages will also display "Connection
            testing".
6.[Bug Fix] SPRID: 051219099
   [Symptom] eWC timeout but telnet port still can save change.
   [Condition] step1.eWC in remote management.
            step2.change telnet port 23 to 23023 and wait 3 minutes.
            step3.apply it.
            step4 turn on login face and login step5.in remote management the telnet

port have changed frome23 to 23023.

7.[Bug Fix] SPRID: 051219100

    [Symptom] the content filter feature still work while disable it.

    [Condition] the content filter feature still work while disable it.

8.[Bug Fix] SPRID: 051219101

    [Symptom] choose PPPoA encapsulation to sync up, when need to retype username and password the IE url show "ZCfgPPPoE.html" webpage.

    [Condition] choose PPPoA encapsulation to sync up, when need to retype username and password the IE url show "ZCfgPPPoE.html" webpage.

Modification in 3.40(ACI.4)b2| 11/8/2005

1.[Bug Fix] SPRID: 050822919

    [Symptom] DUT will reboot automaticly when DUT is initialing and the programs of multicast server is enable.

    [Condition] mulicast server is 192.168.100.1,DUT is192.168.100.2.

        step1.In SMT menu 3.2,enable multicast(IGMPV2)

        step2.In SMT menu 4,set gateway ip is 192.168.100.1,wan ip is 192.168.100.2.

        step3.go to SMT menu 24.1,wait for a moment then it will reboot automaticly.

2.[Bug Fix] SPRID: 051026865

    [Symptom] Wlan port can't communicate with ethernet port.(Rom file is in default status,tripleplay disable)

    [Condition] Wlan port can't communicate with ethernet port.(Rom file is in default status,tripleplay disable)

3.[Bug Fix] SPRID: 051026867

    [Symptom] Ethernet ports in different vlans can communicate with each other.(tripleplay enable)

    [Condition] Ethernet ports in different vlans can communicate with each other.(tripleplay enable)

4.[Bug Fix] SPRID: 051107348

    [Symptom] In SMT menu 4 and menu3.5 the ISP's name and ESSID can not accept special characters such as #$%^, but in eWC can accept it, they are not accordant

    [Condition] In SMT menu 4 and menu3.5 the ISP's name and ESSID can not accept special characters such as #$%^, but in eWC can accept it, they are not accordant

5.[Bug Fix] SPRID: 051108423

    [Symptom] eWC time out but can reset DUT to the factory default

    [Condition] Step1 enter eWC->maintenance->firmware

        Step2 enter SMT menu 24.8 CI command" sys reboot"

        Step3 after DUT startup click the reset button in eWC then can reset DUT to the factory default

6.[Bug Fix] SPRID: 051108424

    [Symptom] Configure firewall will cause DUT crash

    [Condition] Step1 enter GUI->advanced setup->firewall->rule summary, create a rule

and apply it

        Step2 enter the rule and delete it

        Step3 click back button in IE column and apply it again, then the DUT will crash

7. [Feature Enhancement]

    Remove CI command: wan adsl txgain

                        wan adsl targetnoise

8. [Feature Enhancement]

    Reset button test

9. [Feature Enhancement]

    Throughput Enhancement: Quick route

10.[Change default rom file]

      Add CI command in autoexec.net:

      ether driver qroute 2

Modification in 3.40(ACI.4)b1| 10/17/2005

1. [Feature Enhancement]

    Triple play port mapping.

2.[Bug Fix] SPRID: 051017256

    [Symptom] subnet mask error

    [Condition] 1. Log into the device via WEB GUI

                2. Config Static IP via Wizard or Advanced Setup LAN/WAN.

                3. Enter subnet mask "255.255.248.0"Then it will pop up a message shows "subnet mask error". However, "255.255.248.0" is a valid subnet

3.[Bug Fix] SPRID: 051017257

    [Symptom] Configure client and establish the connection of client to DUT, Set the DUT to make the WLAN function is disable,then set DUT to make the WLAN function is enable,sometimes it can't work normally

    [Condition] step1:Configure client and establish the connection of client to DUT,then Set the DUT to make the WLAN function is disable.

             step2:set DUT to make the WLAN function is enable.

             step3.1:sometimes the wlan LED flash.

             step3.2:sometimes the client can't searching the AP,and other client (which can't connect to the AP before disable the wlan function)also can't searching the AP.

4.[Bug Fix] SPRID: 051017261

    [Symptom] WIFI- test MCA2 fails.

    [Condition] step1:Connect PC1 to P660HW-T3(LAN side);

             step2:Connect PC2 and PC3 to P660HW-T3 through WLAN(using WPA-PSK)；

             step3:Run Chariot console on PC1, using script "realaud.scr" to send multicast traffic from PC1 to PC2 and PC3,

             step4:Chariot always shows error.

5. change modem code to 3.2.0.7

Modification in 3.40(ACI.3)C0| 08/23/2005
1.change to FCS

Modification in 3.40(ACI.3)b1| 08/18/2005
1. [Bug Fix]
Fix the WLAN mask margine issue.
2.[Bug Fix] SPRID: 050728329
    [Symptom] Whiteboard(WAN to LAN) can't work well when UPNP is enable.
    [Condition] Whiteboard(WAN to LAN) can't work well in all of the following
        conditions.
     1. OS is based on WinXP;
     2. enable UPNP and "Allow users to make configuration changes through UPnP " in
         GUI-UPNP;
     3. make sure that wan should be first to ask for whiteboard;
     4. MSN6.2-MSN6.2;MSN7.0-MSN6.2;MSN6.2-MSN7.0;MSN7.0-MSN7.0.
3.[Bug Fix]
        If run multicast stream(s) with througput less than 5.5Mbit then it works fine. But
        if the stream speed goes up to 6Mb or higher then the device is not able to keep up and
        the multicast stream starts to get choppy and it gets unviewable

Modification in 3.40(ACI.2)C0| 07/26/2005
1. change to FCS.

Modification in 3.40(ACI.2)b1 | 07/26/2005
2. [Feature Enhancement]
     Block the traffics between WLAN and LAN.
2. [Feature Enhancement]
    Add WPA2 feature
3. [Bug Fixed]
    In GUT/Advanced Setup/NAT/Full Feature, while click "Delete" button to delete one
        rule, this button can not work.
4.[Bug Fixed]
    [Symptom]WPA2-PSK function in DUT/GUI,DUT require to active the RADIUS at
first
    [Condition]Step1 Go to GUI/Wireless, try to use WPA2-PSK
        Step2 DUT require to active the RADIUS at first
        Step3 While in SMT, don't need to do so

Modification in 3.40(ACI.1)C0 | 07/12/2005
1. fix the wireless power control issue.
2. fix the ADM6996I-AC version Ethernet switch IOP issue

Modification in 3.40(ACI.0)C0 | 07/04/2005
1. change to FCS.

Modification in 3.40(ACI.0)b2 | 07/04/2005
1. build the f/w from 3.40(UU.0)C0.

Modification in 3.40(ACI.0)b1 | 05/17/2005
1. Create this project.

Annex A CI Command List

Command Class List Table		
System Related Command	Exit Command	Ethernet Related Command
WAN Related Command	WLAN_Related_Command	IP Related Command
Bridge Related Command	Radius Related Command	8021x Related Command
Bandwidth Management		

System Related Command Home

Command				Description
sys				
	adjtime			retrive date and time from Internet
	cbuf			
		display	[a|f|u]	display cbuf a: all f: free u: used
		cnt		cbuf static
			display	display cbuf static
			clear	clear cbuf static
	baud		<1..5>	change console speed
	callhist			
		display		display call history
		remove	<index>	remove entry from call history
	clear			clear the counters in GUI status menu
	countrycode		[countrycode]	set country code
	date		[year month date]	set/display date
	domainname			display domain name
	edit		<filename>	edit a text file
	enhanced			return OK if commands are supported for PWC purposes
	errctl		[level]	set the error control level 0:crash no save,not in debug mode (default) 1:crash no save,in debug mode 2:crash save,not in debug mode 3:crash save,in debug mode
	event			
		display		display tag flags information
		trace		display system event information
			display	display trace event
			clear <num>	clear trace event
	extraphnum			maintain extra phone numbers for outcalls
		add	<set 1-3> <1st phone num> [2nd phone num]	add extra phone numbers
		display		display extra phone numbers
		node	<num>	set all extend phone number to remote node <num>
		remove	<set 1-3>	remove extra phone numbers
		reset		reset flag and mask
	feature			display feature bit
	fid			
		display		display function id list
	firmware			display ISDN firmware type
	hostname		[hostname]	display system hostname

	iface			
		disp	[#]	display iface list
	isr		[all|used|free]	display interrupt service routine
	interrupt			display interrupt status
	logs			
		category		
			access [0:none/1:log]	record the access control logs
			attack [0:none/1:log/2:alert/3:both]	record and alert the firewall attack logs
			display	display the category setting
			error [0:none/1:log/2:alert/3:both]	record and alert the system error logs
			ipsec [0:none/1:log]	record the access control logs
			mten [0:none/1:log]	record the system maintenance logs
			upnp [0:none/1:log]	record upnp logs
			urlblocked [0:none/1:log/2:alert/3:both]	record and alert the web blocked logs
			urlforward [0:none/1:log]	record web forward logs
		clear		clear log
		display		display all logs
		errlog		
			clear	display log error
			disp	clear log error
			online	turn on/off error log online display
		load		load the log setting buffer
		mail		
			alertAddr [mail address]	send alerts to this mail address
			display	display mail setting
			logAddr [mail address]	send logs to this mail address
			schedule display	display mail schedule
			schedule hour [0-23]	hour time to send the logs
			schedule minute [0-59]	minute time to send the logs
			schedule policy [0:full/1:hourly/2:daily/3:weekly/4:none]	mail schedule policy
			schedule week [0:sun/1:mon/2:tue/3:wed/4:thu/5:fri/6:sat]	weekly time to send the logs
			server [domainName/IP]	mail server to send the logs
			subject [mail subject]	mail subject
		save		save the log setting buffer
		syslog		
			active [0:no/1:yes]	active to enable unix syslog
			display	display syslog setting
			facility [Local ID(1-7)]	log the messages to different files
			server [domainName/IP]	syslog server to send the logs
	mbuf			
		cnt		
			disp	display system mbuf count
			clear	clear system mbuf count
		link	link	list system mbuf link
		pool	<id> [type]	list system mbuf pool
		status		display system mbuf status
		disp	<address>	display mbuf status
		debug	[on|off]	

memory		<address> <length>	display memory content
memwrite		<address> <len> [data list ...]	write some data to memory at <address>
memwl		<address>	write long word to memory at <address>
memrl		<address>	read long word at <address>
memutil			
	usage		display memory allocate and heap status
	mqueue	<address> <len>	display memory queues
	mcell	mid [f|u]	display memory cells by given ID
	msecs	[a|f|u]	display memory sections
	mtstart	<n-mcell>	start memory test
	mtstop		stop memory test
	mtalloc	<size> [n-mcell]	allocate memory for testing
	mtfree	<start-idx> [end-idx]	free the test memory
model			display server model name
proc			
	display		display all process information
	stack	[tag]	display process's stack by a give TAG
	pstatus		display process's status by a give TAG
queue			
	display	[a|f|u] [start#] [end#]	display queue by given status and range numbers
	ndisp	[qid]	display a queue by a given number
quit			quit CI command mode
reboot		[code]	reboot system code = 0 cold boot, = 1 immediately boot = 2 bootModule debug mode
reslog			
	disp		display resources trace
	clear		clear resources trace
stdio		[second]	change terminal timeout value
time		[hour [min [sec]]]	display/set system time
timer			
	disp		display timer cell
	trace	[on|off]	set/display timer information online
	start	[tmValue]	start a timer
	stop	<ID>	stop a timer
trcdisp			monitor packets
trclog			
	switch	[on|off]	set system trace log
	online	[on|off]	set on/off trace log online
	level	[level]	set trace level of trace log #:1-10
	type	<bitmap>	set trace type of trace log
	disp		display trace log
	clear		clear trace
	call		display call event
	encapmask	[mask]	set/display tracelog encapsulation mask
trcpacket			
	create	<entry> <size>	create packet trace buffer
	destroy		packet trace related commands
	channel	<name> [none|incoming|outgoing|bothway]	<channel name>=enet0,sdsl00, fr0 set packet trace direction for a given channel
	string		enable smt trace log
	switch	[on|off]	turn on/off the packet trace

		disp		display packet trace
		udp		send packet trace to other system
			switch [on|off]	set tracepacket upd switch
			addr <addr>	send trace packet to remote udp address
			port <port>	set tracepacket udp port
		parse	[[start_idx], end_idx]	parse packet content
		brief		display packet content briefly
	tripleplay			
		portbase		
			enable	enable port mapping
			disable	disable port mapping
			set <eportid> <pvcid |disable>	set port map to pvc or disable
			disp	display the port mapping table
			save	save configure
			groupset [groupid] [LAN |PVC] [index] [WLAN]	set mapping group
			groupadd [groupid] [LAN |PVC] [index] [WLAN]	add mapping in a group
			groupdel [groupid] [ALL |LAN |PVC] [index] [WLAN]	delete mapping in a group
		igmpsnp		
			enable	enable igmp snooping
			disable	disable igmp snooping
			maxresptime [value]	set SP_MaxResponseTime
			queryinterval [value]	set SP_QueryInterval
			robust [value]	set SP_Robustness
			disp	display current group status
		debug [value]		open debug flag
	version			display RAS code and driver version
	view		<filename>	view a text file
	wdog			
		switch	[on|off]	set on/off wdog
		cnt	[value]	display watchdog counts value: 0-34463
	romreset			restore default romfile
	server			
		access	<telnet|ftp|web|icmp|snmp|dns> <value>	set server access type
		load		load server information
		disp		display server information
		port	<telnet|ftp|web|snmp> <port>	set server port
		save		save server information
		secureip	<telnet|ftp|web|icmp|snmp|dns> <ip>	set server secure ip addr
		manageip	<1-16> <ip>	set server managed ip addr
	spt			
		dump		dump spt raw data
			root	dump spt root data
			rn	dump spt remote node data
			user	dump spt user data
			slot	dump spt slot data
		save		save spt data
		size		display spt record size
		clear		clear spt data
	cmgr			
		trace		

			disp <ch-name>	show the connection trace of this channel
			clear <ch-name>	clear the connection trace of this channel
		cnt	<ch-name>	show channel connection related counter
	socket			display system socket information
	filter			
		clear		clear filter statistic counter
		disp		display filter statistic counters
		sw	[on|off]	set filter status switch
		set	<set>	display filter rule
		netbios		
			disp	display netbios filter status
			config <0:LAN to WAN, 1:WAN to LAN, 2:LAN to DMZ, 3:IPSec passthrough, 4:Trigger Dial> <on|off>	config netbios filter
	ddns			
		debug	<level>	enable/disable ddns service
		display	<iface name>	display ddns information
		restart	<iface name>	restart ddns
		logout	<iface name>	logout ddns
	cpu			
		display		display CPU utilization
	tripleplay			
		portbase		
			enable	Enable triple-play service
			disable	Disable triple-play service
			set <eportid> <pvcid | disable>	Set triple-play service
			save	Save triple-play service
			disp	display triple-play information
	8021p			
		enable		Enable 802.1p
		disable		Disable 802.1p
		set	<LanPort> <priority>	Set priority per LAN Port
		disp		Show 802.1p settings
		save		Save the settings to FLASH ROM
	8021q			
		enable		Enable 802.1q
		disable		Disable 802.1q
		set	<Group#> vid <VlanId> lanPort <LanPort #1> ... [LanPort #4] wanPort <RemoteNode #1> ... [RemoteNode #8]	Set VLAN Group information, include VLAN, LAN port mapping, and Remote Node mapping. where, <Group#>: 1~4 <VlanId>: 1~4094, 0=>Disable this group settings, 4095=>Reserved <LanPort#>: 1~4 <RemoteNode#>: 1~8
		setlan	<LanPort#> <Group#>	Join LAN Port ID into group <LanPort#>: 1~4 <Group#>: 1~4, 0=>remove from the group
		setwan	<RemoteNode#> <Group#>	Join Remote Node ID into group <RemoteNode#>: 1~8 <Group#>: 1~4, 0=>remove from the group
		disp		Show 802.1q settings

| | | save | | Save the settings to FLASH ROM |
| | | clear | <Group#> | Clear the group settings
<Group#>: 1~4 |

Exit Command

Command				Description
exit				exit smt menu

Ethernet Related Command

Command				Description
ether				
	config			display LAN configuration information
	driver			
		cnt		
			disp <name>	display ether driver counters
			clear <name>	clear ether driver counters
		iface	<ch_name> <num>	send driver iface
		ioctl	<ch_name>	Useless in this stage.
		mac	<ch_name> <mac_addr>	Set LAN Mac address
		reg	<ch_name>	display LAN hardware related registers
		rxmod	<ch_name> <mode>	set LAN receive mode. mode: 1: turn off receiving 2: receive only packets of this interface 3: mode 2+ broadcast 5: mode 2 + multicast 6: all packets
		status	<ch_name>	see LAN status
		init	<ch_name>	initialize LAN
	version			see ethernet device type
	pkttest			
		disp		
			packet <level>	set ether test packet display level
			event <ch> [on|off]	turn on/off ether test event display
		sap	[ch_name]	send sap packet
		arp	<ch_name> <ip-addr>	send arp packet to ip-addr
		mem	<addr> <data> [type]	write memory data in address
	test		<ch_id> <test_id> [arg3] [arg4]	do LAN test
	pncconfig		<ch_name>	do pnc config
	mac		<src_ch> <dest_ch> <ipaddr>	fake mac address
	switch			
		speedDuplex	<portID> [a|m =auto|manual] [10|100] [h|f =half|full-duplex]	Set speed/duplex mode portID: all|1|2|3|4
		status		Show Ethernet port link speed/duplex status

WAN Related Command

Command				Description
wan	Adsl			
		chandata		ADSL channel data, line rate
		close		Close ADSL line
		linedata		
			near	Show ADSL near end noise margin
			far	Show ADSL far end noise margin

		open		Open ADSL line
		opencmd		Open ADSL line with specific standard
			Glite	
			T1.413	
			Gdmt	
			multimode	
			adsl2	
			adsl2plus	
		opmode		Show the operational mode
		rateadap	[on|off]	Turn on/off rate adaptive mechanism
		perfdata		Show performance information,CRC,FEC, error seconds..
		reset		Reset ADSL modem, and must reload the modem code again
		Status		ADSL status (ex: up, down or wait for init)
		errorsecond		
			sendes	Send current error second information immediately
wan	atm	vchunt		
			Add <remoteNodeIndex> <vpi> <vci> <service bit(hex)>	Add a entry to hunting pool <remote node> : input the remote node index 1-8 <vpi> : vpi value <vci> : vci value <service>: it's a hex value, bit0:PPPoE/VC (1), bit1:PPPoE/LLC (2) , bit2:PPPoA/VC (4), bit3:PPPoA/LLC (8), bit4:Enet/VC (16), bit5 :Enet/LLC (32) For examples: If you need service PPPoE/LLC and Enet/LLC then the service bits will be 2+32 = 34 (decimal) = 22 (hex), you must input 22 Need to perform save after this command
			Remove <removeNodeId> <vpi> <vci>	Input remote node ID and vpi, vci value to remove the specific entry. System will save automatically.
			Active <yes|no>	Enable VC auto hunting featurer
			display	Display the hunt pool
			Clear	Clear the configure buffer
			Save	Save current setting into ROM file
			timer	The waiting time before checking the hunting table result
			Send	Send VC hunt pattern again
			result	Check the result of VC auto hunting
	hwsar	disp		Display hwsar packets incoming/outgoing information
		clear		Clear hwsar packets information
	Zero	Status		Display status of Zero configuration
		On		Turn on Zero configuration
		Off		Turn off Zero configuration
		Flags	<disable (1:zeroCfh / 2:auto-hunt / 4:password / 7:all)>	
		debug	1:enable / 0:disable	Display debug messages

WLAN Related Command

Command				Description
Wlan				
	active	[on|off]	[0|1]	Turn on/off wireless lan
	association			Show association list
	load			Load WLAN configuration into buffer.
	Display			Display WLAN configuration data.
	chid			Configure channel ID
	essid			Configure ESSID
	hiddenssid		[on/off]	Enable/Disable hidden SSID
	threshold			
		rts	<RTS threshold value>	Set threshold rts value
		Fragment	<Fragment threshold value>	Set threshold fragmentation value
	wep			
		type	<none|64|128|256>	Set WEP key to 64, 128 or 256 bits.
		Key	Set <set> <value>	Set WEP key value per set
		Key	Default <set>	Set WEP default key set
	macfilter			
		Enable		Enable macfilter
		Disable		Disable macfilter
		Action	<allow|deny>	When action match, allow or deny this mac
		Set	<Set#> <MAC Address>	Set mac address by set
	Clear			Clear all WLAN configuration data.
	Save			Save WLAN configuration working buffer to Rom file.
	filter			
		[incoming | outgoing]	<generic>[set#1][set#2][set#3][set#4]	To set generic filter for wireless channel
	version			

IP Related Command

Command				Description
ip				
	address		[addr]	display host ip address
	loopbackaddr		<IP1> [IP2]	Set loopback address.
	alias		<iface>	alias iface
	aliasdis		<0|1>	disable alias
	arp			
		status	<iface>	display ip arp status
		add	<hostid> ether <ether addr>	add arp information
		resolve	<hostid>	resolve ip-addr
		drop	<hostid> [hardware]	drop arp
		flush		flush arp table
		publish		add proxy arp
	dhcp		<iface>	
		client		
			release	release DHCP client IP
			renew	renew DHCP client IP
		mode	<server|relay|none|client>	set dhcp mode
		relay	server <serverIP>	set dicp relay server ip-addr
		reset		reset dhcp table
		server		

			probecount <num>	set dhcp probe count
			dnsserver <IP1> [IP2] [IP3]	set dns server ip-addr
			winsserver <winsIP1> [<winsIP2>]	set wins server ip-addr
			gateway <gatewayIP>	set gateway
			hostname <hostname>	set hostname
			initialize	fills in DHCP parameters and initializes (for PWC purposes)
			leasetime <period>	set dhcp leasetime
			netmask <netmask>	set dhcp netmask
			pool <startIP> <numIP>	set dhcp ip pool
			renewaltime <period>	set dhcp renew time
			rebindtime <period>	set dhcp rebind time
			reset	reset dhcp table
			server <serverIP>	set dhcp server ip for relay
			dnsorder [router|isp]	set dhcp dns order
		status	[option]	show dhcp status
		static		
			delete <num>|all	delete static dhcp mac table
			display	display static dhcp mac table
			update <num> <mac> <ip>	update static dhcp mac table
	dns			
		query		
			address <ipaddr> [timeout]	resolve ip-addr to name
			debug <num>	enable dns debug value
			name <hostname> [timeout]	resolve name to ip-addr
			status	display dns query status
			table	display dns query table
		server	<primary> [secondary] [third]	set dns server
		stats		
			clear	clear dns statistics
			disp	display dns statistics
		table		display dns table
	httpd			
		debug	[on|off]	set http debug flag
	icmp			
		echo	[on|off]	set icmp echo response flag
		data	<option>	select general data type
		status		display icmp statistic counter
		trace	[on|off]	turn on/off trace for debugging
		discovery	<iface> [on|off]	set icmp router discovery flag
	ifconfig		[iface] [ipaddr] [broadcast <addr> |mtu <value>|dynamic]	configure network interface
	ifdrop		<iface>	chaek if iface is available.
	ping		<hostid>	ping remote host
	pong		<hostid> [<size> <time-interval>]	pong remote host
	extping		<target address>	
			[-t]	Continue to send ECHO_REQ until Ctrl-C input
			[-c]	Validate the reply data
			[-d] [Data]	Data pattern. The maximum length of data is 255 characters.
			[-f]	Set DF flag.
			[-l] [Data size]	Datagram size in bytes (with 28 bytes Header).
			[-v] [TOS value]	Specify the value of TOS flag.
			[-n] [Repeat value]	The number of times to send ECHO_REQ

				packet.
			[-w] [Timeout value]	Specify the value of Timeout in seconds.
			[-o] [IP address/IFace]	To specify one IP address or interface to be the Source IP address.
			[-p] [Min MTU] [Max MTU] [Interval size]	Sweep range of sizes.
	route			
		status	[if]	display routing table
		add	<dest_addr|default>[/<bits>] <gateway> [<metric>]	add route
		addiface	<dest_addr|default>[/<bits>] <gateway> [<metric>]	add an entry to the routing table to iface
		addprivate	<dest_addr|default>[/<bits>] <gateway> [<metric>]	add private route
		drop	<host addr> [/<bits>]	drop a route
		flush		flush route table
		lookup	<addr>	find a route to the destination
		errcnt		
			disp	display routing statistic counters
			clear	clear routing statistic counters
	status			display ip statistic counters
	adjTcp		<iface> [<mss>]	adjust the TCP mss of iface
	udp			
		status		display udp status
	rip			
		accept	<gateway>	drop an entry from the RIP refuse list
		activate		enable rip
		merge	[on|off]	set RIP merge flag
		refuse	<gateway>	add an entry to the rip refuse list
		request	<addr> [port]	send rip request to some address and port
		reverse	[on|off]	RIP Poisoned Reverse
		status		display rip statistic counters
		trace		enable debug rip trace
		mode		
			<iface> in [mode]	set rip in mode
			<iface> out [mode]	set rip out mode
		dialin_user	[show|in|out|both|none]	show dialin user rip direction
	tcp			
		ceiling	[value]	TCP maximum round trip time
		floor	[value]	TCP minimum rtt
		irtt	[value]	TCP default init rtt
		kick	<tcb>	kick tcb
		limit	[value]	set tcp output window limit
		max-incomplete	[number]	Set the maximum number of TCP incomplete connection.
		mss	[value]	TCP input MSS
		reset	<tcb>	reset tcb
		rtt	<tcb> <value>	set round trip time for tcb
		status	[tcb] [<interval>]	display TCP statistic counters
		syndata	[on|off]	TCP syndata piggyback
		trace	[on|off]	turn on/off trace for debugging
		window	[tcb]	TCP input window size
	samenet		<iface1> [<iface2>]	display the ifaces that in the same net
	uninet		<iface>	set the iface to uninet

	tftp			
		support		pritn if tfpt is support
		stats		display tftp status
	xparent			
		join	<iface1> [<iface2>]	join iface2 to iface1 group
		break	<iface>	break iface to leave ipxparent group
	antiprobe		<0|1> 1:yes 0:no	set ip anti-probe flag
	igmp			
		debug	[level]	set igmp debug level
		forwardall	[on|off]	turn on/off igmp forward to all interfaces flag
		querier	[on|off]	turn on/off igmp stop query flag
		iface		
			<iface> grouptm <timeout>	set igmp group timeout
			<iface> interval <interval>	set igmp query interval
			<iface> join <group>	join a group on iface
			<iface> leave <group>	leave a group on iface
			<iface> query	send query on iface
			<iface> rsptime [time]	set igmp response time
			<iface> start	turn on of igmp on iface
			<iface> stop	turn off of igmp on iface
			<iface> ttl <threshold>	set ttl threshold
			<iface> v1compat [on|off]	turn on/off v1compat on iface
		robustness	<num>	set igmp robustness variable
		status		dump igmp status
		snoop		
			enable	Enable IGMP Snooping
			disable	Disable IGMP Snooping
			status	Show IGMP Snooping status
	pr			
		clear		clear ip pr table counter information
		disp		dump ip pr table counter information
		switch		turn on/off ip pr table counter flag
	nat			
		timeout		
			gre [timeout]	set nat gre timeout value
			iamt [timeout]	set nat iamt timeout value
			generic [timeout]	set nat generic timeout value
			reset [timeout]	set nat reset timeout value
			tcp [timeout]	set nat tcp timeout value
			tcpother [timeout]	set nat tcp other timeout value
		update		create nat system information from spSysParam
		iamt		display nat iamt information
		iface	<iface>	show nat status of an interface
		lookup	<rule set>	display nat lookup rule
		new-lookup	<rule set>	display new nat lookup rule
		loopback	[on|off]	turn on/off nat loopback flag
		reset	<iface>	reset nat table of an iface
		server		
			disp	display nat server table
			load <set id>	load nat server information from ROM
			save	save nat server information to ROM
			clear <set id>	clear nat server information
			edit active <yes|no>	set nat server edit active flag
			edit svrport <start port> [end port]	set nat server server port

				edit intport <start port> [end port]	set nat server forward port
				edit remotehost <start ip> [end ip]	set nat server remote host ip
				edit leasetime [time]	set nat server lease time
				edit rulename [name]	set nat server rule name
				edit forwardip [ip]	set nat server server ip
				edit protocol [protocol id]	set nat server protocol
		service			
				irc [on|off]	turn on/off irc flag
		resetport			reset all nat server table entries
		incikeport		[on|off]	turn on/off increase ike port flag

Bridge Related Command

Command				Description
bridge				
	mode		<1/0> (enable/disable)	turn on/off (1/0) LAN promiscious mode
	blt			related to bridge local table
		disp	<channel>	display blt data
		reset	<channel>	reset blt data
		traffic		display local LAN traffic table
		monitor	[on|off]	turn on/off traffice monotor. Default is off.
		time	<sec>	set blt re-init interval
	brt			related to bridge route table
		disp	[id]	display brt data
		reset	[id]	reset brt data
	cnt			related to bridge routing statistic table
		disp		display bridge route counter
		clear		clear bridge route counter
	stat			related to bridge packet statistic table
		disp		display bridge route packet counter
		clear		clear bridge route packet counter
	disp			display bridge source table

Radius Related Command

Command				Description
radius				
	auth			show current radius authentication server configuration
	acco			show current radius accounting server configuration

8021x Related Command

Command				Description
8021x				
	debug	level	[debug level]	set ieee802.1x debug message level
		trace		show all supplications in the supplication table
		user	[username]	show the specified user status in the supplicant table

Bandwidth management Related Command

Command				Description
bm				

	interface	lan	enable	<bandwidth xxx>		Enable bandwidth management in LAN with bandwidth xxx bps. If the user doesn't set the bandwidth, the default value is 100Mbps.
				<wrr|prr>		Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based.
				<efficient>		Enable work-conserving feature.
				<marktos xx>		Mark TOS value.
			disable			Disable bandwidth management in LAN
		wlan	enable	<bandwidth xxx>		Enable bandwidth management in WLAN with bandwidth xxx bps. If the user doesn't set the bandwidth, the default value is 100Mbps.
				<wrr|prr>		Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based.
				<efficient>		Enable work-conserving feature.
				<marktos xx>		Mark TOS value.
			disable			Disable bandwidth management in WLAN
		mpoa[00~07]	enable	<bandwidth xxx>		Enable bandwidth management in WAN with bandwidth xxx bps. If the user doesn't set the bandwidth, the default value is 100Mbps.
				<wrr|prr>		Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based.
				<efficient>		Enable work-conserving feature.
				<marktos xx>		Mark TOS value.
			disable			Disable bandwidth management in WAN
	class	lan	add #	bandwidth xxx	<name xxx>	Add a class with bandwidth xxx bps in LAN. The name is for users' information.
					<priority x>	Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The default value is 3.
					<borrow on|off>	The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The default value is off.
					<marktos xx>	Mark TOS value.
			mod #	<bandwidth xxx>		Modify the parameters of the class in LAN. The bandwidth is unchanged if the user doesn't set a new value.
				<name xxx>		Set the class' name.
				<priority x>		Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The priority is unchanged if the user doesn't set a new value.
				<borrow on|off>		The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The borrow is unchanged if the user doesn't set a new value.
				<marktos xx>		Mark TOS value.
			del #			Delete the class # and its filter and all its children class and their filters in LAN.
		wlan	add #	bandwidth xxx	<name xxx>	Add a class with bandwidth xxx bps in WLAN. The name is for users' information.
					<priority x>	Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The default value

						is 3.
					<borrow on|off>	The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The default value is off.
					<marktos xx>	Mark TOS value.
			mod #	<bandwidth xxx>		Modify the parameters of the class in WLAN. The bandwidth is unchanged if the user doesn't set a new value.
				<name xxx>		Set the class' name.
				<priority x>		Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The priority is unchanged if the user doesn't set a new value.
				<borrow on|off>		The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The borrow is unchanged if the user doesn't set a new value.
				<marktos xx>		Mark TOS value.
			del #			Delete the class # and its filter and all its children class and their filters in WLAN.
		mpoa[00~07]	add #	bandwidth xxx	<name xxx>	Add a class with bandwidth xxx bps in WAN. The name is for users' information.
					<priority x>	Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The default value is 3.
					<borrow on|off>	The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The default value is off.
					<marktos xx>	Mark TOS value.
			mod #	<bandwidth xxx>		Modify the parameters of the class in WAN. The bandwidth is unchanged if the user doesn't set a new value.
				<name xxx>		Set the class' name.
				<priority x>		Set the class' priority. The range is between 0 (the lowest) to 7 (the highest). The priority is unchanged if the user doesn't set a new value.
				<borrow on|off>		The class can borrow bandwidth from its parent class when the borrow is set on, and vice versa. The borrow is unchanged if the user doesn't set a new value.
				<marktos xx>		Mark TOS value.
			del #			Delete the class # and its filter and all its children class and their filters in WAN.
	filter	lan	add #	Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol tos <xx> tosmask <xx>		Add a filter for class # in LAN. The filter contains destination address (netmask), destination port, source address (netmask), source port , protocol, tos value and tos mask. You may set the value as 0 if you do not care the item.
			del #			Delete a filter which belongs to class # in LAN.
		wlan	add #	Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol tos <xx>		Add a filter for class # in WLAN. The filter contains destination address (netmask), destination port, source address (netmask), source port , protocol, tos value and tos mask.

				tosmask <xx>		You may set the value as 0 if you do not care the item.
			del #			Delete a filter which belongs to class # in WLAN.
		mpoa[00~07]	add #	Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol tos <xx> tosmask <xx>		Add a filter for class # in WAN. The filter contains destination address (netmask), destination port, source address (netmask), source port , protocol, tos value and tos mask. You may set the value as 0 if you do not care the item.
			del #			Delete a filter which belongs to class # in WAN.
	show	interface	lan			Show the interface settings of LAN
			wlan			Show the interface settings of WLAN
			mpoa[00~07]			Show the interface settings of WAN
		class	lan			Show the classes settings of LAN
			wlan			Show the classes settings of WLAN
			mpoa[00~07]			Show the classes settings of WAN
		filter	lan			Show the filters settings of LAN
			wlan			Show the filters settings of WLAN
			mpoa[00~07]			Show the filters settings of WAN
		statistics	lan			Show the statistics of the classes in LAN
			wlan			Show the statistics of the classes in WLAN
			mpoa[00~07]			Show the statistics of the classes in WAN
	monitor	lan	<#>			Monitor the bandwidth of class # in LAN. If the class is not specific, all the classes in LAN will be monitored. The first time you key the command will set it on; the second time you will set it off, and so on.
		wlan	<#>			Monitor the bandwidth of class # in WLAN. If the class is not specific, all the classes in WLAN will be monitored. The first time you key the command will set it on; the second time you will set it off, and so on.
		mpoa[00~07]	<#>			Monitor the bandwidth of class # in WAN. If the class is not specific, all the classes in WAN will be monitored. The first time you key the command will set it on; the second time you will set it off, and so on.
	config	save				Save the configuration.
		load				Load the configuration.
		clear				Clear the configuration.