Prestige 861 Series

DMT 3/4/5-band, ATM-based VDSL Modem/Gateway

VDSL, the fastest offering of DSL, provides significantly higher bandwidth than other DSL technologies. VDSL technology, which is similar to that of ADSL, uses existing copper wires to deliver high-speed data services.

The major issues with VDSL technology are the line codes to be employed, which can be divided into either single-carrier or multi-carrier modulation schemes. For example, QAM is the most widely used form of single carrier systems while DMT, the standard line code for ADSL, is the primary form of multi-carrier modulation. Both QAM- and DMT-based systems can be designed for VDSL applications. However, DMT modulation dynamically adapts the bit rate to conditions on the local loop and offers excellent performance even over noisy lines.

ZyXEL's Prestige 861 series, which is a DMT-based VDSL modem, supports a complete range of speeds ranging from 64Kbps to 25Mbps. Symmetric speeds for the Prestige 861 series range up to 25Mbps at 64Kbps increments while asymmetric speeds range up to 52Mbps downstream and 26Mbps upstream at 64Kbps increments. The built-in 4-port switch allows multiple devices to share the bandwidth without the cost of additional network hardware.

Benefits

DMT Modulation — Standard Compliance and Outstanding Performance

The Prestige 861 series is a DMT (Discrete Multi-Tone)-based VDSL CPE. DMT modulation dynamically adapts the bit rate to conditions on the local loop and offers excellent performance even over noisy lines. Network administrators become free from manually testing lines and from constantly adjusting equipment to noise conditions. Both IEEE 802.3ah Ethernet in the First Mile (EFM) Task Force and IEEE T1E1.4 Working Group selected DMT as its worldwide VDSL line-coding standard.

Bandwidth of over 25 Mbps Per Port in Full Duplex

The high-bandwidth Prestige 861 series allows service providers to simultaneously deliver a variety of value-added services, such as broadband Internet access and multiple streaming video channels. With the Prestige 861 series, small to medium business users can have much higher bandwidth for both symmetric and asymmetric applications while home users can enjoy interactive media-rich entertainment which was previously unavailable.

Triple Play over Existing Copper Wires

With VDSL, traditional "copper wire" telecom operators may begin offering "triple play" multimedia services such as multiple high-quality digital video streams, high-speed internet access, and voice services in a way which provides a user experience similar to today's other existing distribution systems (cable, terrestrial, satellite). New revenue can be generated with a minimal amount of installation time and expense.

Co-existence with Plain Old Telephone Service (POTS), ISDN and Digital Phones

VDSL can be implemented quickly, even if there is only one phone line per tenant. The existing POTS or ISDN services may be kept while adding new broadband services.

An Instant LAN with an Integrated 10/100Mbps Switch

The combination of a switch makes the Prestige 861 series more efficient and less expensive than a similar unit with an external switch or hub. The industry-standard HP Auto MDI/MDIX features enable automatic and transparent detection as well as automatic correction of cables. Product installation, debugging, and network maintenance become substantially easier and significantly more efficient.

VLAN Supports QoS for Service Differentiation

The VLAN feature in the Prestige 861 series offers the benefits of both security and performance. For example, various priorities can be assigned to differentiate real-time applications and Internet access applications via VLAN tagging. Such control enables service providers to turn on various broadband services to a larger number of customers more quickly and economically.

ZyXEL
Unleash Networking Power

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Features

VDSL Line Interface

- Duplex Method: DMT/FDD
- One VDSL Line
- RJ-11 Connector
- Rate
  - 998 4 band (without optional band):
    - MAX downstream payload rate: 60Mbps
    - MAX upstream payload rate: 34Mbps
  - 997 4 band (without optional band):
    - MAX downstream payload rate: 43Mbps
    - MAX upstream payload rate: 27Mbps
- Fixed and start-up Rate Adaptation
- Resynchronization algorithm
- Power back-off

LAN Interface

- Interface: 4 x 10Base-T/100Base-TX (IEEE802.3/IEEE802.3u)(Half Duplex/Full Duplex, Auto-Negotiation)
- Flow control
  - Half Duplex: Back pressure flow control
  - Full Duplex: IEEE802.3x flow control
- Forwarding capacity: 10Mbps/100Mbps
- Auto MDI/MDI-X: support of Enable/ Disable Function
- RJ-45 connector

Switching Function

- Non blocking switching
- Forwarding frames: IEEE802.3/IEEE802.1q/PPPoE
- MAC address filtering
- 2048 MAC address learning
- Port based VLAN and Tag based VLAN (IEEE802.1Q)
- VLAN-ID: Able to set from 1 to 16
- Number of VLAN: 16

Network Maintenance

- Remote control: report VDSL modem condition/control of speed and duplex/loop back control/setting function

ATM Protocol

- VDSL physical layer support ATM, AAL5
- Multiple Protocol over AAL5 (RFC2684)
- VC and LLC based mulitplexing
- ATM Forum UNI3.1/4.0 PVC
- Up to 8 VCs
- Virtual Circuit Traffic Shaping: UBR, CBR, VBR-nrt, VBR-rt
- OAM F4/F5

Bridging

- IEEE 802.1d transparent bridging

System Control

- Status surveillance
- Performance monitoring
- CPE side Ethernet Link status surveillance
- Security and Configuration back up
- Self diagnostic
- Password-protected Telnet support
- Configuration backup*

Management

- Web-based management*
- PS2 console
- Text-based management
- Telnet support
- FTP for firmware upgrade
- SNMP MIB support*

Security

- Password-protected access support

** Future release in router mode*

Specifications

Physical Specification

- Dimensions : 206(L) x 161 (D) x 51(H)mm
- Weight: 0.5Kg

Power Requirement

- Power supply: 100 ~ 120 VAC, 200 ~ 240 VAC
- Power consumption: Maxim 9 Watts

Operating Environment

- Temperature : 0 ~ 50ºC
- Humidity: 10 ~ 90% (non-condensing)

Certificate

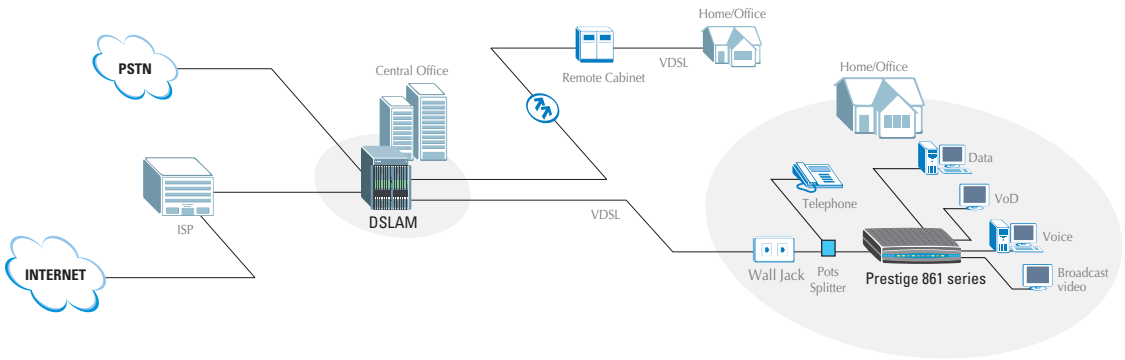
EMC

- FCC Part 15 Class B
- EN 55022 Class B
- EN 55024 Class B

Safety

- CAN/CSA-C22.2 No. 60950-1-03
- ANSI/UL Std No 60950-1, 1st Ed.
- EN 60950-1, 1st Ed.
- IEC 60950-1, 1st Ed.
- ITU-T K.21-surge

Application Diagram



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