



Firmware Release Note

Prestige 660HW-61

Standard version

Release 3.40(PE.6)C0

| | |
|----------------|---------------------|
| Date: | Aug 12, 2004 |
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ZyXEL Prestige 660HW-61 Standard Version Release 3.40(PE.6)C0 Release Note

Date: Aug 12, 2004

Supported Platforms:

ZyXEL Prestige 660HW-61

Versions:

ZyNOS Version : V3.40(PE.6) | 08/09/2004 19:42:50
Bootbase Version : V1.06 | 04/01/2004 11:22:33

Notes:

The Prestige 660HW-61, 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. P660HW-61 takes advantage of much higher data rate than ADSL, speed up to 12Mbps (ADSL2) or 26Mbps (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.

P660HW-61 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.

ADSL data pump version: TI AR7 03.00.09.00

Features:

Modifications in V 3.40(PE.6)C0| 08/012/2004

1 chang to FCS

Modifications in V 3.40(PE.6)b2| 08/06/2004

1 [BUG FIXED]

Symptom: MBM wizard link to blank screen inGUI

Condition: MBM wizard link to blank screen inGUI

2[BUG FIXED]

Symptom: Http can not trigger PVC, and go to zeroconfig GUI

Condition: set one remote note .

3 [BUG FIXED]

Symptom: system exception

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Condition: device run MBM test and refresh MBM monitor

Modifications in V 3.40(PE.6)b1| 08/02/2004

1. [Enhancement]

Add Media bandwidth management.

Modifications in V 3.40(PE.5)C0| 07/16/2004

1. Change to FCS version.

Modifications in V 3.40(PE.5)b3| 07/15/2004

1. Change xDSL GUI to completely solve login security problem.

Modifications in V 3.40(PE.5)b2| 07/12/2004

1. [Enhancement]

Support IPv6 and AX.25 packet format in firewall available service.

2. [Enhancement]

SPTGEN support for 8 PVC, WLAN Enable/Disable, and WPA, 802.1x

3. [Enhancement]

CI command to enable/disable SIP ALG

4. [BUG FIXED]

Symptom: Configure customer port in firewall will cause exception.

Condition: Add, edit or delete a customer port or a range of customer ports will cause system reboot.

5. [BUG FIXED]

Symptom: content filter sometimes can not work fine when using search engine

Condition: 1. Setting content filter restricte keyword and enable keyword blocking on eWC.

2. To setting content filter schedule on eWC.

3. Using seach engine like "google" to search keyword.

4. Sometimes could link restricted keyword's website.

6. [BUG FIXED]

Symptom: Remove SMT4 ISP node, and doing VC auto-hunt, system will get exception

7. [BUG FIXED]

Symptom: Java script error when configuring zero-configuration on WEB.

8. [BUG FIXED]

Symptom: Traffic redirect function cannot work.

Condition: When used as the mean of dial backup, Traffic Redirect won't work when ADSL link fails.

9. [BUG FIXED]

Symptom: SMT sometimes would show wrong noise margin value.

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- Condition: 1. Using CI command to see DSL noise margin after ADSL link-up.
2. Sometimes would show wrong value when noise margin small than zero.

10. [BUG FIXED]

- Symptom: If PC is with windows XP, the AnyIP feature sometimes doesn't work
Condition: Only happens on Windows XP PC

11. [BUG FIXED]

- Symptom: xDSL GUI has login security problem.

12. [BUG FIXED]

- Symptom: Fix bug that the selection data of radio button can be saved when Apply button is done.

13. [BUG FIXED]

- Symptom: ROM-D cannot work.

Modifications in V 3.40(PE.5)b1| 06/25/2004

1. [BUG FIXED]

- Symptom: Wireless WEP key should not treat character as HEX value on eWC.
Condition: 1. Into Wireless LAN -> Wireless on eWC and setting WEP Encryption is 64-bit WEP.
2. To input "0123456789" on key1 then to press apply button.
3. The eWC can not display any error message.
4. The 128 and 256 bit WEP have the same bug.

2. [BUG FIXED]

- Symptom: Device will reply wrong packet under ENET ENCAP + IES1000 combination.
Condition: One PC and two devices with ENET ENCAP are connected to IES1000. After PC ping device 1 and power-off device 1, PC pinging device 1 again will get reply from device 2.

3. [BUG FIXED]

- Symptom: Error ARP reply under 2 remote nodes. One is routing mode, and the other is bridge mode.
Condition: Device is set 2 remote nodes. The 1st remote node is routing mode, and the 2nd is bridge mode. When device receives ARP request from the 1st remote node, it will reply it from 2nd remote node. This problem makes the remote VLAN enabled router confused and the communication will fail.

Modifications in V 3.40(PE.4)C0| 06/18/2004

1. Change to FCS version

Modifications in V 3.40(PE.4)b2| 06/15/2004

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1. [Enhancement]
Enhance accuracy of Feature “AUTO_MODIFY_PRODUCTNAME” which will automatically determine its product name: either P660HW-61 or P660H-61.
2. [Bug Fixed]
Symptom: Web GUI and SMT setting in firewall are inconsistent on all release before (PE.4)b1, including (PE.4)b1.
Condition: Previous release were based on old WEB GUI
3. [Bug Fixed]
Symptom: QoS criteria violation.
Do not comply with the rule: $Priority_{(CBR)} > Priority_{(VBR)} > Priority_{(UBR)}$
Condition: When being loaded traffic beyond line rate, the remote node traffic configured in CBR doesn't maintain its rate which is achievable. Rather, CBR traffic could be worse than VBR traffic. It is because the system sets $Priority_{(CBR)} = Priority_{(VBR)}$.

Modifications in V 3.40(PE.4)b1 | 06/03/2004

1. Change TI datapump to TI AR7 03.00.09.00

Modifications in V 3.40(PE.3)c0 | 05/24/2004

1. Change to FCS version.

Modifications in V 3.40(PE.3)b3 | 05/18/2004

1. [ENHANCEMENT]
Enhance zero configuration web pages.
2. [BUG FIXED]
Symptom: If you set right accounting server, password and enable it, when turn on/off authentication server or accounting server then system possible occurs reset.
Condition: This is because when smt23-2 changing setting, system would send out accounting off packet to server and then create a timer to wait ack in 5 seconds period. Once receiving ack off system would delete parameter entry_p. In this time the "timer needs be stop" or after next 5 seconds the parameter entry_p would cause double free problem, then system reset.
3. [BUG FIXED]
Symptom: 802.1x with dynamic WEP key cannot work when shared secret of accounting server is invalid
Condition: 1. Enable smt23.2 authentication server and acctounting server.
2. 802.1x supplicant associate to AP with mode 802.1x dynamic wep.
3. Modify smt23.2 acctounting server shared secret with a wrong value.
4. 802.1x supplicat was prohibited by 802.1x module.
4. [BUG FIXED]

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Symptom: SPT would show redundant error message "set TKIP key error" in Authentication required WPA mode if WPA broadcast key update Timer expired when wlan is not active

Condition: Because wlan is not active so wlan chip is not initialized. In this time if setkeymapping() still set key into chip, it is naturally generate set key error.

5. [BUG FIXED]

Symptom: Manually change current hour and press "Save" button, the saved value is wrong.

Condition: Using Web to setting current hour then to save it.

6. [BUG FIXED]

Symptom: Use ROM-d to put default ROM file will get malloc fail even available memory size is still large than RAS size.

Condition: Use FTP_BUFFER_SIZE to alloc memory, instead of allocate the size of flash.

Modifications in V 3.40(PE.3)b2 | 05/12/2004

1. [BUG FIXED]

Symptom: Apple Power book can't get IP when enable AnyIP..

Condition: Ask IP behavior in Apple is different with PC. Router would misunderstand Apple wants to ask IP or do any IP. We add a condition for Apple which don't run any IP.

2. [BUG FIXED]

Symptom: ATM UBR, VBR can't work.

Condition: Fixed. Add VBR configuration at SAR channel setup.

3. [BUG FIXED]

Symptom: Using 802.1X + dynamic WEP key under WPA mixed mode, it will ping timeout after re-authentication.

Condition: In SMT 23.4, Setting 802.1x and Dynamic WEP key and setting the Re-authentication Timer as 60 secs---after the Client re-authentication, then the ping data from LAN to WAN will "timed out".

4. [BUG FIXED]

Symptom: Using WPA-PSK must enable RADIUS server.

Condition: Already fixed. Setting conflict problem.

5. [BUG FIXED]

Symptom: Upload firmware from TFTP, FTP or eWC failed when DSL is link up.

Condition: Fixed.

Modifications in V 3.40(PE.3)b1 | 04/26/2004

7. [ENHANCEMENT]
Add feature: bandwidth management, zero configuration (include: any ip, auto-hunting, web-redirect), firmware re-download mechanism in boot extension.
8. [ENHANCEMENT]
Add new firmware upgrade mechanism via FTP/TFTP/WEB in RAS.

Modifications in V 3.40(PE.2)c0 | 04/09/2004

1. Change to FCS version

Modifications in V 3.40(PE.1)c0 | 03/03/2004

2. Change to FCS version

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 |
| PPP Related Command | Bridge Related Command | Radius Related Command |
| 8021x Related Command | Firewall Related Command | Configuration Related Command |
| SMT Related Command | | |

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 |

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| | | | | |
|--|------------|----------|---|--|
| | 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: | weekly time to send the logs |

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| | | | | |
|--|----------|---------|---------------------------------|---|
| | | | sat] | |
| | | | 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 |

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| | | | |
|-----------|-----------|--|--|
| | 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,sds100, 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 |
| 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 |
| 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 |

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| | | | | |
|--|--------|---------|---|-----------------------------------|
| | 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 |

Exit Command

[Home](#)

| Command | | | | Description |
|---------|--|--|--|---------------|
| exit | | | | exit smt menu |

Ethernet Related Command

[Home](#)

| 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 |

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| | | | | |
|--|-----------|--|---------------------------------|------------------|
| | 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 |

WAN Related Command

[Home](#)

| Command | | | | Description |
|---------|------|---------------|------------------|--|
| wan | adsl | bert | | ADSL ber |
| | | chandata | | ADSL channel data, line rate |
| | | close | | Close ADSL line |
| | | coding | | ADSL standard current |
| | | ctrlint | | ADSL CTRL response command |
| | | defbitmap | | ADSL defect bitmap status |
| | | dyinggasp | | Send ADSL dyinggasp |
| | | fwav | | Test the ADSL F/W available ping |
| | | fwdl | | Download modem code, but must reset first |
| | | 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 |
| | | opmode | | Show the operational mode |
| | | perfdata | | Show performance information,CRC,FEC, error seconds.. |
| | | rdata | [start] [length] | Read DSP CTRL registers 512 bytes |
| | | reset | | Reset ADSL modem, and must reload the modem code again |
| | | selftest | | |
| | | | long | ADSL long loop test |
| | | | short | ADSL short loop test |
| | | status | | ADSL status (ex: up, down or wait for init) |
| | | version | | ADSL version information |
| | | vendorid | | ADSL vendor information |
| | | utopia | | Show ADSL utopia information |
| | | cellcnt | | Show ADSL cell counter |
| | | display | | |
| | | | shutdown | Show the counter of rate adaptive mechanism happening |
| | | | rateup | Show real status that rate adaptive mechanism happened |
| | | rateadap | [on/off] | Turn on/off rate adaptive mechanism |
| | | dumpcondition | [on/off] | Turn on/off online debug information of rate adaptive mechanism |
| | | sampletime | [mins] | Tune the sample time of rate adaptive mechanism |
| | | noisegt | [dB] | if noise margin is 3db greater than before, and rate is worse than before, then system will do “L1 shutdown RA3”, default is 3db |
| | | noisemargin | [dB] | if noise margin is greater than this value, and rate is worse than before, then system will do “L1 shutdown RA3”, default is 8db |
| | | persisttime | [time] | when the adaptive condition is matched system will continue to monitor the time period “persisttime” before doing “L1 shutdown RA3”, default is 30 seconds |

| | | | | |
|--|-------|---------------|--------------------------------|--|
| | | timeinterval | [mins] | when “L1 shutdown RA3” is done twice, and still can’t reach the max rate which system recorded, it will delay a time period that the period base time is “timeinterval” before starting again. The time-based default is 2 hrs |
| | | defectcheck | [on/off] | Turn on/off detect table checking, default is on |
| | | txgain | [value] | Set the CTRL register (0xc3), the value is from 0xfa to 0x06 |
| | | targetnoise | [value] | Set the CTRL register (0xc4), the value is from 0xfa to 0x06 |
| | | maxtonelimit | [value] | Set the CTRL register (0xc5), the value is from 0xfa to 0x06 |
| | | rxgain | [value] | Set the CTRL register (0xc6), the value is from 0xfa to 0x06 |
| | | txoutputpwr | [value] | Set the CTRL register (0xc7), the value is from 0xfa to 0x06 |
| | | rxoutputpwr | [value] | Set the CTRL register (0xc8), the value is from 0xfa to 0x06 |
| | | maxoutputpwr | [value] | Set the CTRL register (0xc9), the value is from 0xfa to 0x06 |
| | | errorsecond | | |
| | | | sendes | Send current error second information immediately |
| | | dygasprecover | | |
| | | dygasprecover | level [value] | By default is 100, after receiving 100 dying gasp system will reboot |
| | | dygasprecover | active [on/off] | Turn on/off this mechanism |
| | | rsploss | [1 0] | Turn on means to response signal loss of CTRL immediately, default is off |
| | atm | test | [fix rand period oam loopback] | Generate ATM traffic |
| | hwsar | disp | | Display hwsar packets incoming/outgoing information |
| | | clear | | Clear hwsar packets information |

WLAN Related Command

[Home](#)

| 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 |

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| | | | | |
|--|---------|-----------------------|---|---|
| | | 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. |
| | Power | | [1:19dbm, 2:18dbm, 3:16dbm, 4:15dbm, 5:14dbm] | Change TX power level. |
| | reset | | | Reset WLAN |
| | filter | | | |
| | | [incoming outgoing] | <generic>[set#1][set#2][set#3][set#4] | To set generic filter for wireless channel |
| | fildisp | | | Display wireless filter setting |
| | 1130cmd | | | Internal usage. |
| | | restart stat | | Show WLAN restart statistics |
| | | chg_dot11mode | | Set WLAN state to mix mode, B only or G only |
| | | show_rxDesc | | Show number of Rx host descriptors |
| | | acxstat | | Show acx run time statistics |

IP Related Command[Home](#)

| 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 dhcp 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 |

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| | | | | |
|--|----------|-----------|---|---|
| | | | 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>] | add an entry to the routing table to iface |

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| | | | | |
|--|-----------|----------------|--|--|
| | | | <gateway> [<metric>] | |
| | | 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 |
| | | errent | | |
| | | | 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 | | prtn 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 |
| | anyip | | | |
| | | status | | display that if any ip work now |
| | | enable | [yes no] | enbale disable anyop feature |
| | | display | | display all any ip entry |

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| | | | | |
|--|------|------------|--------------------------------------|---|
| | | restrict | [yes no] | restrict the connection between any ip client |
| | | flush | | delete all any ip entry |
| | | save | | Save any ip enable status to rom |
| | 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 |
| | 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 |

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| | | | | |
|--|--|------------|-----------------------------------|------------------------------------|
| | | | sip active <1/0> (enable/disable) | Enable/disable SIP ALG |
| | | resetport | | reset all nat server table entries |
| | | incikeport | [on/off] | turn on/off increase ike port flag |

PPP Related Command

[Home](#)

| Command | | | | Description |
|---------|-------------|--------|-------------------|---|
| ppp | | | | |
| | autotrigger | | | |
| | | on | <remoteNodeIndex> | turn on packet trigger, default is enable |
| | | off | <remoteNodeIndex> | turn off packet trigger |
| | | status | | show autotrigger status |
| | retry | | <interval> | adjust PPP retrial interval |

Bridge Related Command

[Home](#)

| Command | | | | Description |
|---------|------|---------|------------------------|---|
| bridge | | | | |
| | mode | | <1/0> (enable/disable) | turn on/off (1/0) LAN promiscuous 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

[Home](#)

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

8021x Related Command

[Home](#)

| 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 |

Configuration Related Command

[Home](#)

| Command | | | | | Description |
|----------|----------|--------------------|--|--|---|
| config | | | | | The parameters of config are listed below. |
| edit | firewall | active <yes no> | | | Activate or deactivate the saved firewall settings |
| retrieve | firewall | | | | Retrieve current saved firewall settings |
| save | firewall | | | | Save the current firewall settings |
| display | firewall | | | | Displays all the firewall settings |
| | | set <set#> | | | Display current entries of a set configuration; including timeout values, name, default-permit, and number of rules in the set. |
| | | set <set#> | rule <rule#> | | Display current entries of a rule in a set. |
| | | attack | | | Display all the attack alert settings in PNC |
| | | e-mail | | | Display all the e-mail settings in PNC |
| | | ? | | | Display all the available sub commands |
| | | e-mail | mail-server <mail server IP> | | Edit the mail server IP to send the alert |
| | | | return-addr <e-mail address> | | Edit the mail address for returning an email alert |
| | | | e-mail-to <e-mail address> | | Edit the mail address to send the alert |
| | | | policy <full hourly daily weekly> | | Edit email schedule when log is full or per hour, day, week. |
| | | | day <sunday monday tuesday wednesday thursday friday saturday> | | Edit the day to send the log when the email policy is set to Weekly |
| | | | hour <0~23> | | Edit the hour to send the log when the email policy is set to daily or weekly |
| | | | minute <0~59> | | Edit the minute to send to log when the email policy is set to daily or weekly |
| | | | Subject <mail subject> | | Edit the email subject |
| | | attack | send-alert <yes no> | | Activate or deactivate the firewall DoS attacks notification emails |
| | | | block <yes no> | | Yes: Block the traffic when exceeds the tcp-max-incomplete threshold |
| | | | | | No: Delete the oldest half-open session when exceeds the tcp-max-incomplete threshold |
| | | | block-minute <0~255> | | Only valid when sets 'Block' to yes. The unit is minute |
| | | | minute-high <0~255> | | The threshold to start to delete the old half-opened sessions to minute-low |
| | | | minute-low <0~255> | | The threshold to stop deleting the old half-opened session |
| | | | max-incomplete- high <0~255> | | The threshold to start to delete the old half-opened sessions to max-incomplete-low |
| | | | max-incomplete- low <0~255> | | The threshold to stop deleting the half-opened session |
| | | | tcp-max-incompl ete <0~255> | | The threshold to start executing the block field |
| | | set <set#> | name <desired name> | | Edit the name for a set |

| | | | | | |
|--|--|--|-----------------------------------|--|--|
| | | | default-permit <forward block> | | Edit whether a packet is dropped or allowed when it does not match the default set |
| | | | icmp-timeout <seconds> | | Edit the timeout for an idle ICMP session before it is terminated |
| | | | udp-idle-timeout <seconds> | | Edit the timeout for an idle UDP session before it is terminated |
| | | | connection-timeout <seconds> | | Edit the wait time for the SYN TCP sessions before it is terminated |
| | | | fin-wait-timeout <seconds> | | Edit the wait time for FIN in concluding a TCP session before it is terminated |
| | | | tcp-idle-timeout <seconds> | | Edit the timeout for an idle TCP session before it is terminated |
| | | | pnc <yes no> | | PNC is allowed when 'yes' is set even there is a rule to block PNC |
| | | | log <yes no> | | Switch on/off sending the log for matching the default permit |
| | | | rule <rule#> | permit <forward block> | Edit whether a packet is dropped or allowed when it matches this rule |
| | | | | active <yes no> | Edit whether a rule is enabled or not |
| | | | | protocol <0~255> | Edit the protocol number for a rule. 1=ICMP, 6=TCP, 17=UDP... |
| | | | | log <none match not-match both> | Sending a log for a rule when the packet none matches not match both the rule |
| | | | | alert <yes no> | Activate or deactivate the notification when a DoS attack occurs or there is a violation of any alert settings. In case of such instances, the function will send an email to the SMTP destination address and log an alert. |
| | | | | srcaddr-single <ip address> | Select and edit a source address of a packet which complies to this rule |
| | | | | srcaddr-subnet <ip address> <subnet mask> | Select and edit a source address and subnet mask if a packet which complies to this rule. |
| | | | | srcaddr-range <start ip address> <end ip address> | Select and edit a source address range of a packet which complies to this rule. |
| | | | | destaddr-single <ip address> | Select and edit a destination address of a packet which complies to this rule |
| | | | | destaddr-subnet <ip address> <subnet mask> | Select and edit a destination address and subnet mask if a packet which complies to this rule. |
| | | | | destaddr-range <start ip address> <end ip address> | Select and edit a destination address range of a packet which complies to this rule. |
| | | | | tcp destport-single <port#> | Select and edit the destination port of a packet which comply to this rule. For non-consecutive port numbers, the user may repeat this command line to enter the multiple port numbers. |
| | | | | tcp destport-range <start port#> <end port#> | Select and edit a destination port range of a packet which comply to this rule. |
| | | | | udp destport-single <port#> | Select and edit the destination port of a packet which comply to this rule. For non-consecutive port numbers, users may repeat this command line |

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|--------|----------|------------|--------------|---|---|
| | | | | | to enter the multiple port numbers. |
| | | | | udp destport-range <start port#> <end port#> | Select and edit a destination port range of a packet which comply to this rule. |
| | | | | desport-custom <desired custom port name> | Type in the desired custom port name |
| delete | firewall | e-mail | | | Remove all email alert settings |
| | | attack | | | Reset all alert settings to defaults |
| | | set <set#> | | | Remove a specified set from the firewall configuration |
| | | set <set#> | rule <rule#> | | Remove a specified rule in a set from the firewall configuration |
| insert | firewall | e-mail | | | Insert email alert settings |
| | | attack | | | Insert attack alert settings |
| | | set <set#> | | | Insert a specified rule set to the firewall configuration |
| | | set <set#> | rule <rule#> | | Insert a specified rule in a set to the firewall configuration |
| cli | | | | | Display the choices of command list. |

Firewall Related Command[Home](#)

| Command | | | | Description |
|---------|----------|-------------|----------|---|
| sys | | | | |
| | firewall | | | |
| | | acl | | |
| | | | disp | Display specific ACL set # rule #, or all ACLs. |
| | | active | <yes no> | Active firewall or deactivate firewall |
| | | ent | | |
| | | | disp | Display firewall log type and count. |
| | | | clear | Clear firewall log count. |
| | | pktdump | | Dump the 64 bytes of dropped packet by firewall |
| | | update | | Update firewall |
| | | dynamicrule | | |
| | | tcprst | | |
| | | | rst | Set TCP reset sending on/off. |
| | | | rst113 | Set TCP reset sending for port 113 on/off. |
| | | | display | Display TCP reset sending setting. |
| | | icmp | | |
| | | dos | | |
| | | | smtp | Set SMTP DoS defender on/off |
| | | | display | Display SMTP DoS defender setting. |
| | | | ignore | Set if firewall ignore DoS in lan/wan/dmz/wlan |
| | | ignore | | |
| | | | triangle | Set if firewall ignore triangle route in lan/wan/dmz/wlan |
| | | | | |

SMT Related command[Home](#)

| No | Command | Description | Comment |
|----|----------------------|------------------------------|---------|
| | sys bridge [on/off] | Set system bridge on/off | Menu 1 |
| | sys routeip [on/off] | Set system IP routing on/off | Menu 1 |

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| | | | |
|--|---|---|--------------------------|
| | sys hostname [hostname] | Set system name | Menu 1 |
| | sys display | Display hostname, routing/bridge mode information in menu 1 | Display Menu 1 |
| | sys default | Load All Default Settings Except LAN and DHCP. | |
| | sys save | Save all the parameters which will include menu1, menu 3.2 LAN, menu 4 or menu 11 WAN, menu 12 static route, menu 15 NAT server set, menu 21 filter sets, menu 22 SNMP, menu 24.11 remote management and 3.5 Wireless LAN | |
| | | | |
| | wan backup mechanism [dsl icmp] | Set wan backup mechanism to DSL link or ICMP | Menu 2 |
| | wan backup addr [index] [IP addr] | Set wan ip address <index> | Menu 2 |
| | wan backup tolerance [number] | Set keepalive fail tolerance | Menu 2 |
| | wan backup recovery [interval(sec)] | Set recovery interval | Menu 2 |
| | wan backup timeout [number] | Set ICMP timeout | Menu 2 |
| | wan backup save | Save wan backup related parameters | Menu 2 |
| | wan backup display | Display wan backup configurations | Menu 2 |
| | wan tredir active [on/off] | Set traffic redirect on/off | Menu 2.1 |
| | wan tredir ip [IP addr] | Set traffic redirect gateway IP address | Menu 2.1 |
| | wan tredir metric [number] | Set traffic redirect metric | Menu 2.1 |
| | wan tredir save | Save traffic redirect related parameters ** Have to apply “wan backup save” command thereafter | Menu 2.1 |
| | wan tredir display | Display traffic redirect configurations | Menu 2.1 |
| | | | |
| | lan index [1 2 3] 1: Select main LAN Interface 2: Select IP Alias 1 3: Select IP Alias 2 | Select a LAN interface to edit | Menu 3.2 |
| | lan active [on/off] | Turn on or off on IP Alias Interface | Menu 3.2.1 |
| | lan ipaddr [address] [subnet mask] | Set LAN IP address and subnet mask Example: > lan ipaddr 192.168.1.1 255.255.255.0 | Menu 3.2 |
| | lan rip [none in out both] [rip1 rip2b rip2m] | Set LAN IP RIP mode and RIP version, if you choose none in the first parameter, the second parameter is also necessary | Menu 3.2 |
| | lan multicast [none igmpv1 igmpv2] | Set LAN IP multicast mode | Menu 3.2 |
| | lan filter [incoming outgoing] [tcpip generic] [set#1] [set#2] [set#3] [set#4] | Set LAN filter to be incoming/outgoing or protocol /device and the filter set could be 1-12, 0 means empty Example: Lan filter incoming tcpip 1 0 0 0 | Menu 3.1 |
| | lan dhcp mode [server relay none] | Set DHCP mode to be “server”, “relay”, “none” | Menu 3.2 |
| | lan dhcp server dnsserver [pri dns] [sec dns] | Set primary and secondary LAN DNS server | Menu 3.2 |
| | lan dhcp server pool [start-address] [num] | Set DHCP start address and pool size | Menu 3.2 |
| | lan dhcp server gateway [IP address] | Set DHCP gateway | Menu 3.2 |
| | lan dhcp server netmask [subnet mask] | Set DHCP subnet mask | Menu 3.2 |
| | lan dhcp server leasetime [second] | Set DHCP lease time | Menu 3.2 |
| | lan dhcp server renewalttime [second] | Set DHCP renew time | Menu 3.2 |
| | lan dhcp server rebindtime [second] | Set DHCP rebind time | Menu 3.2 |
| | lan dhcp relay server [IP address] | Set IP address of DHCP relay server | Menu 3.2 |
| | lan display | Display LAN or IP alias parameters | Display Menu 3 |
| | lan clear | Clear the Working Buffer | |
| | lan save | Save LAN related parameters | |
| | | | |
| | wan node index [1-8] | Set the node pointer to specific wan profile. If you want to set WAN profile, please use this command first, system will use the index number for pointing to specific PVC (remote node), | Menu 11.1 |

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| | | | |
|--|---|---|-----------------|
| | | and for consequent commands reference, if index = 1 means it's ISP node | |
| | wan node clear | Clear the parameters of the temporary WAN profile | Menu 11.1 |
| | wan node ispname [ISP name] | Enable the name of wan node | Menu 11.1 |
| | wan node enable | Enable the wan profile | Menu 11.1 |
| | wan node disable | Disable the wan profile | Menu 11.1 |
| | wan node encap [1483 pppoe pppoe enet] | Set the wan protocol | Menu 11.1 |
| | wan node mux [vc llc] | Set the wan multiplex | Menu 11.1 |
| | wan node ppp authen [chap pap both] | Set PPP authentication type | Menu 11.1 |
| | wan node ppp username [name] | Set PPP username | Menu 11.1 |
| | wan node ppp password [password] | Set PPP password | Menu 11.1 |
| | wan node service [name] | Set PPPoE service name | Menu 11.1 |
| | wan node bridge [on off] | Set the wan bridge mode | Menu 11.1 |
| | wan node routeip [on off] | Set the wan IP routing mode | Menu 11.1 |
| | wan node callsch [set1#][set2#][set3#][set4#] | Set call schedule set, set number 0 means empty | Menu 11.1 |
| | wan node nailedup [on off] | Set nailed up connection on/off | Menu 11.1 |
| | wan node vpi [num] | Set the wan vpi. Range : 0~255 | Menu 11.6 |
| | wan node vci [num] | Set the wan vci. Range : 32~65535 | Menu 11.6 |
| | wan node qos[ubr cbr] | Set the wan QOS type to be UBR or CBR | Menu 11.6 |
| | wan node per [num] | Set the wan PCR value | Menu 11.6 |
| | wan node scr [num] | Set the wan SCR value | Menu 11.6 |
| | wan node mbs [num] | Set the wan MBS value | Menu 11.6 |
| | wan node wanip [static dynamic] [address] | Set the wan IP address | Menu 11.3 |
| | wan node remoteip [address] [subnet mask] | Set the remote gateway IP address and subnet mask | Menu 11.3 |
| | wan node nat [off sua full] [address mapping #] | Set type wan NAT mode to be off or SUA or Full feature | Menu 11.3 |
| | wan node rip [none in out both] [rip1 rip2b rip2m] | Set the wan RIP mode and RIP version | Menu 11.3 |
| | wan node multicast [none igmpv1 igmpv2] | Set the wan IP multicast mode | Menu 11.3 |
| | wan node filter [incoming outgoing] [tcpip generic] [set #1] [set #2] [set #3] [set #4] | Set WAN filter, incoming or outgoing can be specified, and filter set can be 1-12, value 0 means empty | Menu 11.5 |
| | wan node save | Save the related parameters of WAN node | |
| | wan node display | Display WAN profile configuration in buffer | Display Menu 11 |
| | | | |
| | ip route addrom index [Rule #] | Select a Static Route index 1-16 to edit | Menu 12.1 |
| | ip route addrom name [Name] | Set Rule Name | Menu 12.1 |
| | ip route addrom active [on off] | Set Active or Inactive Flag | Menu 12.1 |
| | ip route addrom set [dest address/ mask bits] [gateway] [metric] | Set IP static route Example: > ip ro addrom set 192.168.1.33/24 192.168.1.1 2 | Menu 12.1 |
| | ip route addrom private [yes no] | Set Private Flag | Menu 12.1 |
| | ip route addrom disp | Display both working buffer and Editing Entry | Menu 12.1 |
| | ip route addrom freememory | Discard all changes | Menu 12.1 |
| | ip route addrom save | Save edited settings | Menu 12.1 |
| | ip route addrom clear [Index #] | Clear Static Route Index | Menu 12.1 |
| | | | |
| | ip nat addrmap map [map#] [set name] | Select NAT address mapping set and set mapping set name, but set name is optional Example: > ip nat addrmap map 1 myset | Menu 15.1 |
| | ip nat addrmap rule [rule#] [insert edit] | Set NAT address mapping rule. If the "type" is not | Menu 15.1 |

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| | | | |
|--|---|--|---------------------|
| | [type] [local start IP] [local end IP] [global start IP] [global end IP] [server set #] | “inside-server” then the “type” field will still need a dummy value like “0”. Type is 0 - 4 = one-to-one, many-to-one, many-to-many-overload, many-to-many-non overload, inside-server Example: > ip nat addrmap rule 1 edit 3 192.168.1.10 192.168.1.20 192.168.10.56 192.168.1.56 0 | |
| | ip nat addrmap clear [map#] [rule#] | Clear the selected rule of the set | Menu 15.1 |
| | ip nat addrmap freememory | Discard Changes | Menu 15.1 |
| | ip nat addrmap disp | Display nat set information | Menu 15.1 |
| | ip nat addrmap save | Save settings | Menu 15.1 |
| | ip nat server load [set#] | Load the server sets of NAT into buffer | Menu 15.2 |
| | ip nat server disp [1] | “disp 1” means to display the NAT server set in buffer, if parameter “1” is omitted, then it will display all the server sets | Menu 15.2 |
| | ip nat server save | Save the NAT server set buffer into flash | Menu 15.2 |
| | ip nat server clear [set#] | Clear the server set [set#], must use “save” command to let it save into flash | Menu 15.2 |
| | ip nat server edit [rule#] active | Activate the rule [rule#], rule number is 1 to 24, the number 25-36 is for UPNP application | Menu 15.2 |
| | ip nat server edit [rule#] svrport <start port> <end port> | Configure the port range from <start port> to <end port> | Menu 15.2 |
| | ip nat server edit [rule#] remotehost <start IP> <end IP> | Configure the IP address range of remote host (Leave it to be default value if you don’t need this command) | Menu 15.2 |
| | ip nat server edit [rule#] leasetime <seconds> | Configure the lease time (Leave it to be default value if you don’t want this command) | Menu 15.2 |
| | ip nat server edit [rule#] rulename <string> | Configure the name of the rule (Leave it to be default value if you don’t want this command) | Menu 15.2 |
| | ip nat server edit [rule#] forwardip <IP address> | Configure the LAN IP address to be forwarded | Menu 15.2 |
| | ip nat server edit [rule#] protocol <TCP UDP ALL> | Configure the protocol to be used TCP , UDP or ALL (it must be capital) | Menu 15.2 |
| | sys filter set index [set#] [rule#] | Set the index of filter set rule, you may apply this command first before you begin to configure the filter rules | Menu 21 filter sets |
| | sys filter set name [set name] | Set the name of filter set | Menu 21 filter sets |
| | sys filter set type [tcpip generic] | Set the type of filter rule | Menu 21 filter sets |
| | sys filter set enable | Enable the rule | Menu 21 filter sets |
| | sys filter set disable | Disable the rule | Menu 21 filter sets |
| | sys filter set protocol [protocol #] | Set the protocol ID of the rule | Menu 21 filter sets |
| | sys filter set sourceroute [yes no] | Set the sourceroute yes/no | Menu 21 filter sets |
| | sys filter set destip [address] [subnet mask] | Set the destination IP address and subnet mask of the rule | Menu 21 filter sets |
| | sys filter set destport [port#] [compare type = none equal notequal less greater] | Set the destination port and compare type (compare type could be 0(none) 1(equal) 2(not equal) 3(less) 4(greater)) | Menu 21 filter sets |
| | sys filter set srcip [address] [subnet mask] | Set the source IP address and subnet mask | Menu 21 filter sets |
| | sys filter set srport [port#] [compare type = none equal not equal less greater] | Set the source port and compare type (compare type could be 0(none) 1(equal) 2(not equal) 3(less) 4(greater)) | Menu 21 filter sets |
| | sys filter set tcpEstab [yes no] | Set TCP establish option | |
| | sys filter set more [yes no] | Set the more option to yes/no | Menu 21 filter sets |
| | sys filter set log [type 0-3= none match notmatch both] | Set the log type (it could be 0-3 =none, match, not match, both) | Menu 21 filter sets |
| | sys filter set actmatch[type 0-2 = checknext forward drop] | Set the action for match | Menu 21 filter sets |
| | sys filter set actnomatch [type 0-2 = | Set the action for not match | Menu 21 filter sets |

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| | | | |
|--|--|--|----------------------------------|
| | checknext forward drop] | | |
| | sys filter set offset [#] | Set offset for the generic rule | Menu 21, it's for generic filter |
| | sys filter set length [#] | Set the length for generic rule | Menu 21, it's for generic filter |
| | sys filter set mask [#] | Set the mask for generic rule | Menu 21, it's for generic filter |
| | sys filter set value [(depend on length in hex)] | Set the value for generic rule | Menu 21, it's for generic filter |
| | sys filter set clear | Clear the current filter set | Menu 21 |
| | sys filter set save | Save the filter set parameters | |
| | sys filter set display [set#][rule#] | Display Filter set information. W/o parameter, it will display buffer information. | |
| | sys filter set freememory | Discard Changes | |
| | | | |
| | sys snmp disp | Display SNMP parameters | Menu 22 |
| | sys snmp get [community] | Set the community string of get | Menu 22 SNMP |
| | sys snmp set [community] | Set the community string of set | Menu 22 SNMP |
| | sys snmp trusthost [IP address] | Set the IP address of trusted host | Menu 22 SNMP |
| | sys snmp trap community [community] | Set the community string of trap | Menu 22 SNMP |
| | sys snmp trap destination [IP address] | Set the destination address of trap | Menu 22 SNMP |
| | sys snmp discard | Discard changes | |
| | sys snmp clear | Clear Working Buffer | |
| | sys snmp save | Set the SNMP parameters | Menu 22 SNMP |
| | | | |
| | sys password [new password] | Set system password [save immediately] | Menu 23 system password |
| | | | |
| | sys baud [1-5] | Index 12,3 will be 38400,19200, 9600, 57600, 115200 bps [save immediately] | Menu 24.2.2 console speed |
| | | | |
| | sys server load | Load setting before editing | |
| | sys server access [ftp telnet web] [access type] | Set the server access type to be 0: ALL, 1: None, 2:LAN only, 3:WAN only | Menu 24.11 remote management |
| | sys server port [ftp telnet web] [port] | Set the server port number | Menu 24.11 remote management |
| | sys server secureip[ftp telnet web] [address] | Set the server security IP address | Menu 24.11 remote management |
| | sys server disp [1] | Display server settings, [1] means display buffer | |
| | sys server save | Save the embedded server (remote management) parameters | |
| | | | |
| | wlan load | Load system parameters into working buffer | Menu 3.5 for Wireless LAN |
| | wlan disp | Display the working buffer | Menu 3.5 for Wireless LAN |
| | wlan essid [name] | Set the wireless ESSID | Menu 3.5 for wireless LAN |
| | wlan hideessid [on off] | Set to hide ESSID or not | Menu 3.5 for wireless LAN |
| | wlan chid [#=1~11] | Set channel ID 1-11 | Menu 3.5 for wireless LAN |
| | wlan threshold rts [value] | Set the RTS threshold value | Menu 3.5 for wireless LAN |
| | wlan threshold fragment [value] | Set fragment threshold | Menu 3.5 for wireless |

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|--|--|---|-----------------------------|
| | | | LAN |
| | wlan wep type [none 64 128] | Set the wep type to be none, 64bit or 128bits | Menu 3.5 for wireless LAN |
| | wlan wep key set [key set#1-4] [key value] | Set wep key value | Menu 3.5 for wireless LAN |
| | wlan wep key default [key set # 1-4] | Set default key set value | Menu 3.5 for wireless LAN |
| | | | |
| | wlan macfilter enable | Enable mac filter | Menu 3.5.1 for wireless LAN |
| | wlan macfilter disable | Disable mac filter | Menu 3.5.1 for wireless LAN |
| | wlan macfilter action [allow deny] | Set the action type of filter | Menu 3.5.1 for wireless LAN |
| | wlan macfilter set [set# 1-12] [mac address] | Set the mac address of filter | Menu 3.5.1 for wireless LAN |
| | wlan clear | Clear Working Buffer | |
| | wlan save | Save wireless MAC filter parameters | |

Bandwidth Management

| 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 pr> | | Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based. |
| | | | | <efficient> | | Enable work-conserving feature. |
| | | | 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 pr> | | Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based. |
| | | | | <efficient> | | Enable work-conserving feature. |
| | | | 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 pr> | | Select fairness-based(WRR) or priority-based(PRR) mechanism. the default value is fairness-based. |
| | | | | <efficient> | | Enable work-conserving feature. |
| | | | 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. |

| | | | | | | |
|--|--|-------------|-------|-----------------|-----------------|--|
| | | | 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. |
| | | | 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. |
| | | | 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. |
| | | | 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. |
| | | | 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. |
| | | | del # | | | Delete the class # and its filter and all its children class and their filters in WAN. |

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| | | | | | | |
|--|---------|-------------|-------------|---|--|--|
| | filter | lan | add # | Daddr <mask Dmask> Dport Saddr <mask Smask> Sport protocol | | Add a filter for class # in LAN. The filter contains destination address (netmask), destination port, source address (netmask), source port and protocol. 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 | | Add a filter for class # in WLAN. The filter contains destination address (netmask), destination port, source address (netmask), source port and protocol. 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 | | Add a filter for class # in WAN. The filter contains destination address (netmask), destination port, source address (netmask), source port and protocol. 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. |