



The ComNet™ VDSL3 consists of one each 10/100TX 8-port managed switch, one each 2-channel EoVDSL uplink modem, and a mounting chassis, to easily and inexpensively aggregate Ethernet-enabled equipment at remote field locations back to a central or head-end location over existing copper infrastructure. The VDSL3 is the perfect solution for upgrading a legacy twisted copper or coaxial cable plant for use with Ethernet, when compared to the significant costs of installing new network cabling. Utilizing the latest generation VDSL2 technology for the fastest data rate and greatest transmission distance, any standard telephone-grade twisted copper pair, legacy serial cabling, or standard 75Ω coaxial cable may be used. The easily configured 10/100 Mbps 8-port managed switch accommodates up to six Ethernet-compatible devices, with the other two ports allocated to the 2-channel EoVDSL uplink modem. The VDSL3 may be deployed in most out-of-plant installations, such as those found in intelligent transportation systems and factory automation/control applications.

FEATURES

- › Designed as a very low-cost and simple to implement solution for drop-and-repeat Ethernet-over-copper transmission circuits
- › Provides greater flexibility and the same functionality as drop-and-repeat EoVDSL managed switches costing considerably more
- › Latest generation VDSL2 technology for fastest data rate and greatest transmission distance
- › Modular, Field-Expandable Design: Supports more than one EoVDSL channel by adding additional 2-channel EoVDSL uplink modems
- › Uses telephone-grade twisted copper pair, legacy serial cabling, or standard 75Ω coaxial cable circuits to create a drop-and-repeat/point-to-multipoint Ethernet-based network
- › Ideal for those applications where an existing installed base of copper wiring is available.
- › Automatically selects fastest usable data rate, depending upon the copper circuit transmission distance and cable quality.
- › Transmission Distances of up to 1.8 mi (3 km) between drops over twisted copper, or up to 1500 ft (457 m) between drops over coaxial cable
- › Designed for installation in harsh out-of-plant/unconditioned industrial or roadside operating environments (-40° to +75° C ambient). Fully compliant with the environmental requirements of NEMA TS-2 for Traffic Signal Control Equipment
- › Natural convection cooling; no fans or air filters for the highest level of reliability, and zero periodic maintenance
- › 120/240 VAC power supply included. The VDSL3 may also be operated from an external source of +12 to +27 VDC.
- › 5 Year Warranty

APPLICATIONS

- › Industrial Security:
 - Ethernet-compatible access control systems, intercom systems, and IP-compatible CCTV camera surveillance networks
 - VOIP (Voice over IP) telephony networks
- › ITS/Transportation:
 - Connecting Ethernet-based traffic signal controller units onto an existing twisted copper pair or coaxial cable circuit
 - Video Detection Systems (VDS) for analyzing traffic flow patterns and disturbances

ORDERING INFORMATION

| Part Number | Description |
|----------------------|---|
| VDSL3 | 1 × 8-port managed Ethernet switch with (8) 10/100TX ports + 1 × 2-Port Ethernet over Twisted Pair or Coax VDSL modem |
| Included Accessories | Plug-in Power Supply (Included) |
| Options | Add 'C' for Conformally Coated Circuit Boards (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1) |

MANAGED SWITCH SPECIFICATIONS

| | |
|---------------------------|---|
| Connector | 8 RJ-45 for 10/100Mbps |
| Technology | Store-and-Forward switching architecture |
| Transfer Rate | 14880 packets per second for 10Mbps 148,800 packets per second for 100Mbps |
| Network Cables | UTP/STP Cable: 100Meters |
| MAC Address | 8K MAC address Table |
| Data Buffer | 2Mbits |
| Switch Technology | Non-blocking Store-and-Forward w/ 1.6Gbps Switch Fabric |
| LED | Per unit: Power Per RJ-45 port: Link/Activity, 100Mbps, Full duplex/Collision |
| EMI & Safety | FCC Class A, CE, UL, cUL |
| IEEE Standards | IEEE802.3, 802.3u IEEE802.3x Flow control and Back Pressure IEEE802.1D Spanning Tree protocol (Rapid Spanning Tree Not Supported) IEEE802.1Q VLAN Tagging IEEE802.1p Class of Service IEEE802.3ad Link Aggregation |
| Voltage Regulation | Solid-State |
| Circuit Board | Meets IPC Standard |
| MTBF | >100,000 hours |
| Operating Temp | -40° C to +75° C |
| Storage Temp | -40° C to +85° C |
| Relative Humidity | 0% to 95% (non-condensing)† |
| Management | 1. Web management (IE) 2. RS-232 console management 3. Telnet |

SOFTWARE FEATURES SPECIFICATIONS

| | |
|--------------------------|---|
| Trunk | IEEE 802.3ad Trunk with LACP for load distribution control and fail over recover Up to 4 ports per group, max 4 Groups |
| Class of Service | Global system supports 2 queues for Hi and Low priority. |
| QoS | Global System support 8 levels of priority and mapping to Hi/Low priority queue for Class of Service |
| VLAN | Port based VLAN, 802.1Q Tag VLAN, Protocol Type VLAN, GVRP support VLAN ID up to 4094, VLANs up to 256 groups |
| DHCP | Support DHCP client |
| IP Multicast | Support IGMP Snooping, supports 256 groups. Support 2 types of Query mode for Enable/Disable or Auto Query |
| Filter Database | Support port static MAC address lock, MAC Filter, Port Security. |
| Port Mirror | Online traffic monitoring on up to eight ports. |
| Broadcast Control | None, 5%, 10%, 15%, 20%, 25% |
| Spanning Tree | IEEE802.1d support RFC Standard RFC 768 UDP, RFC 783 TFTP, RFC 791 IP, RFC792 ICMP, RFC 854 TELNET Server/Client, RFC 1112 IGMP, RFC 2068 HTTP, RFC 2674 VLAN MIB, RFC 1493 Bridge MIB, RFC 1157 SNMP, RFC 1213 MIB II, Bridge MIB, RFC 1643 Ethernet Like, RFC 1757 RMON1, LANTECH Enterprise MIB, RFC 1215 Trap. |
| Protocol | CSMA/CD |

EOVDSL UPLINK MODEM SPECIFICATIONS

Ethernet Port Ethernet connector: (2) RJ-45
 Cable: Cat 5, Cat 5e, Cat 6
 Data Rate: 10/100Mbps
 Distance: 100m (328ft)

Line Side Port 1 (Twisted Pair)
UTP connector: (2) Screw Terminal Block
Cable: Telephone-grade 19 to 26 AWG (one twisted pair)
Throughput: (Downstream / Upstream)
 1000 ft (305 m) 70 Mbps / 68 Mbps
 2500 ft (762 m) 26 Mbps / 17 Mbps
 5000 ft (1524 m) 16 Mbps / 1 Mbps
 7500 ft (2286 m) 5 Mbps / 0.5 Mbps
 10,000 ft (3048 m) 1 Mbps / 0.25 Mbps

Line Side Port 2 (75Ω Coax)
Coax Connector: (2) BNC
Impedance: 75 ohm
Throughput: (Downstream / Upstream)
 200 ft (61 m) 88 Mbps / 95 Mbps
 500 ft (152 m) 85 Mbps / 93 Mbps
 1000 ft (305 m) 83 Mbps / 89 Mbps
 1500 ft (500 m) 76 Mbps / 83 Mbps

Faster data rates and greater transmission distances thru coaxial cable are possible, depending upon the type and quality of the coaxial cable utilized

User-Configurable Selection Of:

- Master/Remote Operation
- Symmetrical/Asymmetrical Data
- Forward Error Correction
- Long or Short Range operation for optimal BER (Bit Error Rate) performance

Overload Protection Automatic Resettable Solid-State Current Limiters
Circuit Board Meets IPC Standard
System Outline Dimensions (L x W x H) 6.97 x 3.3 x 6.5 in. (17.7 x 8.4 x 16.5 cm)
Shipping Weight: <5 lbs./2.25 kg
MTBF >100,000 hours
Operating Temp -40° C to +75° C
Storage Temp -40° C to +85° C
Relative Humidity 0% to 95% (non-condensing)†
VDSL3 Power: A 100-264 VAC wall-mount power supply is provided.
System Power Requirements for Operation of switch and uplink modem from External Low-voltage DC Sources +12 - +27 VDC @ < 1 A

† May be extended to humidity with condensation conditions by adding suffix '/C'

NOTE: In a continuing effort to improve and advance technology, product specifications are subject to change without notice.



TYPICAL APPLICATION

