

ZyXEL Prestige 1600 3.22(X.01)

Release Note/Manual Supplement

Date: Dec 4, 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 and ADSL solutions are available now.

This version first support ADSL Network Module. Each Prestige 1600 provides up to 24 SDSL ports, and is equipped with 10/100M Ethernet as a daisy chain for connecting up to five units (thus a maximum of 120 SDSL ports).

Previous Release version 2.50 and 3.20 can only support IDSL Network Module, please update your FW to 3.21(X.00) or 3.22(X.00) to support SDSL Network Module. And update your FW to 3.22(X.01) to support ADSL Network Module.

This document describes the features in the ZyXEL Prestige 1600 product for its 3.22(X.01) release. The known problem list section describes problems currently under investigation and enhancement during our internal test.

Note: P1600 do not support ADSL and IDSL Network Module operate within the same chassis. Please separate ADSL and IDSL NM to different chassis and connected by LAN. For ADSL CPE, ZyXEL Prestige 630 is recommended, other ZyXEL ADSL CPE devices are also available, please contact our CSO if you can not make it work with other ZyXEL ADSL CPE devices.

Support Platforms:

ZyXEL Prestige firmware V3.22(X.01) 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) and 3.22(X.00) release.

Version:

ZyNOS F/W Version: V3.22(X.01) | 12/4/2001 9:32:44
BootBase: V1.08 | 8/21/2001 14:07:15

New Features:

1. Support ADSL network module.
2. ADSL Line performance report.

Features Details:

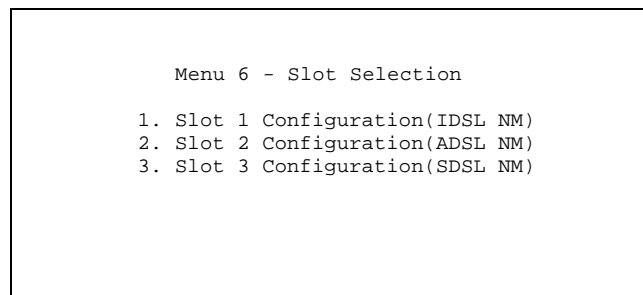
ADSL (Asymmetric DSL)

Asymmetric Digital Subscriber Line (ADSL), a modem technology, converts existing twisted-pair telephone lines into access paths for high-speed data communications. ADSL can transmit up to 6 Mbps to a subscriber, and as much as 832 kbps or more in both directions.

An ADSL circuit connects an ADSL modem on each end of a twisted-pair telephone line, creating three information channels -- a high speed downstream channel, a medium speed duplex channel, and a POTS (Plain Old Telephone Service) channel. The POTS channel is split off from the digital modem by filters, thus guaranteeing uninterrupted POTS, even if ADSL fail.

How to use P1600 ADSL Network Module for your connections:

1. P1600 3.22(X.00) b01 supports IDSL, SDSL and ADSL Network Module. And it detects different type of Network Module automatically. After boot up, enter menu 6, Slot Selection will show the Network Module detected. Remember previous Firmware Version 2.50 and 3.20 can not recognize ADSL/SDSL Network Module. Please update your Firmware Version to 3.22(X.00)b01.



2. Menu 6.1 Port Usage show Device Type is ADSL, please select your Speed and set the same Speed to your CPE device (Prestige 642R)

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Menu 6.1 - Port Usage

Active= Yes
Device Type: ADSL
Speed : DownStream= 6M  UpStream= 1M

Encapsulation= PPP over ATM(2364)
Multiplexing= VC
Edit ATM Options= No
Authen Method= Local
Protocol= None
User Name=
Password= *****
IP Address Assigned to Client= 192.168.255.33
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:
```

Speed :

Down Stream Data Rate from 256K to 8Mbps.
256K/512K/768K/1M/1.5M/2M/3M/4M/6M/8M
Up Stream Data Rate from 64K to 2Mbps.
64K/128K/256K/384K/512K/640K/1M/1.5M/2M
Down Stream Data Rate must be greater than Up stream Data Rate.

Encapsulation:

There is only one encapsulation mode PPP over ATM (2364) supported. So the CPE Device Encapsulation mode need be set to PPP over ATM.

Multiplexing:

LLC and VC multiplexing modes are supported. Please select the same multiplexing mode at CPE device.

VPI/VCI:

Select Edit ATM Options to Yes, enter menu 6.1.1. Set VPI/VCI value, please also set the same value at CPE device.

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Menu 6.1.1 - ATM Setup

Virtual Path Identifier(VPI)= 8
Virtual Channel Identifier(VCI)= 35
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RIP :

RIP version 1 and 2 are support at DSL interface at this version. When enable RIP, and select direction to Both or Incoming, the IP Address Assigned to Client will be not available.

Performance:

Max Reach

The maximum Reach Performance of P1600 ADSL Network Module and Prestige 642R is listed.

Range	Upstream Speed	Downstream Speed
0.0 kft:	1120 kbps	8160 kbps
0.5 kft:	1152 kbps	8160 kbps
1.0 kft:	1152 kbps	8160 kbps
1.5 kft:	1152 kbps	8160 kbps
2.0 kft:	1152 kbps	8160 kbps
2.5 kft:	1152 kbps	8160 kbps
3.0 kft:	1184 kbps	8160 kbps
3.5 kft:	1184 kbps	8160 kbps
4.0 kft:	1152 kbps	8160 kbps
4.5 kft:	1184 kbps	8160 kbps
5.0 kft:	1216 kbps	8160 kbps
5.5 kft:	1184 kbps	8160 kbps
6.0 kft:	1184 kbps	8160 kbps
6.5 kft:	1184 kbps	8160 kbps
7.0 kft:	1120 kbps	8160 kbps
7.5 kft:	1088 kbps	8160 kbps
8.0 kft:	1088 kbps	8160 kbps
8.5 kft:	1056 kbps	8160 kbps
9.0 kft:	1024 kbps	8160 kbps
9.5 kft:	1024 kbps	8160 kbps
10.0 kft:	960 kbps	7680 kbps
10.5 kft:	928 kbps	6944 kbps
11.0 kft:	896 kbps	5856 kbps
11.5 kft:	896 kbps	5216 kbps
12.0 kft:	832 kbps	4736 kbps
12.5 kft:	768 kbps	4064 kbps
13.0 kft:	736 kbps	3168 kbps
13.5 kft:	672 kbps	2880 kbps
14.0 kft:	640 kbps	2400 kbps
14.5 kft:	576 kbps	2048 kbps
15.0 kft:	544 kbps	1696 kbps
15.5 kft:	512 kbps	1344 kbps
16.0 kft:	416 kbps	1056 kbps
16.5 kft:	352 kbps	864 kbps
17.0 kft:	320 kbps	576 kbps
17.5 kft:	288 kbps	416 kbps

Line Performance Report:

For ADSL/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 xsdl00

Ras> xsdl st xsdl00
ADSL FW Version v1.00.03
ADSL FW date Nov 21 2000 09:26:38

Mb2NmPduOk	0	Mb2NmPduError	0
Nm2MbPduOk	0	Mm2NbPduError	0
Nm2AturPduOk	0	Nm2AturPduError	0
Atur2NmPduOk	0	Atur2NmPduError	0
aturLinkDownCount	0		

AS0 downstream rate	:	2048 Kbps
AS1 downstream rate	:	0 Kbps
LS0 upstream rate	:	512 Kbps
LS1 upstream rate	:	0 Kbps
Down/up stream Margin	:	35/14 dB
Down/up stream Attenuation	:	2/ 0 dB
Attainable Dwon/up stream Rate	:	9728/ 960 Kbps

nfebe-l/nfebe-ni	:	0/0
ncrc-l/ncrc-ni	:	0/0
nfecc-l/nfecc-ni	:	0/0
nfec-l/nfec-ni	:	0/0
nblks-ds/nblks-us	:	51570/51570
nsec-ds/nsec-us	:	882/882
n-eb-ds/n-eb-us	:	0/0
n-bbe-ds/n-bbe-us	:	0/0
n-es-ds/n-es-us	:	0/0
n-ses-ds/n-ses-us	:	0/0
non-ses-blks-ds/non-ses-blks-us	:	51570/51570
n-uas-ds/n-uas-us	:	0/0
fe_loss_seconds/ne_loss_seconds	:	0/0
fe_fec_seconds/ne_fec_seconds	:	0/0
fast_trains	:	0
fast_trains_fail	:	0

Bugs Fixed:

1. Frame Relay connection never up after disconnected problem is fixed.
2. SDSL Slot reset problem is fixed at this version.

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.
9. Upgrade P1600 to 3.22(X.00), Bootbase will automatically upgrade to 1.08, please do not downgrade FW version to 3.20. Reboot may happen due to access timing change.
10. CuteFTP Pro application is not compatible to Prestige FTP server, please use other FTP application.

To Update P1600

P1600

Versions:

ZyNOS F/W Version: V3.22(X.01) | 12/4/2001 9:32:44

BootBase: V1.08 | 4/12/2001 14:17:29

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

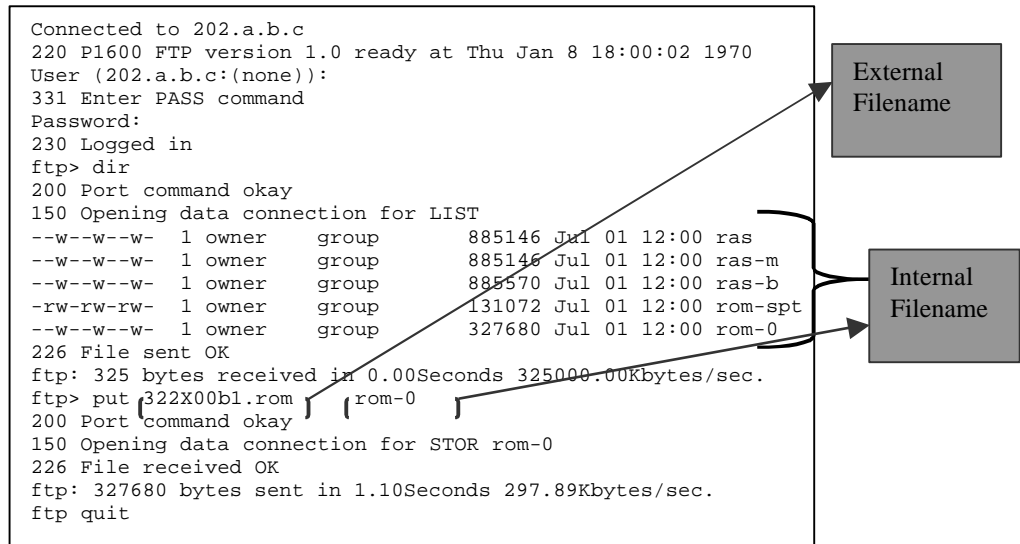
File Name : 322X00b1.bin

Romfile: 322X00b1.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).



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. 1600mas.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 Filenam e	Description	External Filenam e	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 p1600mas.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)