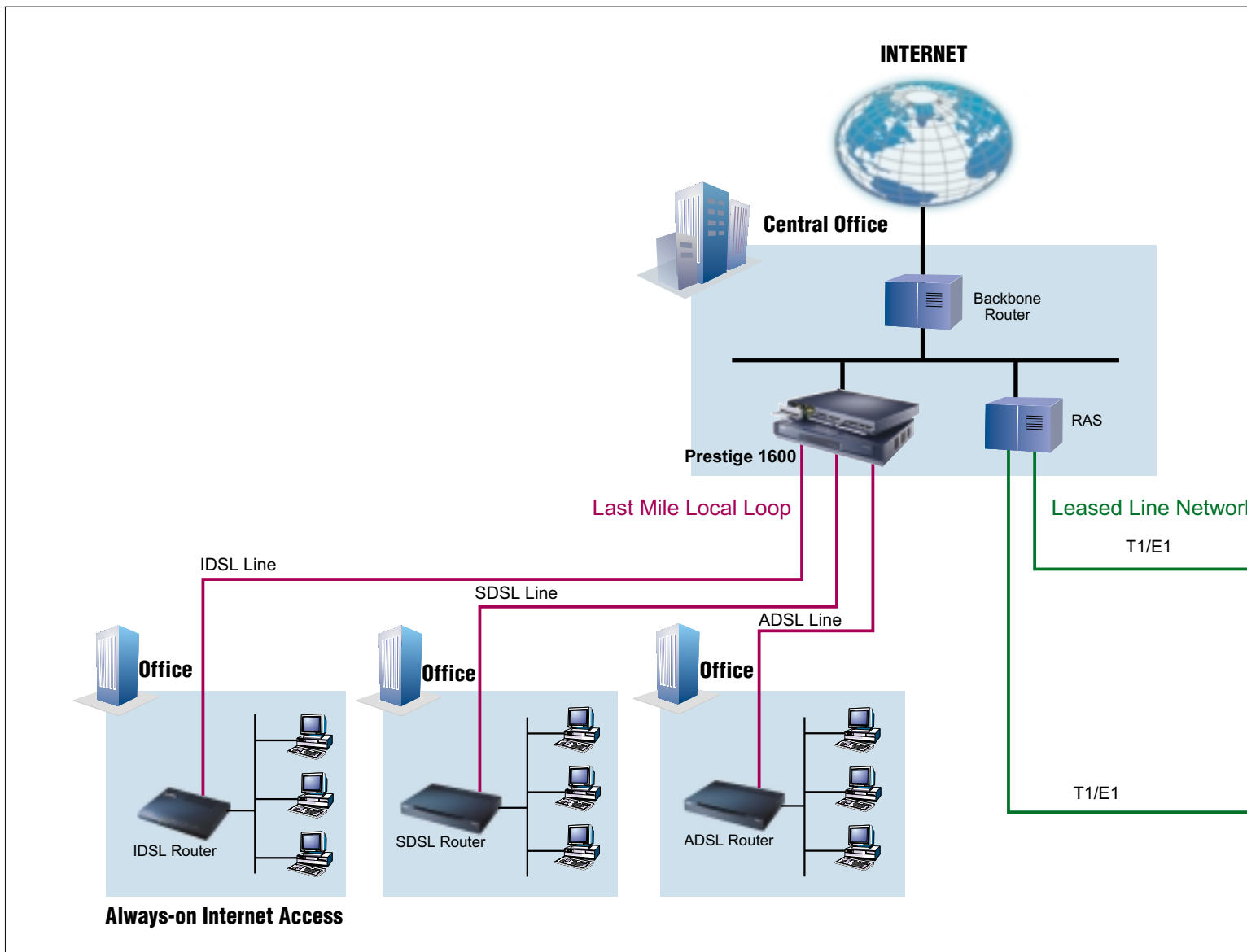## Applications

MDU (Multiple Dwelling Units)

As global telecom markets become more and more open and competitive, many service providers are moving their POPs to locations close to the end users, such as high-rise buildings and communities. In those locations, DSL technologies can make use of the existing copper wires inside the buildings to offer higher speed, always-on services. The P1600 is ideally suited for deployment in MDUs as it provides a scaleable, flexible and cost-effective Internet service platform.

MHU (Multiple Hospitality Units)

The environment in hotels is almost the same as in high-rise buildings. The major difference is that the hotel guests used to use the built-in modem in the notebook computer for Internet roaming services. To offer better quality and faster speed than dial-up services, more and more hotels have begun to install concentrators to provide Plug-and-Play broadband Internet connections. The P1600 fulfills this need in hotels with its DSL connectivity and complete network management.

Leased-Line Applications--Always-on Internet Access

Business users are becoming increasingly dissatisfied with the speed of traditional dial-up modem solutions and with the expense of T1/E1 leased lines, and are demanding faster and cheaper access solutions. SDSL is designed to meet the growing bandwidth demands and it runs over existing copper wires, which eliminates costly re-wiring. The P1600 can serve as a leased-line RAS server for ISPs and Telcos to replace conventional T1/E1 leased-line services.

WAN Network Connectivity

- One FlexWAN port with 50-pin VHDCI connector.
  - -- RS-449/V.35/X.21/EIA-530/RS-232 interface support
  - -- Synchronous leased-line mode
  - -- Interface speeds of up to 2 Mbps
- Frame Relay
  - -- ITU-T Q.933 Annex A; ANSI T1.617 Annex D
  - -- Multiple Protocol over Frame Relay (RF 1490)

Internet Access

- PPP (Point-to-Point Protocol) support
  - -- PPP over HDLC (RFC 1662)
  - -- PPP over Frame Relay (RFC 1973)
- SUA (Single User Account)/NAT (Network Address Translation) enables multiple subscribers to access the Internet with an single IP address
- The most comprehensive NAT support for multimedia applications, including NetMeeting, CuSeeMe, ICQ, etc.

Network Protocols

- IP routing
- RIP-1, RIP-2 support
- IP multicast
- IP policy routing

Network Management and Control

- Remote firmware upgrades and configuration of backup and restore
- CLI (Command Line Interpreter) for advanced configuration
- Integrated SNMP support for managing complex networks from remote sites
- Built-in diagnostic and remote support tools
- FTP (File Transfer Protocol) firmware upgrades and configuration backup and restore
- Auto-configure ZyXEL DSL CPEs' speeds
- ZyNOS with high flexibility for configuration
- Script file download/upload

Robust Security Features

- Packet filtering for controlled access to and from subscribers
- Password protected system management terminal
- PAP (Password Authentication Protocol)
- CHAP (Challenge Handshake Authentication Protocol)
- Microsoft CHAP

Physical Interfaces

- One auto-sensing 10/100M Ethernet port
- One 50-pin VHDCI port for FlexWAN interface with support for interfaces: RS-449 / V.35 / X.21 / EIA-530 / RS-232
- One RS-232 console port for local configuration and management
- DTE with full modem control

Dimension

- Chassis: 17.3"(W) X 13.39"(L) X 2.6"(H)
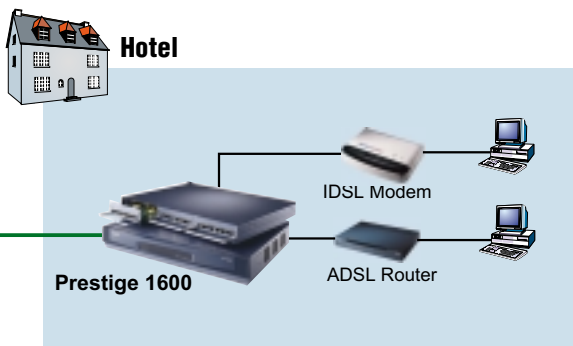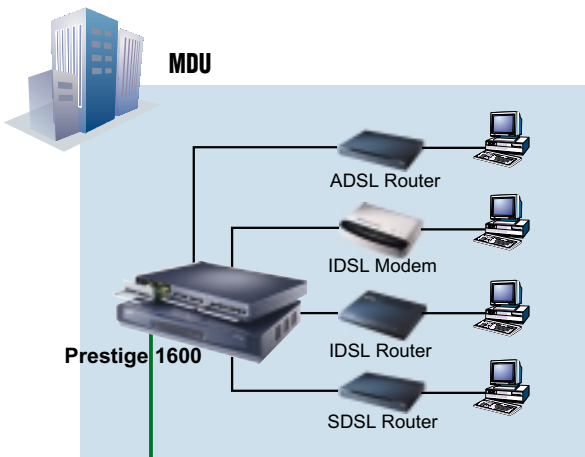- NM Card: 5.3"(W) X 12.2"(L) X 0.94"(H)

Power Consumption

- Chassis: 80 watts maximum
- 100 to 240 VAC, 50 to 60Hz

Operation Environment

- Temperature: $0\sim50^{o}$C
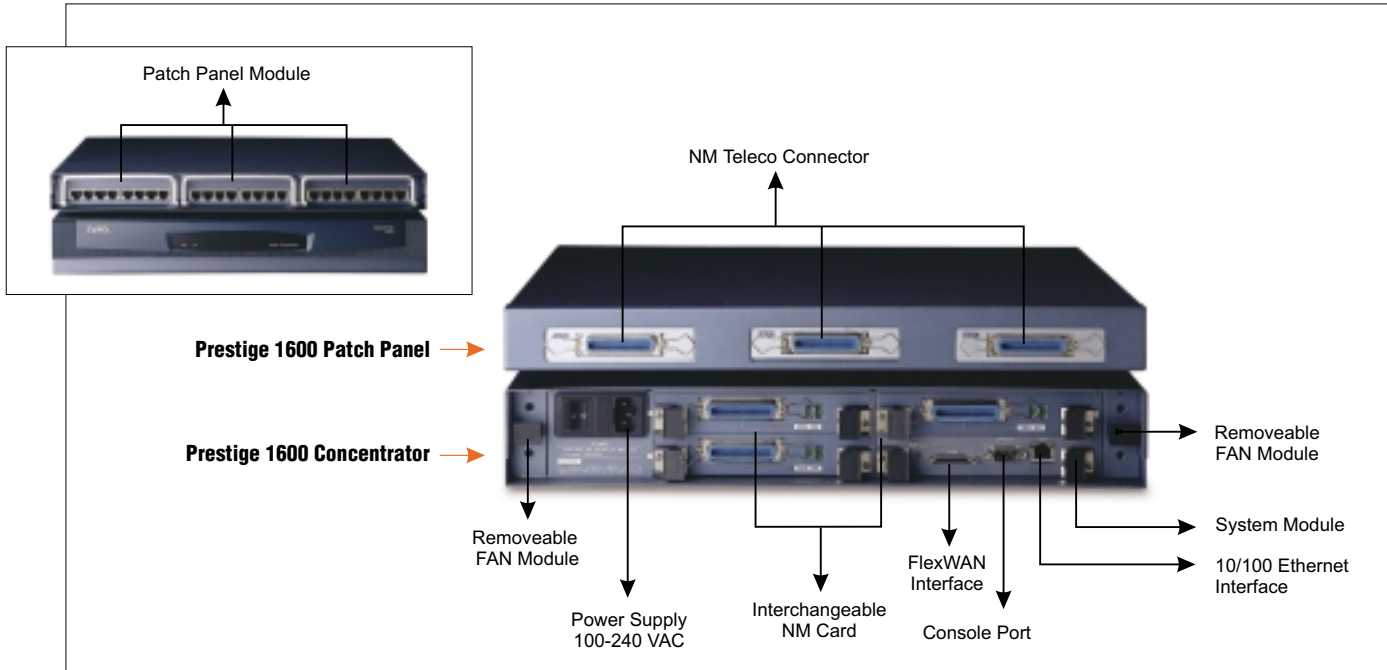- Humidity: 20%~95%

Storage Environment

- Temperature: $-30\sim60^{o}$C
- Humidity: 20%~95%

MDU

ADSL Router

IDSL Modem

Prestige 1600

IDSL Router

SDSL Router

rk

Hotel

IDSL Modem

Prestige 1600

ADSL Router

Prestige 1600 System Outlook

Patch Panel Module

NM Teleco Connector

Prestige 1600 Patch Panel →

Prestige 1600 Concentrator →

Removeable FAN Module

System Module

10/100 Ethernet Interface

Removeable FAN Module

FlexWAN Interface

Power Supply 100-240 VAC

Interchangeable NM Card

Console Port

Prestige 1600 NM Card Basic Specifications

	IDSL NM Card	SDSL NM Card	ADSL NM Card	10/100M Ethernet Switch Card
Number of Port Per Card	16	8	8	4+1
Specification	• Symmetrical data • 64K or 128Kbps transmission • 2B1Q line modulation for level line code • Manual rate adaption configuration	• 2B1Q line modulation for level line code • Speed up to 2.3Mbps • Multi-rate selection	• G. DMT(G.992.1) support • G.Lite(G.992.2) support • G.hs support • Multi-rate selection • Speed up to 6Mbps downstream	• Five-port 10/100Mbps switch • One switch port can be activated as uplink port

NM Card Configuration with Prestige 1600 System

NM Card / NM Slot	16-Port IDSL NM Card	8-Port SDSL NM Card	8-Port ADSL NM Card	10/100M Ethernet Switch Card
NM-1	Yes	Yes	Yes	No
NM-2	Yes	Yes	Yes	No
NM-3	No	Yes	Yes	Yes

This product is based on the ZyNOS ™ Networking Operating System with free firmware upgrades that can be downloaded as they become available. Specifications and delivery schedule of available models are subject to change without notice.
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TOTAL INTERNET ACCESS SOLUTION

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Prestige 1600

Universal Access Concentrator

Using the latest DSL technology, ZyXEL has been enhancing the data capacity of the existing twisted-pair wire that runs between the central sites and Home/Office through its extensive CPE offerings. Now, ZyXEL offers service providers a total system solution that includes both the Central Office Equipment (COE) and the Customer Premises Equipment (CPE) required for immediate implementation of multiple services in private and public networks. The P1600 Universal Access Concentrator is a key component of this total system solution.

The P1600 is a scalable and expandable platform that delivers network access services at multiple selectable speeds of up to 6 Mbps to each subscriber. The architecture of the P1600 allows different interchangeable network modules to coexist in the same chassis, and to interoperate with standard-based CPE products. The P1600 concentrates the traffic from the remote clients and uplinks it to Telcos/ISPs through its built-in WAN port or 10/100M Ethernet port. This capability makes the P1600 an ideal solution for deployment in high rise buildings, communities, campuses and hospitality facilities or as a leased-line replacement for both Telcos and ISPs.

Benefits

Multiple Network Service Platform
The P1600 enables service providers and system integrators to offer various network services such as Internet access, remote access and leased line networks to their customers.

Customizable Throughput
The P1600 is a new class of high speed networking platform that supports the latest broadband network access technologies, such as ADSL, IDSL and SDSL. Based on the service requirements, service providers and system integrators can provide differentiated broadband services to different users located in the same service area.

Integrated Access Architecture
Unlike traditional remote access servers and other concentrators, the P1600 incorporates ZyXEL's leading IP routing and enhanced WAN access technologies. The P1600 can aggregate traffic from a number of DSL devices onto a single backbone connection through its built-in WAN interface or 10/100M Ethernet interface. The P1600 also supports advanced IP management, including Multi-NAT.

Scaleable Density
The P1600 is equipped with three network module slots. By utilizing a five-port 10/100M Ethernet switch module card in one of the slots, service providers can connect up to five P1600 units to form a single high density system. If these five P1600 units are all loaded with 16-port IDSL NM cards, the daisy-chained system can support up to 160 IDSL ports.

Consolidated Solution: Includes Competitive CPE Product Lines
ZyXEL not only delivers the P1600 with various DSL NM modules, but also provides the most complete standard-based DSL CPE product lines, including the Omni 128 IDSL modem, the Prestige 128L IDSL router, the Prestige 100L IDSL router/hub, the Prestige 681 SDSL router and the Prestige 640 series ADSL router/modem. With this total system solution, service providers can be assured of interoperability and compatibility, and deploy reliable as well as flexible broadband network services.

ZyXEL
TOTAL INTERNET ACCESS SOLUTION