

# Prestige 871

## DMT 3/4/5-band, IP-based VDSL Modem



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.

To provide VDSL service to end users, Telcos in different areas may have different deployment strategies unique to their existing and future network plans. Ethernet in the First Mile (EFM) is increasingly being adopted by service providers and is being evaluated by Telcos who have traditionally used ATM networks in the past. Without the ATM layer, networks become more cost-effective, flexible, and efficient. The Prestige 871, which is built without ATM, perfectly fits the network demands of today and tomorrow.

ZyXEL's Prestige 871 DMT-based VDSL modem supports a complete range of speeds ranging from 64Kbps to 25Mbps. Symmetric speeds for the Prestige 871 range up to 25Mbps at 64Kbps increments while asymmetric speeds range up to 52Mbps downstream and 26Mbps upstream at 64Kbps increments.

### Benefits

#### **DMT Modulation — Standard Compliance and Outstanding Performance**

The Prestige 871 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 871 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 871, 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.

#### **Best CPE for EFM Applications**

Due to Ethernet's relatively low cost, simplicity, flexibility, ubiquity and high bandwidth, there has recently been growing momentum in the use of Ethernet in access networking. Such trends in access networking make the Prestige 871 a perfect solution for EFM applications.

## Features

### VDSL Interface

- One RJ-11 connector
- Ethernet over VDSL
- Data rate following the configuration from VES-1000
- Power back-off design

### POTS/ISDN Interface

- 600 ohm splitter built-in
- External splitter for other applications

### Ethernet Interface

- One 10/100 Ethernet port
- RJ-45 connector

### System Control

- Plug-and-play
- Firmware upgrade from VES-1000

### Network Protocols

- IEEE 802.3/3u/3x
- Flow control in full duplex mode
- Back pressure in half duplex mode
- Transparent bridging

## Specifications

### Hardware Specification

#### LED and Switch

- Power: on, off
- System
  - Light on: system ready and running well
  - Light flashing: system booting
  - Light off: system not ready or fail
- VDSL
  - Light on: link on
  - Light flashing: training
  - Light off: link down
- 10/100Base-TX
  - 10M, 100M
- Power switch for power on or off

#### Physical Specification

- Dimensions: 180(L) x 127(D) x 35(H) mm
- Weight: 0.35kg

### Power Requirement

- Power Supply: 100 ~ 120VAC, 200 ~ 240 VAC
- Power Consumption: Max. 7Watts

### Operating Environment

- Operating Temperature: 0 ~ 50°C
- Operational Humidity: 10 ~ 90% (Non-condensing)

### Certificate

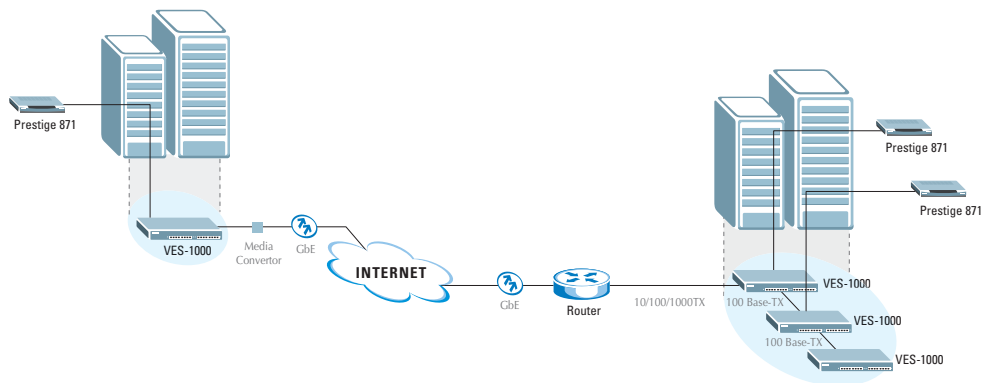
#### EMC

- 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, 1<sup>st</sup> Ed.
- EN 60950-1, 1<sup>st</sup> Ed.
- IEC 60950-1, 1<sup>st</sup> Ed.
- ITU-T K.21-surge

## Application Diagram



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Unleash Networking Power

ZyNOS FC CE

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