ZyXEL

Firmware Release Note

Prestige 662HW-61

Standard Version

Release 3.40(QR.7)C0

Date: **July 6, 2005**
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Supported Platforms:

ZyXEL Prestige 662HW-61

Versions:

ZyNOS Version   : V3.40(QR.7) | 07/06/2005 13:34:35
Bootbase Version   : V1.06 | 04/01/2004 11:22:33

Notes:

The Prestige 662HW-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. P662HW-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.

P662HW-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.

1.Known Issues:

1. US Robotics modem is not supported for dial backup
2. If user wants to register to extend expired date, packet-Scan engine won't send out expired date request until 6th checking with Packet-Scanning server.
3. If device LAN is connected with a switch, and device reboots, then the PC with Any-IP can't connect with device until ARP entry is cleared by PC.
4. WLAN has Beacon failure problem when the channel is in very busy/dirty condition
5. In Web/GUI, the MBM wizard successful page is English only.
6. In Web/GUI, The help page link in GUI->Advanced Setup->Certificates is invalid.

2.Features:
Modifications in V 3.40(QR.7)C0 | 07/06/2005

1. Change to FCS firmware version.

Modifications in V 3.40(QR.7)b1 | 06/17/2005

1. [BUG FIX]
   Symptom: After update firmware from qr.5 to qr.6, Antivirus update is error.
   Condition: N/A

Modifications in V 3.40(QR.6)C0 | 06/07/2005

1. Change to FCS firmware version.

Modifications in V 3.40(QR.6)b4 | 06/07/2005

1. [BUG FIX] SPRID: 050526689
   Symptom: Some words in the help page of configuration still in English when select GUI of French and German language.
   Condition: Some words in the help page of configuration still in English when select GUI of French and German language.
2. Change default Rom-file:
   Add new rule into VC hunting table: VPI/VCI: 0/38 Encapsulation: PPPOA
Multiplexing: VC

Modifications in V 3.40(QR.6)b3 | 05/18/2005

1. [BUG FIX] SPRID: 050406088
   Symptom: VPN tunnel can be built successfully, then LAN PC of P662 can not access with LAN PC of Remote Security Gateway when DUT get Dynamic IP .
   Condition: Step1 Set a rule to build a VPN tunnel between P662 and ZyWALL, Both of them get Dynamic IP
           Step2 in DUT, input CI command "ipsec dial 1",then VPN tunnel can be built successfully
            Step3 but LAN PC of P662 can not access with LAN PC of Remote Security Gateway
             Step4 Change DUT and ZyWALL to use static IP, then work fine.
2. [BUG FIX] SPRID: 050407111
   Symptom: When select Enet Encap+Dynamic IP or PPPOE +Static IP to access internet, the DUT 'route table works improperly.
   Condition: Step1 When select Enet Encap+Dynamic IP or PPPOE +Static IP to access internet,, route table only have 3 rules. It lost the rule of access internet via Gateway
           Step2 so the traffic won't go out
3. [BUG FIX] SPRID: 050411274
   Symptom: Run the throughput test of Router mode, the upstream of traffic test failed .
   Condition: Step1 When select rfc1483 route mode to run the throughput test, the DUT won't route LAN traffic to WAN, so the upstream test failed, and the SMT will show us the info of check buffer
           Step2 While run downstream test, it is PASS.
4. [BUG FIX] SPRID: 050407123
   Symptom: After active Media Bandwidth Management Wizard, the WLAN station will lose the connection of DUT.
   Condition: Step1 Active a service of MBM wizard, then WLAN station tries to connect DUT, and failed to get IP.
           Step2 Inactive MBM, then WLAN station can connect again.

5. [BUG FIX] SPRID: 050310549
   Symptom: When 2 PCs visit eWC of DUT, the priority have some problem.
   Condition: N/A

6. [BUG FIX] SPRID: 041230556 ～ 041230560
   Symptom: Customer reported if a link request is given in IE can hang/reboot the ZyXEL-device.
   http://192.168.1.1/Forms/rpAuth_1?ZyXEL%20ZyWALL%20Series<script>top.locati on.pathname=%20""</script>
   Condition: N/A

7. [BUG FIX] SPRID: 041230568
   Symptom: in eWC advanced setup->lan setup the back button can save the configuration and logout.
   Condition:N/A

8. [BUG FIX] SPRID: 41222143
   Symptom: in menu 24.11, leave the telnet server port default, upload firmware using tftp from lan side pc, it always fails; but if telnet server port is changed to 23, the function works well.
   Condition: N/A

9. [BUG FIX] SPRID: 41228406
   Symptom: When we get rom-t from LAN side by FTP , and modified it, then put rom-t ,the device won't accept the new rom-t. (Just only use ultraedit modify rom-t, the DUT can accept it, but while use other utilitys--DOS Edit/Word/Notepad/WordPad modify the rom-t, the DUT can not accept it.)
   Condition:N/A

10. [BUG FIX] SPRID: 41124036
    Symptom: 1.In Menu 24.8 typing "ip ping 192.168.8.1" (the ip address from which you can get response".the default times of ping is three.
    2.when the device get response in the first time or the second time.type"ctrl+c".then type the Up key and Enter quickly.the system will crash and reboot.
    Condition: N/A

11. [BUG FIX] SPRID: 41021649
    Symptom: PPPoE passthrough function fail(Wireless).
    1. Set WAN interface of the device as PPPoE.(Enable PPPoE passthrough function)
    2. Ethernet client under LAN side can establish the PPPoE connection.
    3. However Wireless Client can not establish the PPPoE connection in the same scenario.
    Condition: N/A

12. [BUG FIX] SPRID: 41228407
    Symptom: VC hunt can not alloc mbuf again when VC hunt table is more than 8.
    Condition: N/A

13. [BUG FIX] SPRID: 050113849
    Symptom: Customer report after P662HW-61 upgrade firmware from QR4 to QR5, P2000W are not able to obtain IP dynamically from P662. Where as if static IP is configured on P2000W than connection can be established. Where in QR4 the phone with same setting it works fine. If we use notebook as DHCP.

Condition: N/A
14. [BUG FIX] SPRID: 050325330
    Symptom: When DSL-link is down, dial backup funtion works fine if there is no active traffic while P662HW-61 goes for dial backup function. But if there is active traffic from LAN->WAN when DSL-link goes down and P662HW-61 goes for dial backup function -> P660HW-61 reboots.
    Condition: Device must be in RFC1483 router mode.
15. [BUG FIX] SPRID: 050404039
    Symptom: 1-) create 15 user profile in CAC menu, no need to click "Enable Content Access Control"
            2-) restart the device
            3-) log on again and enter CAC user profile menu, by default you will see only 10 user
            4-) click the link on "If you want to add more user profiles, please click here.". Again you will see 10 user. 5 user seems disappeared.
            5-) go to main menu
            6-) enter again CAC user profile menu, now you will see 15 user.
    Condition: N/A
16. [BUG FIX] (TI WLAN)
    Symptom: Using Intel 2100 3B wireless-lan card, STA won't reconnect to AP after pinging from STA to AP for a while.
    Condition: N/A
17. [BUG FIX] (TI WLAN)
    Symptom: Run emule and FTP bi-direction test for long time under WPA-PSK,
        STA will disconnect and reconnect to AP.
    Condition: N/A
18. [BUG FIX] (TI WLAN)
    Symptom: when station reassociation, no handshake procedure starts.
    Condition: N/A
19. [BUG FIX] (TI WLAN)
    Symptom: system may exception when issuing "wlan active 0"
    Condition: AP is configured as WPA-PSK mode, and one STA can Ping to host A that connects to AP via Ethernet.
        After issuing "wlan active 0", AP will exception.
20. [BUG FIX] (TI WLAN)
    Symptom: association information is not updated after STA reconnects to AP.
    Condition: associate information on "wlan ass" is not updated after STA reconnects to AP.
21. [BUG FIX] (TI WLAN)
    Symptom: RTS is not the same as the configured value after system reboots.
    Condition: Change RTS value from 2432 to 100 in SMT3.5, then reboot the system.
        RTS will be changed back to 2432.
22. [BUG FIX] (TI WLAN)
    Symptom: STA can't connect to AP on WPA-PSK after system reboots.
    Condition: .STA can't connect to AP on WPA-PSK after system reboots.
        If issuing "wlan reset", STA could connect to AP.

23.[BUG FIX] (TI WLAN)

Symptom: system exception when device is rebooting.

Condition:

1. Device is 802.1x, no secutiry and use authentication database "AP local database first, then RADIUS".

2. Use client(G-220) to associate to this AP

3. Use CLI command "sys reboot" to reset system. exception sometimes occurs during the rebooting.

24.[BUG FIX] (TI WLAN)

Symptom: The Group key update sometimes can not work correctly.

Condition:

1. A station connect to the AP.

2. Reconnect the AP again

3. If there is a MicFailure packet is sent from the station, the Group key update can not work correctly.

25.[BUG FIX] (TI WLAN)

Symptom: System sometimes exception when change setting on smt3.5 or 23.4.

Condition: N/A

26.[BUG FIX] (TI WLAN)

Symptom: Static 256-bit WEP can't work.

Condition: N/A

27.[BUG FIX] (TI WLAN)

Symptom: AP is under WPA-PSK, and STA will disconnect when key update or reauthentication.

Condition: N/A

28.[BUG FIX] (TI WLAN)

Symptom: Exception occurs when changing the state from "No Authentication Required" to

"Authentication Required" when it has traffic between lan and wlan.

Condition: N/A

29. [BUG FIX] (TI WLAN)

Symptom: Static 256-bit WEP and hidden ESSID can't be online changed.

Condition: N/A

30.[FETURE ENHANCE]

Supporting rom file back/restore via GUI .

31.[FETURE ENHANCE]

Modifying the 'Reset System' button (Maintenance→ diagnostic→General) to 'Restart the Device'.

32. [BUG FIX] SPRID: 050222652

Symptom: Customer reported a NAT issue on P662HW-61 (QR5) and P662HW-63(SC.2).Topology is as following

PC　-----　internet　-----　P662HW-61(63)　-----　DNS　server P662HW-61(63): SUA on, Forward Port 53 to DNS server and Firewall WAN-LAN port 53 allow

1. PC will initiate a DNS query to p662HW-61(63) WAN IP + port 53

2. P662HW-61(63) will receive the DNS query and forward it to DNS server on LAN

side.
    3. DNS server will responses to the DNS query and send it to P662HW-61(63)
    4. P662HW-61(63) will reply back to PC, but this traffic will go out via port 10001 or
    10002 or any other none 53 port.
    If DNS query was sent via TCP port 53, then problem does not occur.

Modifications in V 3.40(QR.6)b2 | 05/04/2005
    1. [FEATURE ENHANCE]
    PKI certificate support
    2. [FEATURE ENHANCE]
    4x mode support
    3. [FEATURE ENHANCE]
    OTIST support
    4. [FEATURE ENHANCE]
    CAC enhancement (nat session per host)
    5. [FEATURE ENHANCE]
    Firewall enhancement (blocking text can be modified in CI command)
    6. [FEATURE ENHANCE]
    ADSL2+ data dump
    7. [FEATURE ENHANCE]
    CAC enhancement (back door to set up for websites)
    8. [FEATURE ENHANCE]
    Diffserv support
    9. [FEATURE ENHANCE]
    VRPT support
    10. [FEATURE ENHANCED]
    Support Multiboot client V2.
    11. [BUG FIX]
    SPRID: 050107337
    NAT can not work correctly if I change the Server Mapping Set
    Condition :
        Step1: in eWC =>Advanced Setup=>NAT,choose Full Feature and Edit the Rule 1;
        Step2: choose the Type as Server mode,and set the Globle IP as the Wan ip of the
            DUT;
        Step3: Server Mapping Set choose 2,and Edit Details,and add the Port 2121 forward
            to the LAN PC "10.0.0.2";
        Step4: using an PC in the Wan to access the ftp(port 2121) server on the LAN PC.
            This must be successful;
        Step5: then choose the Server Mapping Set 3, and Edit Details to add the Port 23
            forward to the LAN PC. then Apply.ftp from the WAN to the LAN also can
            successful, but telnet from WAN to LAN can not work.

Modifications in V 3.40(QR.5)C0 | 12/2/2004
    12. [FEATURE CHANGE]
    Change to FCS version.

Modifications in V 3.40(QR.5)b2 | 11/29/2004

1. [BUG FIX]

Symptom: In "VC auto hunt failed" page, if we change the HTTP port number in smt24.11, and then the "here" hyperlink can't connect to eWC.
Condition: N/A

2. [BUG FIX]

Symptom: If the Web site is blocked by CAC Web control function, then the centralized logs can't display correct username and URL address in logs.
Condition: N/A

3. [FEATURE CHANGE]

Symptom: The default ESSID of wireless is changed to "ZyXEL"
Condition: N/A

4. [BUG FIX]

Symptom: In PPPoE mode, if uses the CI command "device drop channel all", the PPPoE can't dial up any more.
Condition: N/A

5. [BUG FIX]

Symptom: Turn on Anti-Virus to scan HTTP packets, and go to the Web site "http://www.alltime.ru/watch.shtml", device will get exceptions.
Condition: N/A
Solution: Update the AV engine to 0.18 can fix this bug.

6. [BUG FIX]

Symptom: In eWC, the F/W upload page doesn't have password protection.
Condition: N/A

7. [BUG FIX]

Symptom: For SIP pass-through feature, if the SIP client uses an account with IP address like test@172.22.1.17 , then our router will modify the IP address field, and causes the SIP connection failed.
Condition: N/A
Solution: It is not necessary to modify the SIP tag "from", and "to" field at any time.

Modifications in V 3.40(QR.5)b1 | 11/18/2004

1. [BUG FIX]

Symptom: The Web redirect function can't work if HTTP port number is changed by remote management function.
Condition: N/A

2. [BUG FIX]

Symptom: Device will crash when doing PAP with INode PPPoE server
Condition: If PPPoE server uses PAP and then our device receive a packet PAP ACK or PAP NAK, but it only happens in Inode server.

3. [BUG FIX]

Symptom: When delete SMT4 and the ADSL mode changes to multi mode automatically even we configure it as G.DMT
Condition: N/A

4. [BUG FIX]

Symptom: IPSec Transport mode will be treated as Tunnel mode

Condition: N/A
5. [BUG FIX]
   Symptom: The IP Alias is active in rom-t, but it is actually inactive in SMT
   Condition: N/A
6. [BUG FIX]
   Symptom: DNS server can't work after configuring DNS server in smt3.2 or web LAN
   page, it need reboot system to let DNS server work.
   Condition: N/A
7. [BUG FIX]
   Symptom: Routing table doesn't update when change different remote IP in SMT4 and
   encapsulation is ENET ENCAP.
   Condition: N/A
8. [BUG FIX]
   Symptom: In Web/GUI firewall rule summary page there is no LAN to WAN ACL set
   Condition: N/A
9. [BUG FIX]
   Symptom: In Web/GUI, changing the setting of Windows Networking (NetBIOS over
   TCP/IP) in DMZ setting page will cause system reboot
   Condition: N/A
10. [BUG FIX]
   Symptom: Customers report that can't build VPN tunnel between 2 devices when using
   DES/3DES encryption, but after we changing the AES encryption the tunnel is built
   OK.
   Condition: N/A

11. [BUG FIX]
   Symptom: In smt3 2, we change nothing but it still save to ROM file
   Condition: N/A
12. [BUG FIX]
   Symptom: Use ENET ENCAP mode, traffic redirect/Dial backup function can't work
   fine if the destination IP is in the same subnet with WAN IP address.
   Condition: N/A

Modifications in V 3.40(QR.4)C0 | 10/01/2004
1. [FEATURE CHANGE]
   Symptom: Change to FCS version
   Condition: N/A

Modifications in V 3.40(QR.4)b2 | 09/30/2004
1. [BUG FIX]
   Symptom: The router gets exception when a client PC runs a port scan tool "bonk".
   Condition: N/A
2. [BUG FIX]
   Symptom: User can't login to embedded Web/GUI, if PC uses windows XP and
   installed service pack 2, and the system UPnP is enabled.

Condition: Only happens when UPnP function is enabled.

Modifications in V 3.40(QR.4)b1 | 09/22/2004
1. [BUG FIX]
   Symptom: Enable email Anti-Virus packet scanning function, then system gets exception when doing email stress test.
   Condition: N/A
2. [BUG FIX]
   Symptom: For Zero-Configuration feature, when VC auto hunt successfully, and the display PPPoE username/password page, but input wrong value, the Web page will be always in testing state.
   Condition: N/A

Modifications in V 3.40(QR.2)b6 | 09/16/2004
1. [BUG FIX]
   Symptom: Configuring the bandwidth of MBM class by command "bm defaultClassBw 20 (kbps)", but it doesn't work.
   Condition: N/A
2. [BUG FIX]
   Symptom: Register and Activate CAC but disable it, and configure some Web categories to block web sites and then uses browser to get on Internet, the system will get exception.
   Condition: N/A
3. [BUG FIX]
   Symptom: Using Web/GUI to update firmware, the Web page will display error message.
   Condition: N/A
4. [BUG FIX]
   Symptom: Reset to default ROM file, and after Anti-Virus activated, the first time to update AV engine will get failed, but it only found in PQA's environment.
   Condition: N/A
5. [BUG FIX]
   Symptom: The Zero-configuration(VC auto-hunting) is not turned on by default.
   Condition: N/A
6. [BUG FIX]
   Symptom: Configuring ATUR two remote nodes with PPPoE mode, after two PVC are connected, change the DSLAM first PVC setting with a wrong VPI/VCI. Drop the first PVC in ATUR, and dial it again, the first PVC (PPPoE) still can dial up successfully.
   Condition: N/A
7. [BUG FIX]
   Symptom: DNS resolving wrong, if the ping an address from console like "www.123.com", system resolves as 0.123.0.0.
   Condition: N/A
8. [BUG FIX]

Symptom: NetMeeting can't be connected when the connection is from WAN to LAN
Condition: N/A

9. [BUG FIX]
Symptom: Configure a MAC address and IP address in static DHCP pool, if a PC is requesting IP by DHCP but it is not in the static DHCP pool, the system will assign the IP address which is belong to static DHCP pool.
Condition: N/A

10. [FEATURE CHANGE]
Symptom: In CAC feature, configure 4 groups name "GROUP1" to "GROUP4" by default.
Condition: N/A

11. [BUG FIX]
Symptom: In AV feature, the E-Mail scanning will cause our CPU loading to reach to 100% and SMT will hang up for a few seconds.
Condition: Only happens when receiving E-Mail attachments and E-Mail AV scanning is enabled.

12. [FEATURE ENHANCE]
Symptom: Enhance CI command under "lan" to support DMZ interface, please refer to appendix – CI command list for details.
Condition: N/A

13. [FEATURE ENHANCE]
Symptom: If WLAN card is not existed, system will change product name automatically to "P662H-61".
Condition: N/A

14. [BUG FIX]
Symptom: In Web/GUI, change PPPoE pass-through from "No" to "Yes" but the function can't work immediately, but after reboot it can work fine.
Condition: N/A

15. [BUG FIX]
Symptom: The string "Enter Menu selection number:" display two times in SMT 15.1
Condition: N/A

16. [FEATURE CHANGE]
Symptom: In Web/GUI, content filter keyword blocking page if we key in capital letter then the content filter function can't work.
Condition: N/A
Solution: Use case-insensitive type instead of case-sensitive for keyword search.

17. [BUG FIX]
Symptom: When multiple stations connected to AP, once the previous one leave, the other stations also disappeared.
Condition: N/A

18. [BUG FIX]
Symptom: Use CI command "wlan association" to show association list will cause system reboot.
Condition: When 3 stations connect to device if user uses CI command "wlan association" to show association list will cause system reboot

19. [BUG FIX]

Symptom: When Cerberian server stop the service, our request to Cerberian will get "request error", at that time, uses CAC will cause system exception.
Condition: Happens only when Cerberian server stop service, and our reqest will get "request error".

20. [BUG FIX]
Symptom: In AV feature, the message "scanned by GGreat" message will appear in Email when virus detected
Condition: N/A

Modifications in V 3.40(QR.2)b5 | 08/11/2004

1. [BUG FIX]
Symptom: In Web/GUI, firewall page, the help about the customized services is updated
Condition: N/A

2. [FEATURE CHANGE]
Symptom: In Web/GUI, CAC time scheduling should be "from Midnight to 24:00PM" by default.
Condition: N/A

3. [BUG FIX]
Symptom: In Web/GUI CAC/Web category page, if user clicks "more…" to extend the categories, and then click "basic…", the Web page swapping is very slow.
Condition: N/A

4. [BUG FIX]
Symptom: Enable the CAC, and then reboot device, and then PPPoE connection can't be dialed up by packets.
Condition: N/A

5. [BUG FIX]
Symptom: In CAC feature, when time budget is used up, it should not show "Idle Time out" in small logout windows.
Condition: N/A

6. [BUG FIX]
Symptom: In content filter, the schedule function and trusted user IP don't work
Condition: N/A

7. [BUG FIX]
Symptom: WEB translation and characters of DHCP relay page has error in French language.
Condition: N/A

8. [BUG FIX]
Symptom: The French login page is Germany, and the Germany login page is French
Condition: N/A

9. [BUG FIX]
Symptom: In French windows OS, the CAC budget left timer do not run
Condition: N/A

10. [BUG FIX]

Symptom: In eWC, the DMZ page, RIP version default should be N/A
Condition: N/A

11. [BUG FIX]
Symptom: When click "Activation" and "update now" of the anti-virus, system needs to display a warning message that is to warn device needing reboot
Condition: N/A

12. [BUG FIX]
Symptom: When CAC turn on, the NAT server set (port forwarding) can't work
Condition: N/A
Solution: If CAC is turn on, and LAN server should accept incoming request from external side, if LAN PC is configured in NAT server set.

13. [BUG FIX]
Symptom: System is configured as PPPoE, after PPPoE is idle timeout, and then start IE to trigger PPPoE, but it will redirect to "enter the username and password" page. It problem also happens when the WAN link switch from dial backup to DSL link.
Condition: N/A

14. [BUG FIX]
Symptom: Using dial backup, the Web dynamic category block function of CAC do not work, and device sometimes reboot when using IE to get web page
Condition: N/A

15. [BUG FIX]
Symptom: Reset to default configuration, using Web/GUI connection wizard to setting connection to be PPPoE, after diagnostic is successful, and then starting the IE, it can not get on Internet.
Condition: N/A

16. [FEATURE ENHANCE]
Symptom: In Web/GUI Anti-Virus, the item "Default action when session overflow" supports multi language.
Condition: N/A

17. [FEATURE ENHANCE]
Symptom: In Web/GUI BW-Mgnt, the help page is updated for dynamic service H.323 and FTP
Condition: N/A

18. [FEATURE ENHANCE]
Symptom: In Web/GUI MBM Wizard, the help and multi language is supported.
Cndition: N/A

19. [FEATURE ENHANCE]
Symptom: The redirected Web pages of Zero-Configuration support multi language
Condition: N/A

20. [FEATURE ENHANCE]
Symptom: In Web/GUI, CAC page supports help and support multi language.
Condition: N/A

21. [FEATURE ENHANCE]
Symptom: In Web/GUI, firewall page, the help in customized services support multi-language
Condition: N/A

22. [BUG FIX]
    Symptom: In MBM advance, add a class and budget is over than root budget, system will save it anyway with a warning message, if you go to Wizard system will return an error also.
    Condition: N/A
23. [BUG FIX]
    Symptom: In eWC CAC feature, if admin is login-in, system will allow the PC to connect Internet but if admin is timeout from eWC, the PC still can connect Internet
    Condition: N/A
    Solution: If Admin is timeout or logout, the PC should redirect to login page.
24. [BUG FIX]
    Symptom: The throughput from LAN to WLAN is only 10Mb around when tested by Chariot tool.
    Condition: N/A
25. [FEATURE ENHANCE]
    Symptom: The AV engine is updated to version 0.13.
    Condition: N/A
26. [FEATURE ENHANCE]
    Symptom: In logs page, add alert for Anti-Virus feature, that means if virus is detected system can send an email to Admin immediately.
    Condition: N/A
27. [FEATURE ENHANCE]
    Symptom: Add a command "bm defaultClassBw" to adjust the default bandwidth of class for MBM.
    Condition: N/A
28. [BUG FIX]
    Symptom: When system receive OAM AIS packet, the data channel will be corrupted and can't be recovered until ADSL drop and connected again.
    Condition: N/A

Modifications in V 3.40(QR.2)b4 | 07/16/2004
1. [FEATURE ENHANCE]
    Symptom: Support CAC (Content Access Control) feature, please refer to external specification or appendix for details.
    Condition: N/A
2. [FEATURE ENHANCE]
    Symptom: Support Vantage CNM
    Condition: N/A
3. [BUG FIX]
    Symptom: If WAN (ISP) provides static IP address, and the VC auto-hunt is active, then the hunting will fail always.
    Condition: N/A
    Solution: If WAN (ISP) provides static IP address, the VC auto-hunt feature should be turn off in SMT4, SMT11, and connection Wizard.
4. [FEATURE CHANGE]

Symptom: The default ROM file setting of DMZ- RIP should be turned off
Condition: N/A

5. [BUG FIX]

Symptom: In Web/GUI, spelling error in firewall customized port hyperlink, and change to multi language the customized port link will display error.
Condition: N/A

6. [BUG FIX]

Symptom: In Web/GUI, NAT page, click edit details, and change NAT setting to full feature and don't apply it, but it always configured as full feature.
Condition: N/A

7. [BUG FIX]

Symptom: In Anti-Virus page, the activating and update function display successfully but the expire date is still old (1970/01/01).
Condition: N/A

8. [BUG FIX]

Symptom: Turning on Anti-Virus debug flag will cause update function failed
Condition: N/A

Modifications in V 3.40(QR.2)b3 | 07/08/2004

1. [BUG FIX]

Symptom: DMZ can't work fine when promiscuous mode is enabled.
Condition: N/A

2. [BUG FIX]

Symptom: In MBM Wizard, disable active button then go next the device will get exception
Condition: N/A

3. [BUG FIX]

Symptom: In MBM Web/GUI, change the FTP priority in advance setup, and then goes to Wizard, and the priority item doesn't go to "others".
Condition: N/A

4. [BUG FIX]

Symptom: In MBM Web/GUI, add a class (for example port 80) in advance and then goes to Wizard, then you can see the XBOX is selected.
Condition: N/A

5. [BUG FIX]

Symptom: In MBM Web/GUI, add a FTP class in advance setting and delete it then the FTP connection will get problem.
Condition: N/A

6. [FEATURE ENHANCE]

Symptom: In MBM Wizard finish page, add a button to return to main page.
Condition: N/A

7. [BUG FIX]

Symptom: Leave the device with default setting for over night and no traffics, the system will get memory leakage
Condition: The default WLAN channel is very busy, and cause Beacon failure

Solution: When WLAN restart, system should use the same memory block that is already allocated.
8. [BUG FIX]
Symptom: Change MBM bandwidth in advance summary page and then the device gets reboot.
Condition: N/A
9. [BUG FIX]
Symptom: In MBM advance setting, disable filter in class setting but doesn't work, the traffics are still limited.
Condition: N/A
10. [BUG FIX]
Symptom: The redirect page of Zero-Configuration has Java script error problem.
Condition: N/A
11. [FEATURE CHANGE]
Symptom: Change ADSL modem code version to 3.0.9.0
Condition: N/A
12. [FEATURE CHANGE]
Symptom: In MBM feature, limit the depth to be 1, it means all the class must be just under root.
Condition: N/A

Modifications in V 3.40(QR.2)b2 | 06/28/2004
1. [BUG FIX]
Symptom: In SMT4, and SMT11 the system will limit the usage when VPI is 0 and VCI is 32 or under.
Condition: N/A
2. [BUG FIX]
Symptom: Static route doesn't work fine when turning on Any-IP feature
Condition: N/A
3. [BUG FIX]
Symptom: In Web/GUI, if ping an address like "192.168.1.1 a" the device will ping it for a loop and the Web GUI can't get response and just like locked.
Condition: N/A
4. [BUG FIX]
Symptom: Multiple remote nodes are configured with different QoS (CBR/VBR/UBR) types, but the traffic transmitting rates are all the same. The schedule priority should be CBR > VBR > UBR
Condition: N/A
5. [BUG FIX]
Symptom: Any-IP doesn't work fine when Any-IP PC uses Windows XP as OS.
Condition: N/A
6. [BUG FIX]
Symptom: Enable Anti-Virus to scan HTTP packets, and access Web GUI from WAN side, some pages can't display correctly.

Condition: N/A
7. [BUG FIX]
   Symptom: Enable Anti-Virus to scan email, and system will cause exception if the
   length of filename is over then 64.
   Condition: N/A
   Solution: Extend the max length of filename to be 255 for Anti-Virus.
8. [BUG FIX]
   Symptom: In Anti-Virus, system will only notify user one time if there are many
   viruses found on different attachments.
   Condition: N/A
9. [BUG FIX]
   Symptom: If SMT4 ISP node is cleared, and doing VC auto-hunt system will get
   exception
   Condition: N/A
10. [BUG FIX]
    Symptom: Device will reply wrong packet when system is configured as ENET
    ENCAP
    Condition: Use IES-1000 as ATUC, and CPE device uses ENET ENCAP and NAT is
    turn off.
    Solution: Only receive packets that destination MAC are to device or it's broadcast/
    multicast packets

11. [FEATURE ENHANCE]
    Symptom: Support one CLI command to enable/disable SIP ALG. This value will be
    saved in ROM file
    Condition: N/A
12. [FEATURE ENHANCE]
    Symptom: Support Anti-Virus in Web logs page.
    Condition: N/A
13. [FEATURE ENHANCE]
    Symptom: Support Media Bandwidth Management Wizard, and also add dynamic
    service for FTP, and H.323 in Bandwidth Management.
    Condition: N/A
14. [FEATURE ENHANCE]
    Symptom: In Web/GUI, add Anti-Virus hyperlink in panel and first page when multi
    language is chose.
    Condition: N/A
15. [FEATURE ENHANCE]
    Symptom: In Web/GUI, support multi language help for Zero-Configuration and
    PPPoE pass-through
    Condition: N/A
16. [FEATURE ENHANCE]
    Symptom: In Web/GUI, support multi language help for Any-IP item.
    Condition: N/A
17. [FEATURE ENHANCE]
    Symptom: In Web/GUI Anti-Virus, after "activate" is pressed, device will activate

Anti-Virus service and also update expire date automatically.
Condition: N/A
18. [FEATURE CHANGE]
Symptom: VC auto-hunt feature will be turn off after VC/Encapsulation is hunted successfully.
Condition: N/A

Modifications in V 3.40(QR.2)b1 | 06/02/2004

1. [FEATURE ENHANCE]
Symptom: Support DMZ interface, and port based-VLAN
Condition: N/A
2. [FEATURE ENHANCE]
Symptom: NAT traversal for IPSec feature
Condition: N/A
3. [FEATURE ENHANCE]
Symptom: Support Packet Scanning (Anti-Virus) feature, but system only can support FTP, HTTP, E-mail application so far, please refer to external specification for details.
Condition: N/A

Modifications in V 3.40(QR.3)C0 | 06/17/2004
1. [FEATURE CHANGE]
Change to FCS version.

Modifications in V 3.40(QR.3)b1 | 06/16/2004
1. [FEATURE CHANGE]
Symptom: Wireless AP F/W 5.0.8 has bad throughput, change back to AP F/W 5.0.7
Condition: N/A

Modifications in V 3.40(QR.1)C0 | 06/02/2004
[FEATURE CHANGE]
1. Change to FCS version

Modifications in V 3.40(QR.1)b1 | 05/28/2004
1. [BUG FIX]
Symptom: TI WLAN has connection problem after a period of time (after 6 hrs to 3 days).
Condition: N/A
Solution: Add a watchdog mechanism to constantly monitor WLAN activity in AP, if anomaly is detected, the watchdog will restart WLAN TNETW1130 module to avoid AP dead.
2. [BUG FIX]
Symptom: In Web/GUI, time and date page, after successfully get time from time server, and then manually change the time and save, but the actually time displayed will reduce one hour.
Condition: Happens on Web GUI only.

3. [BUG FIX]
    Symptom: If you set right accounting server, password and enable it, and then turn
    on/off authentication server or accounting server then system possible occurs reset.
    Condition: N/A
4. [FEATURE ENHANCE]
    Symptom: VC auto-hunt can't hunt "Enet-encap" service
    Condition: Only happens on some DHCP server, that the DHCP server will check the
    MAC address in UDP layer.

5. [FEATURE ENHANCE]
    Symptom:
    1. Can't enable alert function for Firewall, IPSec, IKE in Centralized log of Web/GUI.
    2. Can't enable Centralized logs 802.1x function in centralized log of Web/GUI
    Condition: N/A
    Solution: Add Web/GUI in Centralized log page.
6. [FEATURE ENHANCE]
    Symptom: Change WLAN AP code to 5.0.8, it's for supporting power tuning function,
    the CI command is "wlan power <1-5>".
    Condition: N/A
7. [BUG FIX]
    Symptom: VBR can't work fine
    Condition: N/A

Modifications in V 3.40(QR.0)C0 | 05/7/2004
1. Change to FCS version

Modifications in V 3.40(QR.0)b6 | 05/6/2004
1. [BUG FIX]
    Symptom: In Web GUI, choose French or German language, the Web help of Any-IP is
    not ready in LAN setup and Any IP table.
    Condition: N/A
    Solution: If user chose French or German language system will still display English
    help as well.
2. [BUG FIX]
    Symptom: In Web GUI, chose French or German language, and the any IP can't be
    displayed in logs setting page.
3. [BUG FIX]
    Symptom: Configure more than 5 entries in VC hunt table, Restart device. VC auto
    hunt will start. Start the IE, and will see the "Wait..." information. Wait a moment, the
    IE will show "hunt successfully page"(error) Restart IE, page will show PPPoE
    need username and password page. Enter the user name and password and click
    "Apply". IE will re-display the setup page for username and password. SMT shows
    "dial fail, no interface available"
    Condition: N/A
    Solution: After hunting is successful, system should see the hunted encapsulation but

not the ISP remote node's encapsulation for further reference.
4. [FEATURE ENHANCE]

Symptom: VC auto-hunting doesn't support static IP address, if ISP provides static IP address, system hunting will fail and browser will get fail page

Condition: N/A

Solution:

1. In Web GUI, add a hyperlink in failed page of Zero-Configuration that's to prompt user to login Web Configurator if they have static IP address from ISP

2. In Web GUI Wizard, if the configuration is saved with static IP address, then system will turn off Zero-Configuration (VC auto-hunting) automatically, and if dynamic IP address is chose then system will turn on Zero-Configuration as well

3. In Web GUI, WAN setting page, add an item for Zero-Configuration to turn on/off.

4. In SMT4, SMT11, if user saves remote node as static IP address, system will turn off Zero-Configuration, and vice versa.

Modifications in V 3.40(QR.0)b5 | 05/3/2004

1. [BUG FIX]

Symptom: When change to France or German, the string of media bandwidth management display is EMPTY on Web GUI

Condition: N/A

2. [FEATURE ENHANCE]

Symptom: In Zero-Configuration, when DSL is down, user click home page will get Web redirect to fail page, and after connection is up, click home page again will not work, but open another IE is OK

Condition: N/A

Solution: Add a close button in successful page, this IE will be closed automatically.

3. [BUG FIX]

Symptom: Throughput is only 12M with G100

Condition: Bandwidth management will impact WLAN throughput even bandwidth management is not active.

4. [BUG FIX]

Symptom: Configure more than 5 entries in VC hunt table, Restart device. VC auto hunt will start. Start the IE, and will see the "Wait..." information. Wait a moment, the IE will show "hunt successfully page"(error) Restart IE, page will show PPPoE need username and password page. Enter the user name and password and click "Apply". IE will re-display the setup page for username and password. SMT shows "dial fail, no interface available".

Condition: N/A

5. [BUG FIX]

Symptom: When we turn on debug flag of zero configuration "wan zero debug 1" and DSL link down, system will get exception

Condition: N/A

Solution: Remove the logs in DSL down.

6. [BUG FIX]

Symptom: Using Apple computer (PowerBook G4) can't get IP address from router by DHCP, disable Any-IP can fix this problem

Condition: It's caused by Any-IP function

7. [BUG FIX]

Symptom: Configured as 802.1x Dynamic WEP key, re-authentication timer is 60sec, after 60 sec, the client can't ping out

Condition: N/A

8. [BUG FIX]

Symptom: Configured as WPA Mixed mode enabled, the client connect with 802.1x Dynamic WEP first, and then switching to WPA client will fail

Condition: N/A

9. [FEATURE ENHANCE]

Symptom: The Web help of Any-IP is ready

Condition: N/A

10. [FEATURE ENHANCE]

Symptom: Boot module is upgraded to 1.06 version, it's to support 32M DRAM

Condition: N/A

11. [FEATURE CHANGE]

Symptom: In centralized log, the schedule to send log is "when log is full".

Condition: N/A

Solution: Change the schedule of send log to be "none".

12. [BUG FIX]

Symptom: In SMT, configured as WPA-PSK, and radius server is not active, then system will return error message.

Condition: N/A

Solution: System should not return error message because WPA-PSK doesn't need Radius server.

13. [BUG FIX]

Symptom: When firewall is turn on, SIP can't pass through

Condition: N/A

Modifications in V 3.40(QR.0)b4 | 04/06/2004

1. [BUG FIX]

Symptom: ADSL is down, LAN PC keeps doing ping to WAN side, and configure Web GUI dial backup page, then system will get exception

Condition: N/A

2. [BUG FIX]

Symptom: In Web GUI, click content filter device will get exception.

Condition: Only happens with corrupted ROM file in content filter.

3. [BUG FIX]

Symptom: In Web GUI static WEP key is enabled, and configure 802.1x Dynamic WEP key, the Wireless client doesn't work, and it can't connect to AP.

Condition: N/A

4. [BUG FIX]

Symptom: Configure PC as Any-IP, when router is doing Auto-Hunting, open IE continuously, system will get exception.

Condition: N/A
5.[BUG FIX]
   Symptom: In Zero-Configuration, when DSL is down, user click home page will get
   Web redirect to fail page , and after connection is up, click home page again will not
   work, but open another IE is OK.
   Condition:N/A

Modifications in V 3.40(QR.0)b3 | 03/31/2004

1. [BUG FIX]
   Symptom: Create VPN second rule and dial it will cause exception.
   Condition: First rule is working, and create and dial second.
2. [BUG FIX]
   Symptom: Run eMule will cause crash after a period time.
   Condition: Running eMule over than one night causes exception.
3. [BUG FIX]
   Symptom: System is configured as PPPoA and use IE to get Internet will cause
   exception
   Condition: N/A
4. [BUG FIX]
   Symptom: In Web/GUI, select another language will cause exception
   Condition: N/A
5. [BUG FIX]
   Symptom: WLAN hide ESS ID function doesn't work
   Condition: N/A
6. [BUG FIX]
   Symptom: Device connected with a power on analog modem, and then power on
   device will cause PPPoE can't dial successfully any more.
   Condition: The analog modem must power on first, and then power on device.
7. [BUG FIX]
   Symptom: The dial backup feature will let analog modem dial and drop over and over,
   and can't be dialed successfully.
   Condition: In SMT2, check mechanism is "ICMP", and input ping address with an
   un-existed address.

8. [BUG FIX]
   Symptom: Use SNMP browser to set system parameter will cause watchdog timeout.
   Condition: N/A
9. [BUG FIX]
   Symptom: Configured as WPA-PSK with mix mode enabled and select RADIUS only,
   then save, re-enter into SMT 23.4 the authentication database will become "local
   database only".
   Condition: N/A
10. [BUG FIX]
   Symptom: SMT 3.5 static WEP key is enabled, and SMT 23.4 select 802.1x Dynamic

WEP key, the Wireless client doesn't work, it can't connect to AP.
Condition: N/A
11. [BUG FIX]
    Symptom: In firewall, LAN to LAN /Router interface doesn't work
    Condition: N/A
12. [BUG FIX]
    Symptom: In VPN function, if encryption method selects AES, the rule can't dial
    successfully.
    Condition: N/A
13. [BUG FIX]
    Symptom: In Web GUI, display DMZ in firewall default policy, but system doesn't
    include DMZ feature
    Condition: N/A
14. [BUG FIX]
    Symptom: In Web GUI, dial backup phone number field can't input pause character ",".
    Condition: N/A
15. [BUG FIX]
    Symptom: In Web GUI, when system asks to change password and user presses
    "apply" directly, system password will be changed to NULL.
    Condition: N/A
16. [BUG FIX]
    Symptom: In Zero-Configuration, ADSL is down, and dial backup is up, but Web GUI
    is still displayed "failed page"
    Condition: ADSL is down, but Dial backup is working
17. [FEATURE ENHANCE]
    Symptom: In Web/GUI firewall, the customized port GUI is enhanced.
    Condition: N/A
18. [FEATURE ENHANCE]
    Symptom: In Web/GUI, add Any-IP centralized logs, switch on/off in LAN page, and
    current status in maintenance.
    Condition: N/A
19. [FEATURE ENHANCE]
    Symptom: Support Bandwidth Management in Wireless LAN interface.
    Condition: N/A

Modifications in V 3.40(QR.0)b2 | 03/10/2004
1. [FEATURE ENHANCE]
    Symptom: Support dial backup
    Condition: N/A
2. [FEATURE ENHANCE]
    Symptom: Support Zero-Configuration, please refer to ES for details
    Condition:
3. [FEATURE ENHANCE]
    Symptom: Support Any IP address, please refer to ES for details
    Condition:

4. [FEATURE ENHANCE]
   Symptom: Support maximum to 20 VPN rules
   Condition: N/A
5. [BUG FIX]
   Symptom: In debug mode, type "atba5" baud rate doesn't be changed
   Condition: N/A
6. [BUG FIX]
   Symptom: In eWC/Dial backup, it needs to input at least one IP address even the check
   mode is "DSL link", but SMT doesn't
   Condition: N/A
7. [BUG FIX]
   Symptom: In Zero-Configuration feature, the Web GUI display "connection test in
   progress" page always, and won't change to PPPoE setup page.
   Condition: Only happens in PQA's Red back server

Appendix 1: Zero-Configuration and VC auto-hunting

The Zero-Configuration feature can hunt the encapsulation and VPI/VCI value, and system will automatically configure itself if the hunting result is successfully and system will response suitable Web pages if it's still hunting or failed or need user to provide information. But this feature has one assumption that system supposes the ADSL line from ISP only provides one kind of service, otherwise the hunting will get confusing and failed.

Whenever system ADSL links up system will send out some probing patterns, system will analyze the packets returned from ISP, and decide which services the ISP may provide.

System sends out a limited number of patterns which is pre-configured in a hunting pool. Each entry of hunting pool must contain the VPI, VCI, and which kinds of hunting patterns you want to send.

Whenever system send out all the probing patterns with specific VPI/VCI, system will wait for 5~10 seconds and get the response from ISP, the reply patterns from ISP will decide which kinds of ADSL services of the line will be. After that, system will save back the correct VPI, VCI and also service (encapsulation) type into profile of WAN interface.

Follows are the CI commands that system provides for VC auto-hunting

Command				Description
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

Appendix 2: Media Bandwidth Management Wizard

Media Bandwidth Management (MBM) is for user to control the QoS for different services but the configurations of MBM is too complicated to end-users. So, we develop MBM Wizard to reduce the loading of user configurations. In current design, we just support 6 services which include XBOX, VoIP(SIP), FTP, Email, eMule, WWW, and follows are the classes design details for each interfaces.

Service	Classes	Comment
XBOX	Create classes on WAN, LAN, WLAN interface which will need to bind filter on TCP port 3074, and UDP port 3074	
VoIP(SIP)	Create classes on WAN, LAN, WLAN interface which need to bind filter with dynamic ALG for SIP	
FTP	Create classes on WAN, LAN, WLAN interface which need to bind a filter with dynamic ALG for FTP.	
E-Mail	1.Create classes on WAN interface which need to bind filter with TCP port 25. 2. Create classes on LAN, WLAN interface which need to bind filter with TCP port 110.	
eMule	Create classes on WAN, LAN, WLAN interface which need to bind filter with TCP port 4662	
WWW	Create classes on LAN, WLAN interface which need to bind filter with TCP port 80.	The most of HTTP traffic is coming from downstream directions. So we only create classes in LAN, and WLAN side.

MBM has a borrow mechanism and now we use it for MBM Wizard. System only assign 10k budget (by default) for each class, for sure it's not enough for usage. System also configures the class that can borrow from parent class(root class), but if there are two or more services online at the same time, the borrow mechanism will depend on the priority that we configured in each class. That means the class with higher priority value will get the parent (root) bandwidth first.

Appendix 3: Anti-Virus (Packet Scan)

Virus is one of the most threats of internet security. They spread rapidly and cause huge damage in the world. For virus against, Ani-virus application becomes a popular resolution. But it usually works on a complicate system with many loopholes (ex, Windows series) which provide more changes for virus infection. The main medium for viruses to spread is network. If we want to defense viruses form network, the simpler and securer network devices would play a key role.

Packet Scan is good for virus against. It re-sites in common network device (Ex ADSL router) and scans each network packet fragment. It can quickly discover and destroy virus before entering user's computer.

In current design, we support FTP, HTP, SMTP, and POP3 network scanning.

Feature

1   Support downstream packets scanning for FTP, HTP, and POP3 network protocol.
2   Support upstream packets scanning for SMTP network protocol.
3   Support automatic and manual online update for scanning engine form GGreat server.
4   Providing centralize log and alert while virus detection.
5   Support Windows Messages for virus notification. (Win98, WinME, Win2K, WinXp)

Limitation

1   Each network protocol FTP, HTP, POP3 and SMTP must use standard port number, FTP is 21, HTP is 80, POP3 is 110 and SMTP is 25.
2   Compression file scanning doesn't support (Ex ZIP, RAR).
3   Doesn't support multi-session download (flashGet).
4   The maximum session number is 300 that can be created simultaneous
5   There exists the extension file name limitation.
    5.1   Available extension file name is following.
          mhtm,mhtml,asp,bat,com,class,cpl,cmd,doc,dot, dll, drv, exe, eml, htm, html, hta, htt, hlp, js, jse, jsp, lnk, nws, obj, ocx, pif, ppt, php, rtf, rar, scr, shtml, swf, vbs, vba, vbe, vxd, xml, xls, xla, wml, zip
6   Support following virus types detection.

The representative virus in recent four years:			
X1 _Virus	LENA_Virus	SW Flash_Virus	Fable_Worm
NOTEPAD TROJAN	JASEMIN_Virus	Myparty_Worm	Cult_Worm
VIRUS	DESIRE_Virus	MYSYS_Worm	Spybot_Worm
ILOVEYOU_Virus	SEEKER.JS	LOTTO_Worm	Kindal_Worm
MTX_Virus	DELBIOS.INF	PATCH_Worm	Fizzer_Worm
CIH Killer 1.1	PHP.Alf_Virus	SHARP_Worm	Kwbot_Worm
WEIRD_Virus	PHAGE.PALM_Virus	GIBE_Worm	Electron_Worm
Plage 2000_Virus	CODEGREEN_Virus	Cervivec_Worm	Hawawi_Worm
WORD 97 MACRO	ANTHRAX_Virus	Valentin_Worm	Palyh_Worm
VIRUS	PET-TICK_Virus	MyLife_Worm	Oror_Worm
EXCEL 97 MACRO	Winmem_Html	Yarner_Worm	GPIX_Virus
VIRUS	ADDY.PL_Virus	IFRAME-Mail_Worm	Venzu_Worm
NAVIDAD_Virus	DEAD0H_Virus	BirdSpy_Worm	Sdbot_Worm
CREATIVE_Virus	Invictus infector_Virus	Fix2001_Worm	Mumu_Worm
JOKE-GHOST_Virus	TRION_Virus	Perrun_Worm	Gaobot_Worm
Ghost _Virus	EMBRION_Virus	Simile_W32	Lolol_Worm

Hdfill32_Virus	TROOD_Virus	GAY_Worm	Sodabot_Worm
EMANUEL_Virus	SABIA_Virus	Runouce_Worm	Webauto_Worm
Cabanas PE_Virus	BINLADEN_Virus	Msvxd_Worm	Redist_Worm
HYBRIS_Virus	LAZYVX_Virus	Yourpassword_Worm	Opax_Worm
Demiurg_Virus	REDALART_Virus	Startme_Html	Lorraine_Worm
Blebla_Virus	Unknown VBS Virus	PWsteal Server	Valla_Virus
Kenston PE_Virus	JAVAKILLER_Virus	Scrsvr_Worm	Klexe_Worm
Dark Akuma_Virus	SPACES_Virus	Bugbear_Worm	Fortnight_Worm
Windows Bomb_Virus	WINSTART_BAT_Virus	Redlof_Worm	Nebiwo_Worm
Back Door Setup_Virus	SYS602_BAT_Virus	Rawtocash_Worm	Deloder_Worm
Bymer Wininit_Virus	PENFOLD_BAT_Virus	Henpeck_Worm	Mimail_Worm
Etymo-Crypt.1308	IKX_Virus	Brasil_Worm	Msblast_Worm
VBS.ANNA_Virus	Halen_Virus	HAI_Worm	Welchi_Worm
Explorer Inf PE	DION_Virus	Bymer Msi211	Randex_Worm
Cih v1.2x_Virus	Evil_Virus	Pate_Virus	Swen_Worm
Winux PE_ELF virus	MARKJ_Virus	Bride_Worm	Mapson_Worm
Bad Transmission_Virus	ALIZEE_Virus	Cblade_Worm	Trojan_Worm
CfgWiz32 Virus	LARA.THEME_Virus	Iraq_Worm	Qint_Worm
SIRCAM_W32_Virus	NACH_Virus	DUPATOR	Dozer_Worm
EICAR _Virus	LASTWORLD_Virus	Setver_Worm	Inmotecd_Worm
APOST_Virus	QUEST_Virus	WinHaelp_Worm	Galil_Worm
MYPICS_Virus	XANAX_Virus	Recovery_Worm	MSN_Worm
1NFO.A RTF_Virus	PARROT_Virus	Sobig_Worm	Sober_Worm
DOGGIE_Virus	CICHOSZ_Virus	Lirva_Worm	Beagle_Worm
INVALID_Virus	ALMA_Virus	Cupid_Worm	Mydoom_Worm
KETAMINE_Virus	EXPL0RER_Virus	Supova_Worm	DeadHat_Worm
STREAM_Virus	KRIZ_Virus	Handy_Worm	Netsky_Worm
VAMPIRE_Virus	XPUPDATE_BAT_Virus	Lovegate_Worm	Femot_Worm
SEX URL_Virus	BACKDOOR_WORM_Virus	Zoek_Worm	Flat_Worm
TRINOO_Virus	BYTEBAND_Virus	Holar_Worm	Netav_Worm
NIMDA_Virus	VBS_Engine_Virus	Kaiten_Virus	Serot_Worm
SUBSEVEN_Virus	Pentagone_Worm	WHOG_Virus	Elerad_Virus
WinCAW_Virus	Weird_Trojan	Sachiel_Worm	Paroc_Virus
ROACH_Virus	WINL0G0N_WORM	Ganda_Worm	Trilissa_Virus
UNCENSORED_Virus	Scherzo_Worm	Sysupd_Worm	Sasser_Worm
INTA_Virus	GOP_Worm	Scchost_Worm	Explet_mm
ARIS_Virus	Dotnet_Virus	Ultimax_Worm	Xabot_Worm
BUBICA_Virus	Happy Time	Lovelorn_Worm	Protoride_Worm
BUMDOC_Virus	Klez Series_Virus	Flood_Worm	Erkez_Worm
CEREBRUS_Virus			
DOB_Virus			
GUNMAN_Virus			
Virus infect through by special port:			
Iraq_Worm—invade through (SMB Server message service) port 445 Msblast_Worm-- Invade through TCP Port 135 and open TCP port 4444 then open UDP port 69 Welchi_Worm　　　--Invade through TCP Port 135. Fizzer _Worm　　　--Open 81 Port to be HTTP Server and open 2018 to 2021 Port to be backdoor. Sasser _Worm—The vulnerability of LSASS in port 445. Bobax _Worm-- The vulnerability of LSASS in port 445. Korgo_Worm-- The vulnerability of LSASS in port 445. CODERED_IIS CodeBlue_IIS			

Appendix 3: Content Access Control (CAC)

Content Access Control (CAC) provides ability to manage each user host for internet access. Through CAC, network administrator can arrange the time schedule of internet access, set up which network service can be used and manage which web site can be browsed for each group user. There are 4 groups and 32 user profiles provided in this system currently, each group provides different internet access rule, there are 3 types of parameters to define the access rule. Time schedule type of parameters that specifies the time interval for internet access, Service type of parameters that specifies which internet services can be provided, such as Telnet, FTP, and HTTP and so on. Web browsing type of parameters that restricts access some categories of web sit. In each user profile, there are 3 parameters, the first is user name, the second is password and the third is group index, each user who wants to access internet must login to device successfully first by entering user name and password through web browser and the group index specifies which group profile is used to define internet access rule

Feature

1   Provide 4 groups to define 4 different rules for internet access. Each group contains 3 types of parameter to define the internet access rule.
  1.1   Time Schedule: To arrange the internet access time by specifying time interval and time budget.
  1.2   Service: Provide the ability to restrict some specific internet service usage.
  1.3   Web Browsing: To restricts access some types of web sit. Provide two methord.
    1.3.1 Pre-defined Web Content Categories: User can define which web categories should be blocked. To classify each web URL, device connects to Cerberian's server that will provide the category of this web URL.
    1.3.2 Keyword blocking: User can create a set of keyword. Device will search of those keywords in every web URL. If match, then block is web browsing.
2   Provide 32 user profile
3   Provide Centralize log.

Limitation
1   Content filter will be disabled while CAC enable.
2   Any user host that belongs to NAT server set can access internet at will. CAC doesn't take effect for this host.
3   Pre-defined Web Content Categories will be disabled automatically if the Cerberian's server connection failure -"request error".

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
	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>	<channel name>=enet0,sdsl00, fr0

				[none|incoming|outgoing|bothway]	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
	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	
cac		enable	[on|off]	Cac enable switch	
		timeout	[value]	Content Access Control idle timeout value	
		debug	[on|off]	Cac debug switch	
		licence	readkeys	Display readkeys	
			writekeys	writekeys [AK][SKU]	
		user	load [index]	Load some a user	
			save	Save user setting	
			disp	Display user setting	
			Active [on|off]	Let this user active	
			username <name>	Set user name of some a index	
			password <password>	Set password for some a user	
			group <category>	Set user is belong to some a group <1-4>	
			clear <index>	Clear some a user setting by index	
		online	status	Display online user info	
			add <usrename> <password> <ipaddr>	Add a user with name ,password and local ip address	
			del <ipaddr>	Delete by ipaddr	
		group	load <age category>	Load some a group by age category	
			save	Save some a group	
			name <name>	Set the group name	
			QueryURL <url> <server|localcache|keyword>	Query from server or local cache or keyword if the RUL is block or forward	
			time display	Display the time schedule	
			time timebudget <weekday 0-6> <timebudget(min)>	Set time budget	
			time unlimit <weekday0-6> <on|off>	Unlimit switch	
			time starthour <weekday 0-6> <start hour>	Set start hour	
			time endhour <weekday 0-6> <end hour>	Set end hour	
			keyword enable [on|off]	Keyword enable switch	
			keyword display	Display the keyword	
			keyword add <keyword>	Add a keyword	
			keyword del <keyword>	Delete a keyword	
			keyword clearall	Delete all keywords	
			webControl enable [on|off]	Web control enable switch	
			webControl display	Display the web control	
			webControl logAndBlock <log|block|both>	Set the log and block switch	
			webControl category :[block/forward][(1~55)/all]	Set web control category	
			webControl cache	Display the cache of web control	
		budget	display [index]	Display the budget	
			Load	Load the budget	
			clear	Clear the settings	
			Save <index>	Save settings.	
			updateTimer [value]	Set update time	

		exemptHost	Load <index>	Load some a exempt host	
			save	Save the exempt host settings	
			display	Display the exempt host settings	
			website	Set backdoor web site	

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

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

					Open ADSL line with specific standard
		opencmd			Open ADSL line with specific standard
			Glite		
			T1.413		
			Gdmt		
			multimode		
		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
		targetnoise	[value]		Adjust target noise offset
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

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.
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   <u>Home</u>

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
	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

PPP Related Command

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

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

Configuration Related Command

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-incomplete <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 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
		cnt			
			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

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SMT Related command

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
	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|4] 1: Select main LAN Interface 2: Select IP Alias 1 3: Select IP Alias 2 4.DMZ	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 renewaltime [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), and for consequent commands reference, if index = 1 means it's ISP node	Menu 11.1
	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|pppoa|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 pcr [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] [type] [local start IP] [local end IP] [global start IP] [global end IP] [server set #]	Set NAT address mapping rule. If the "type" is not "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	Menu 15.1
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 srcport [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 = checknext | forward | drop]	Set the action for not match	Menu 21 filter sets
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 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	