ZyXEL Prestige 1600

ZyNOS v3.22(X.00) | 04/12/2001

Release Notes & Manual Supplement

Date: April 12, 2001

Congratulations on your purchase of P1600 Access Concentrator. The Prestige 1600 is a scalable DSL, delivering networking services at multiple selectable speeds from 64Kbps and 6Mbps. It can be deployed at high rise buildings, Telcos, ISPs and System Integrators with various configurations.

Equipped with one 10/100M Ethernet port, three Network Module Slots, and one optional WAN interface and one four-ports 10M/100M LAN switch card, the architecture of the Prestige 1600 allows network modules of different generations to co-exist in the same chassis and to inter-operate with the same system module.

IDSL, SDSL solutions are available now.

Previous Release version 2.50 and 3.20 can only support IDSL Network Module, please update your FW to 3.22(X.00) to support SDSL Network Module.

This document describes the features in the ZyXEL Prestige 1600 product for its 3.22(X.00) release. The known problem list section describes problems currently under investigation and enhancement during our internal test.

Support Platforms:

ZyXEL Prestige firmware V3.22(X.00) supports P1600 Master hardware platforms. It's also compatible with IDSL Network Module at previous 3.20(X.00) release and SDSL Network Module at previous 3.21(X.00) release.

Version:

ZyNOS F/W Version: V3.22(X.00) | 4/12/2001 14:17:52
BootBase: V1.08 | 4/12/2001 14:17:52

New added Features:

1 SDSL Line performance report.
2. RIP support at DSL interface.
3. SDSL AutoBaud Feature.

Features Details:

Line Performance Report:

For SDSL NM the following Line Performance information can be get from menu 24.8 CI command "xdsl st <xdsl channel name>", The command is for trouble shooting, FAQ will give a further explanation.

For example,
Ras>xdsl st xdsl00

```
ras> xdsl st xdsl00
SDSL FW Version N2.2
SDSL FW date 12-13-2000 17:15:00
DSLStatus          2
BitpumpStatus      0
txError            0      rxOverError           0
rxCrcErr           0      rxDrop                0
rxCnt              0      txCnt                 1
Near Noise Margin  14     dB
Near Attenuation   30     dB
Far Attenuation    20     dB
```

SDSL AutoBaud Feature:
What is AutoBaud?

AutoBaud consists of a set of device drivers which enhances the connection process for DSL transceivers

What are the Benefits of AutoBaud?

1. Speeds up connection set-up time by automatically determining the maximum data rate that can be supported on a specific loop…this eliminates much of the circuit provisioning that would otherwise be required
1. Easy configuration of SDSL data rates from 144 to 2320 kbps.

How to use P1600 SDSL AutoBaud:

2

```
                    Menu 6.1 - Port Usage

              Active= Yes
              Device Type: SDSL
              Auto Baud= Yes    Speed= 2320K

              Encapsulation= PPP
              Authen Method= Local
                Protocol= None
                User Name=
                Password= ********

              IP Address Assigned to Client= 192.168.255.1
              Start of Public IP Address= 0.0.0.0
                IP Count= 0
              RIP Direction= None       Multicast= N/A
              Version= RIP-1            IP Policies=

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

Enter Menu 6.1 Port Usage, Choose the maximum allowed speed for SDSL Line, and toggle AutoBad selection to Yes. P1600 will probes the link and determines the loop characteristics including Line noise and attenuation, determines the best possible speed that the link will support automatically.

Please make sure you CPE device also supports AutoBaud feature, for Prestige 681, please upgrade to 2.50(T.05) version. When connecting to CPE without AutoBaud function, the SDSL line still can be connected by setting the P1600 a larger line speed than CPE. P1600 will enter non-AutoBaud loop and make connection if the line quality can support the line speed setting of CPE.

How to Remote Upgrade on line P1600 and P681 to Auto-Baud
1. First remote upgrade P1600 FW version from 3.21 to 3.22 by FTP/TFTP, all the configuration will keep the same, and all connections will also be connected by non-AutoBaud mode when P1600 boot up.
2. Then upgrade your P681 to 2.50(T.05), the configuration of P681 will also keep the same, the connection will be up by non-AutoBaud mode.
3. Remote telnet to your P681, enter menu 2, select Auto-Baud to be Enable and save. At this moment, the connection will be dropped.
4. Remote telnet to your P1600, enter menu 6 port setup to enable the Auto-Baud. You also can select a higher speed let Auto-Baud feature negotiate a more reliable connection.
5. Check menu 24.8 CI command "xdsl st xdslxx" the Noise Margin value, 10-14dB shows you have a good line quality.
6. If you only upgrade P1600, the connection will be still up by the same selected speed at P681, even thought you did not upgrade the P681. This connection is made by non-AutoBaud mode.P1600 is backward compatible with non-AutoBaud P681.

Auto-Baud Speed :

Auto-baud Data Rate is supported from 144K to 2320Kbps.
    144K/160K/192K/208K/272K/384K/400K/416K/528K/768K/784K/1040K/1168K/1536K/ 1552K/1568K/2320K

Bugs Fixed:

1. Menu 6.1 Port Usage, P1600 now performs checking on duplicate IP Address Assigned to Client.
2. Menu 24.1 Current Time and Date lost is fixed at this version.
3. Enter Menu 1 cause default route lost is fixed at this version.
4. This FW will upgrade the Bootbase automatically to version 1.08.

Know Problem List:

1. IP multicast is not supported at this release.

2. **Due to Hardware limitation, C2-2 sample can only support 8M bytes flash memory. For C2-2 user, please use b03 Firmware version only. This release can not be applied to C2-2 sample.**

3. The default menu 3.2 TCP/IP IP Address setting are 192.168.1.1 at P1600 and other Prestige series products. It may happen you can not ping successfully to the P100L/P128L /P681 at P1600 CI command mode if they have same IP address at menu 3.2. Change IP address at one of them will solve the problem.

4. At menu 24.6 Restore Configuration do not have a timeout design at Xmodem protocol.

5. ICMP Packet length exceed 1500 bytes can not pass through NAT. P1600 will adjust TCP MSS to let TCP packets not exceed 1500 bytes. SUA has no problem for all kinds of protocol.

6. Login to P1600 by telnet, the password can not exceed 22 characters.

7. The interface identifiers of P1600 :
   Slot 1 is mapped from xdsl00 to xdsl07 for SDSL, xdsl00 to xdsl15 for IDSL.
   Slot 2 is mapped from xdsl16 to xdsl23 for SDSL, xdsl16 to xdsl31 for IDSL.
   Slot 3 is mapped from xdsl32 to xdsl39 for SDSL, no IDSL supported at this Slot.
   Due to reserve Interfaces for IDSL Slot, the interface identifiers are not numbered continuously for SDSL Network Module.

8. Menu 6.1.1 ATM Setup, if VPI value exceeds 255, VCI value exceeds 65535, the value saved will be not correct.

To Update P1600

P1600

Versions:
ZyNOS F/W Version: V3.22(X.00) | 4/12/2001 14:17:52
BootBase: V1.08 | 4/12/2001 14:17:52
Boot Extension Commands:
ATBAx: Where x = baud rate
options available are:
1= 38.4K
2= 19.2K
3= 9.6K
4= 57.6K
5= 115.2K
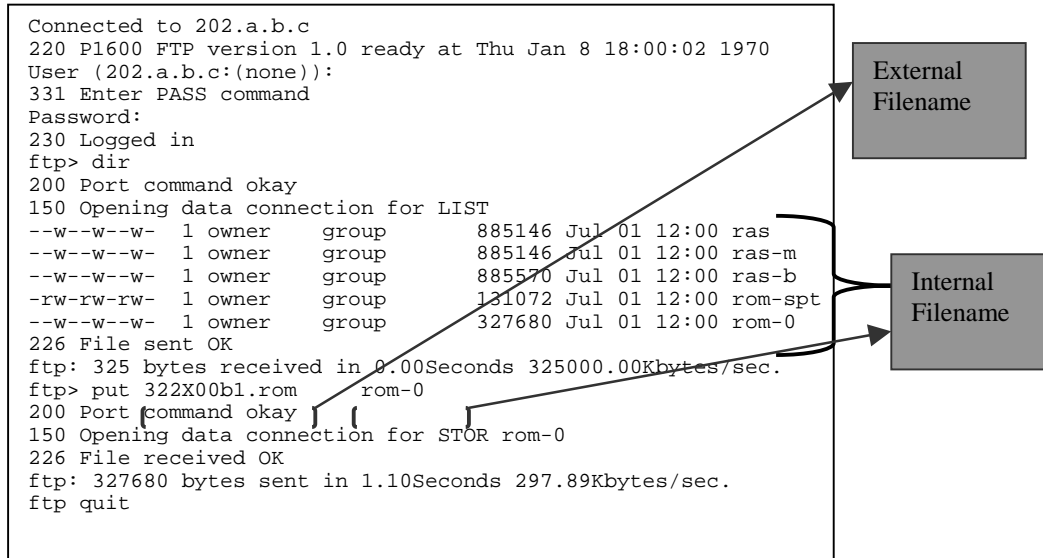ATUR: Upload Firmware file via XMODEM
File Name : p1600.bin

Romfile: p1600.rom
ATUR3: Upload Romfile and clear all settings, the setting will change to manufactory setting, baud rate sets to 9.6K, please change to 9.6K for further configuration.

FTP Upgrade

There are two set of filenames: internal (in P1600) and external (in PC, MAC, or UNIX). Each set contains ZyNOS firmware and the configuration file. Firmware file contains the firmware and the configuration file contains the SMT menu settings, defaults etc. The internal names are ras-m and ras-b (firmware files) and rom-spt and rom-0 (configuration files).

```
Connected to 202.a.b.c
220 P1600 FTP version 1.0 ready at Thu Jan 8 18:00:02 1970
User (202.a.b.c:(none)):
331 Enter PASS command
Password:
230 Logged in
ftp> dir
200 Port command okay
150 Opening data connection for LIST
--w--w--w-  1 owner    group       885146 Jul 01 12:00 ras
--w--w--w-  1 owner    group       885146 Jul 01 12:00 ras-m
--w--w--w-  1 owner    group       885570 Jul 01 12:00 ras-b
-rw-rw-rw-  1 owner    group       131072 Jul 01 12:00 rom-spt
--w--w--w-  1 owner    group       327680 Jul 01 12:00 rom-0
226 File sent OK
ftp: 325 bytes received in 0.00Seconds 325000.00Kbytes/sec.
ftp> put 322X00b1.rom      rom-0
200 Port command okay
150 Opening data connection for STOR rom-0
226 File received OK
ftp: 327680 bytes sent in 1.10Seconds 297.89Kbytes/sec.
ftp quit
```

External Filename

Internal Filename

FTP Example

Usually, the external firmware filename is the router model name with a bin extension, e.g., p1600mas.bin. Rename it as "ras-m" or "ras-b" when uploading to the Prestige main block and backup block respectively using TFTP or FTP. You don't have to rename the file when using XMODEM protocol.

The external configuration filename is usually the router model name with a *.rom extension, e.g.1600.rom. Rename it as rom-spt and rom-0 when transferring files to the Prestige. Renaming is not necessary if you transfer files using XMODEM protocol.

Table Filenames

Internal Filename	Description	External Filename	FTP Command Example
rom-spt	The rom-spt file is the user configuration file. It contains your Prestige configurations such as IP addresses, Remote Node settings etc. as well as your password.	*.rom	get rom-spt (backup) put rom-spt (restore)

rom-0	The rom-0 configuration file is the entire factory configuration file. It includes rom-spt, default settings, file system, log, etc. Uploading the rom-0 file replaces the entire ROM file system, including your Prestige configurations, system-related data (including the baud rate and default password), the error log and the trace log.	*.rom	put p1600.rom rom-0 (upload)
ras	This is the firmware filename for all Prestige models. This is ras-m when you upload the firmware to the main block and ras-b when you save the current firmware to the backup block.	*.bin	
ras-m	This is the router firmware filename on the Prestige 1600 when you are transferring files to the main block.	*.bin	put p1600.bin ras-m (upload)
ras-b	This is the router firmware filename on the Prestige 1600 when you are transferring files to the backup block.	*.bin	put p1600.bin ras-b (upload)