ZyXEL Prestige 650R-13

V3.40(FU.0)   Release Note (Internal usage only)

Date： June 17, 2002

This document describes the features in the ZyXEL Prestige 650R-13 product for its V3.40(FU.0) release. This formal version is for Alcatel ADSL AnnexB chip. The new feature section describes the newly added feature with this release.

Version Numbers：
- Bootbase Version: V1.04
- RAS Version: V3.40(FU.0)

Supported Platform

ZyXEL Prestige firmware V3.40(FU.0) supports for P650R-13.

Version:

BootBase Version: V1.04 | 5/13/2002 18:55:09
ZyNOS Version: V3.40(FU.0) | 6/17/2002   11:36:48

Notes:

1. The Prestige 650R-13 is a compact ADSL over ISDN router that can be used for small-office or home-user and allows a small LAN to access the Internet through ADSL connection over the existing copper line.

   - Support ITU standard (G.992.1 AnnexB; G.997.1).
   - Auto-sensing 10/100M Ethernet interface
   - support Multi-protocol over AAL5 (RFC1483) (RFC2684)
   - Support PPP over ATM AAL5 (RFC 2364)
   - Support PPP over Ethernet (RFC2516)
   - Support up to 8 PVCs
   - IP routing and bridging modes
   - Multi-NAT for Multi Global IP address Internet Access
   - DHCP Client, Sever and Relay
   - RIP I/ RIP II supported.
   - IGMP
   - IP alias
   - IP Policy Routing
   - ICMP Router Discovery
   - TFTP/FTP server for firmware upgrade
   - F4/F5 OAM
   - Dynamic DNS
   - Call Scheduling for PPPoE
   - Support Web Configurator

2. For PPPoE, system must turn off the PPP VJ header compression. The command is as following: "ppp ipcp compress off", this command is already added into "autoexec.net"

Modification

1. *From 3.40(FU.0)b11 to 3.40(FU.0) …………..(06/17/2002)*
   - Change name for formal release.

2. *From 3.40(FU.0)b10 to 3.40(FU.0)b11……….(06/12/2002)*
   - Fix ppp channel setting serval times by changing static and dynamic would cause system could not ping out.
   - Fix oam F4 / F5 loopback test would be failure when debug flag is turned off.
   - Add hidden protection for sptgen.

3. *From 3.40(FU.0)b9 to 3.40(FU.0)b10…………(06/07/2002)*
   - Fix the ip checksum error if the options existed in ip header.
   - Fix the system hangup if the icmp echo requtest pass through our router in which the port translation setting in serverSet Table was from 1 to 2000.
   - Fix the system hangup due to press left button in smt submenu 24.2/24.3/24.4/12/12.1/12.3.
   - Fix the CPU Bus timeout if OAM packet pass through our router in which there is no such VC.
   - Fix the channel drop fail and ring up fail problem at smt4/ smt11 (connection magnment)
   - Fix the security webpage filter link list problem.

4. *From 3.40(FU.0)b8 to 3.40(FU.0)b9 …………(05/31/2002)*
   - Fix firmware upgrade by console sometimes would cause system un-boot.
   - Fix ppp dial fail if setting by sptgen which the encap changed from 1483 or enet-encap.
   - Fix the filter setting in IpAlias at smt3.2.1 is not NULL by default.
   - Modify the web Help message about wizard and security.
   - Modify the process for NAT error setting.

5. *From 3.40(FU.0)b7 to 3.40(FU.0)b8 …………(05/28/2002)*
   - Change Alcatel modem code to 2.7.38
   - Add ci-command "sys spt hidden <node>"
   - Add at-command "ATDC"
   - Fix the enet-encap cound not bind dynamic wanip if DSL line is dropped and linked again.
   - Fix the exception if NetBIOS (port=138) enter wan side and NAT / SUA is turned on.
   - Fix the channel would close and open again if there is no change at NAT webpage.
   - Enlarge the adsl modem code download timing from 100ms to 200ms (For HTP)
   - Fix the username would be "?" if we enter smt11.3 and return smt11.1

6. *From 3.40(FU.0)b6 to 3.40(FU.0)b7 …………(05/16/2002)*
   - Merge the code with P650H / P650HW
   - Change Bootbase to 1.04 version
   - Use the Rom_controller when engineer debug flag is close to avoid the NULL pointer exception problem.
   - Add "pragma pack(1) / pragma pack() " bewteen PACKED definition.
   - Change ethernet driver to follow P650H.
   - Merge SNMP trap v2
   - Merge the new exception handler.
   - Fix the DSL Active light is sparkling when no traffic pass through.
   - Fix the exception when typing "sys iface disp wanif0 4" (after wanif0 had created)
   - Fix the exception when new mac address pass through after the following setting steps: bridge is not set at smt1 and change bridge to router at smt11
   - Fix the exception if changing the encap from PPP to 1483
   - Fix the PPP always idle if packet trigger before DSL line is up.
   - Fix the default setting is lost when we clear the remoteNode by typing space at smt.

7. *From 3.40(FU.0)b5 to 3.40(FU.0)b6 …………(04/29/2002)*
   - Add sptgen feature.

2

- Modify the default DHCP pool from 6 to 32.
- Add the null-pointer protection (avoid exception) and exception handler.

8. *From 3.40(FU.0)b4 to 3.40(FU.0)b5 …………(04/12/2002)*
   - Change the interrupt priority.
   - Fix the ADSL LED would not let off when we reset adsl line by smt or web.
     (SPR: CPHC200204082335)
   - Fix the restore default rom button would cause the security level change to 3.
     (SPR: CPHC200204082337)
   - Fix the loss of the web help pags. **(SPR: CPHC200204082331 ~ 2334, 2320,2321)**
   - Add vendor and HwVerRange check.
   - Add 2-bytes check Model
   - Modify NatSessions from 256 to 1024 at mmct table.
   - Add model check mechanism when upgrading rasCode by FTP / TFTP / Console .
     (key must be turn off)
   - Fix the err_code=0x0009 problem when we press the NULL help WebPages.
     (SPR: CPHC200204082336)
   - Add the separated selection for Web security page.

9. *From 3.40(FU.0)b3 to 3.40(FU.0)b4 …………(04/01/2002)*
   - Fix the TimeServer would cause the system reset. **(SPR: CPHC200203262269)**
   - Fix the TimeServer couldn't upgrade after the system reset. **(SPR: CPHC200203282295)**
   - Fix the loss of the Web mainmenu's help. **(SPR: CPHC200203262270)**
   - Enlarge the length of the PPPoE username to 45 by Web. **(SPR:CPHC200203262272)**
   - Add Snmp protection for incoorect content attack.
   - Fix the OH-phone call couldn't work.
   - Add " wan adsl dumplog" for Alcatel chipset.
   - Protect the romfile to avoid the write flash error if spRead() is called after spSave()
     immediately.

10. *From 3.40(FU.0)b2 to 3.40(FU.0)b3…………..(03/20/2002)*
    - Add RemoteNode magnment
    - Add PPP packet trigger   (Warning: This version hadn't supported PPP BCP mode)
    - Add Call filter to supprot PPP / PPPoE at smt11.5
    - Add ESP pass through from the server side.
    - Add protection for MBS setting at smt4 / smt11.6 (MBS range: 0~65535)
    - Add protection for idle-timeout at smt4 / smt11.1(Idle Timeout range: 0~65535)
    - Add extended username to support 45 characters
    - Enlarge the default queue number
    - Fix the username and password are " "(space) when the encap became from 1483 to PPPoE
      (SPR: CPHC200202252162)
    - Modify the name of smt submenu3 (the same as smt main menu) and submenu3.2
    - Change the default DHCP ip pool number to 32
    - Upgrade the romPager from 3.0 to 4.0 for new Web usage. **(SPR: CPHC200203282298)**
    - Add the Nat webpage / firmware upgrade/ default rom file at Advance setup and
      Matenment.
    - Fix the DHCP web-page link fail
      (SPR: CPHC200202252163)   (SPR: CPHC200203282303)
    - Fix the reset button failure at Web configuration/Advanced Setup/ Lan
      (SPR:CPHC200202252164)
    - Remove the "NeedSave" characters when we save smt
      (SPR: CPHC200202252156)
    - Open the "ADJUSTTIME" flag at switch.h to solve the time couldn't be get when P650
      restart again.
    - Add dyingGasp Recovery mechanism.

- Change ADSL multi-mode to Normal Open mode. And open the "wan adsl opencmd".
- Fix the ping failure when the packet size larger than 1473 from the wan side (PPPoE encap)

11. From 3.40(FU.0)b1 to 3.40(FU.0)b2 …………(02/05/2002)
- Add DDNS Web. **(SPR: CPHC200203282302)**
- Fix the display about the my wanip at smt24.1 when the length of the ip string is became short from long.
- Fix the Reset button would casue exception after loading default rom-file.

12. Create 3.40(FU.0)b1 …………….…………...(01/31/2002)
- Add the DDNS setting by smt (submenu 1, and 1-1).
- Modify showing APIs about the ADSL driver at smt / web / ci-command.
- Change modem code to 2.7.35 for AnnexB
- Modify the hwsar ci-command the same as before.
- Fix the failure when the user press the ATM counter and OAM Loopback button at web.
- Fix the subnet mask always display 0.0.0.0 at web status page
- Fix the range of NAT server mapping set from 2 to 10 at Web
- Fix the false alarm if the user hadn't change any setting in NAT server set menu at Web.
- Fix the router would hang-up if we press any key when the router download modem code.
- Change the rom-file setting.
- Fix the non-initializing value for static variable.

[Bug level – 59, except 57, 55, 54, 50, 49, 33, 29]

Known Issue
1. Mbuf would be free twice and this would cause the router restart.
Reproduce: (method 1) ci-command and packet transport at the same time (about 4~12 hours)
(method 2) transport heavy traffic at Lan

Manufactory Data in Bootbase

ZyNOS Version	: V3.40(FU.0) | 6/17/2002 11:36:48
Bootbase Version	: V1.04 | 5/13/2002 18:55:09
Vendor Name	: ZyXEL Communications Corp.
Product Model	: Prestige 650
ZyNOS Code Model	: P650 ATU-R
HTP Code Model	: HTP_P650 V 0.01
ZyNOS ROM address	: bfc08000
System Type	: 6
MAC Address	: 00A0C5012345
Default Country Code	: FF
Boot Module Debug Flag	: 01
RomFile Version	: xx
RomFile Checksum	: f005
ZyNOS Checksum	: f77a
SNMP MIB level & OID	: 0601020304050607080910111213141516171819 20
Main Feature Bits	: 86
Other Feature Bits	:

```
        8E  00  00  00  00  00  00  00-00  00  00  00  00  00  00  00
        00  00  00  00  00  00  00  00-00  40  13  00  00  00
```

Default Setting Rom-file. OBM version………340FU0C0.rom

- ```
  Menu 1 – General Setup
  ```

```
            Menu 1 – General Setup
```

```
          System Name = ?
          Location=
          Contact Person's Name=
          Domain Nam=
          Edit Dynamic DNS=No

          Router IP = Yes
          Bridge= No




          Press ENTER to Confirm or ESC to Cancel:
```

- Menu 1.1 – Configure Dynamic DNS

```
             Menu 1 – Configure Dynamic DNS

      System Provider = WWW.DynDNS.ORG
      Active= Yes
      Host=
      EMAIL=
      USER=
      Password= ********
      Enable Wildcard= No




      Press ENTER to Confirm or ESC to Cancel:
```

- Menu 3.1 – General Ethernet Setup

```
              Menu 3.1 – LAN Port Filter Setup

      Input Filter Sets:
          protocol filters=
           device filters=
      Output Filter Sets:
          protocol filters=
           device filters=




      Press ENTER to Confirm or ESC to Cancel:
```

- Menu 3.2 – TCP/IP and DHCP Ethernet Setup

```
                 Menu 3.2 – TCP/IP and DHCP Setup

          DHCP Setup
           DHCP= Server
           Client IP Pool Starting Address = 192.168.1.33
           Size of Client IP Pool = 32
           Primary DNS Server = 0.0.0.0
           Secondary DNS Server = 0.0.0.0
           Remote DHCP Server= N/A
```

```
               TCP/IP Setup:
                 IP Address=192.168.1.1
                 IP Subnet Mask=255.255.255.0
                 RIP Direction= Both
                    Version= RIP-2B
                 Multicast= None
                 IP Policies=
                 Edit IP Alias= No




           Press ENTER to Confirm or ESC to Cancel:
```

- Menu 4 - Internet Access Setup

```
                   Menu 4 - Internet Access Setup

              ISP's Name= ChangeMe
              Encapsulation= ENET Encap
              Multiplexing= LLC-based
              VPI #= 8
              VCI #= 35
              ATM QoS Type= UBR
                 Peak Cell Rate (PCR)= 0
                 Sustain Cell Rate (SCR)= 0
                 Maximum Burst Size (MBS)= 0
              My Login= N/A
              My Password= N/A
              ENET ENCAP Gateway= N/A
              IP Address Assignment= Dynamic
                 IP Address= N/A
              Network Address Translation= SUA Only
                 Address Mapping Set= N/A




              Press ENTER to Confirm or ESC to Cancel:
```

- Menu 11 - Remote Node Setup

```
                  Menu 11 - Remote Node Setup

              1. ChangeMe (ISP,SUA)
              2. _____
              3. _____
              4. _____
              5. _____
              6. _____
              7. _____
              8. _____

               Enter Node # to Edit:
```

- Menu 11.1 - Remote Node Profile

```
```

```
                     Menu 11.1 - Remote Node Profile

     Rem Node Name= ChangeMe              Router= IP
     Active= Yes                          Bridge= No

     Encapsulation= ENET ENCAP            Edit IP/Bridge= No
     Multiplexing= LLC-based²             Edit ATM Options= No
     Service Name= N/A
     Incoming:                            Telco Option:
       Rem Login= N/A                         Allocated Budget(min)= N/A
       Rem Password= N/A                      Period(hr)= N/A
     Outgoing:                                Schedule Sets= N/A
       My Login= N/A                          Nailed-Up Connection= N/A
       My Password= N/A                   Session Options:
       Authen= N/A                            Edit Filter Sets= No
                                              Idle Timeout(sec)= N/A


               Press ENTER to Confirm or ESC to Cancel:
```

- Menu 11.3 - Remote Node Network Layer Options

```
                    Menu 11.3 – Remote Node Network Layer Options

     IP Options:                          Bridge Options:
       IP Address Assignment = Dynamic      Ethernet Addr Timeout(min)= N/A
       Rem IP Addr = 0.0.0.0
       Rem Subnet Mask= 0.0.0.0
       My WAN Addr= N/A
       NAT= SUA Only
         Address Mapping Set= N/A
       Metric= 2
       Private= No
       RIP Direction= Both
         Version= RIP-2B
       Multicast= None
       IP Policies=




               Press ENTER to Confirm or ESC to Cancel:
```

- Menu 11.6 - Remote Node ATM Layer Options

```
                Menu 11.6 – Remote Node ATM Layer Options
            VPI/VCI (LLC-Multiplexing or PPP-Encapsulation)

                    VPI #= 8
                    VCI #= 35
                    ATM QoS Type= UBR
                    Peak Cell Rate (PCR)= 0
                    Sustain Cell Rate (SCR)= 0
                    Maximum Burst Size (MBS)= 0




               Press ENTER to Confirm or ESC to Cancel:
```

- Menu 11.5 - Remote Node Filter

```
                    Menu 11.5 – Remote Node Filter
```

```
                    Input Filter Sets:
                     protocol filters= 12, 11
                         device filters=
                    Output Filter Sets:
                     protocol filters=
                         device filters=




                    Press ENTER to Confirm or ESC to Cancel:
```

- Menu 21 – Filter Set Configuration

```
                    Menu 21 - Filter Set Configuration

       Filter                              Filter
       Set #       Comments                Set #       Comments
       ------  -----------------           ------  -----------------
         1     NetBIOS_WAN                    7     _____
         2     NetBIOS_LAN                    8     _____
         3     TELNET_WAN                     9     _____
         4     PPPoE                         10     _____
         5     FTP_WAN                       11     WebSet1
         6     _____              12     WebSet2


                    Enter Filter Set Number to Configure= 0

                    Edit Comments= N/A

                    Press ENTER to Confirm or ESC to Cancel:
```

- Menu 21.1 – Filter Rules Summary

```
                    Menu 21.1 - Filter Rules Summary

   # A Type                Filter Rules                              M m n
   - - ---- ------------------------------------------------------------ - -
   1 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=137                     N D N
   2 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=138                     N D N
   3 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=139                     N D N
   4 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=137                    N D N
   5 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=138                    N D N
   6 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=139                    N D F

                 Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.2 – Filter Rules Summary

```
                    Menu 21.2 - Filter Rules Summary

   # A Type                Filter Rules                              M m n
   - - ---- ------------------------------------------------------------ - -
   1 Y IP   Pr=17, SA=0.0.0.0, SP=137, DA=0.0.0.0, DP=53             N D F
   2 N
   3 N
   4 N
```

```
 5 N
 6 N

                   Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.3 – Filter Rules Summary

```
                   Menu 21.3 - Filter Rules Summary

 # A Type                   Filter Rules                        M m n
 - - ---- ------------------------------------------------------------ - -
 1 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=23               N D F
 2 N
 3 N
 4 N
 5 N
 6 N




                   Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.4 – Filter Rules Summary

```
                   Menu 21.4 - Filter Rules Summary

 # A Type                   Filter Rules                        M m n
 - - ---- ------------------------------------------------------------ - -
 1 Y Gen  Off=12, Len=2, Mask=ffff, Value=8863                N F N
 2 Y Gen  Off=12, Len=2, Mask=ffff, Value=8864                N F D
 3 N
 4 N
 5 N
 6 N



                   Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.5 – Filter Rules Summary

```
                   Menu 21.5 - Filter Rules Summary

 # A Type                   Filter Rules                        M m n
 - - ---- ------------------------------------------------------------ - -
 1 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=21               N D F
 2 N
 3 N
 4 N
 5 N
 6 N


```

9

```
                    Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.12 – Filter Rules Summary

```
                      Menu 21.11 - Filter Rules Summary

  # A Type                 Filter Rules                          M m n
  - - ---- ---------------------------------------------------------- - -
  1 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=161                  N D N
  2 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=162                  N D F
  3 N
  4 N
  5 N
  6 N


                    Enter Filter Rule Number (1-6) to Configure:
```

- Menu 21.12 – Filter Rules Summary

```
                      Menu 21.12 - Filter Rules Summary

  # A Type                 Filter Rules                          M m n
  - - ---- ---------------------------------------------------------- - -
  1 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=23                    N D N
  2 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=21                    N D N
  3 Y IP   Pr=17, SA=0.0.0.0, DA=0.0.0.0, DP=69                   N D N
  4 Y IP   Pr=6, SA=0.0.0.0, DA=0.0.0.0, DP=80                    N D N
  5 N
  6 N

                    Enter Filter Rule Number (1-6) to Configure:
```

autoexec.net setting
```
sys errctl 0
sys trcl level 5
sys trcl type 1180
sys trcp cr 64 96
sys trcl sw off
sys trcp sw off
ip tcp mss 512
ip tcp limit 2
ip tcp irtt 65000
ip tcp window 2
ip tcp ceiling 6000
ip rip activate
ip rip merge on
ip icmp discovery enif0 off
ppp ipcp compress off
sys wdog sw on
sys quick enable
```

How To Upgrade Firmware

First download the file "340FU0.bin" (Prestige 650R-13) from ZyXEL anonymous FTP server (ftp.zyxel.com), then you can choose SMT to do the upgrade.

1. Upgrade the firmware by console or FTP

(Method 1) Using SMT：

You need to connect Prestige 650R-13 to your PC with an RS-232 cable and execute the terminal emulation software on your PC.   Then follow the following procedure to upgrade your firmware.

Enter SMT menu 24.7.1 and follow the instruction to execute the firmware upload procedure.

```
        Menu 24.7.1 - System Maintenance - Upload System Firmware

        To upload system firmware:
        1. Enter "y" at the prompt below to go into debug mode.
        2. Enter "atur" after "Enter Debug Mode" message.
        3. Wait for "Starting XMODEM upload" message before activating
            Xmodem upload on your terminal.
        4. After successful firmware upload, enter "atgo" to restart the
            system.

        Warning: Proceeding with the upload will erase the current system
        firmware.

                    Do You Wish To Proceed? (Y/N)
```

(Method 2) Using FTP：

You need to connect Prestige 650R-13 to your PC with an ethernet line and execute the FTP software on your PC. Note that your PC and P650R-13 must be in the same subnet. After setting the FTP ipaddress and password, you could login the FTP Server at P650R-13. And then you could upload the firmware.

2. After restarting your Prestige, it will show the following information of running firmware.

```
Bootbase Version: V1.04 | 5/13/2002 18:55:09
RAM: Size = 8192 Kbytes
FLASH: AMD 16M *1
```

```
ZyNOS Version: V3.40(FU.0) | 6/17/2002   11:36:48

Press any key to enter debug mode within 3 seconds.
........................
```

Or in SMT menu 24.2.1, you should be able to see a screen as below.

```
        Menu 24.2.1 - System Maintenance - Information

            Name:
            Routing: IP
            RAS S/W Version: V3.40(FU.0) | 6/17/2002
            ADSL Chipset Vendor: Alcatel, Version 2.7.38
            Standard: Normal Open

            LAN
               Ethernet Address: 00:a0:c5:01:23:45
               IP Address: 192.168.1.1
               IP Mask: 255.255.255.0
               DHCP: Server

                 Press ESC or RETURN to Exit:
```

Please make sure that you are using RAS Version: V3.40(FU.0) firmware in your Prestige 650R-13.
Otherwise, do the firmware upgrade procedure before operation.