



ORION TELECOM NETWORKS INC.

VCL-4 E1 + Ethernet PDH Optical Multiplexer

Product Brochure & Data Sheet

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Product Description

VCL-4 E1 + Ethernet PDH Optical Multiplexer is a point to point high performance optical line transmission equipment, combines 4, ITU-T G.703 compliant standard electrical E1s **plus** 100BaseT ethernet signal into an optical data stream for transport over fiber optic pairs. Several transmitter options for different cable types and wave-lengths are available. 1+1 optical path redundancy is offered and available as an option.

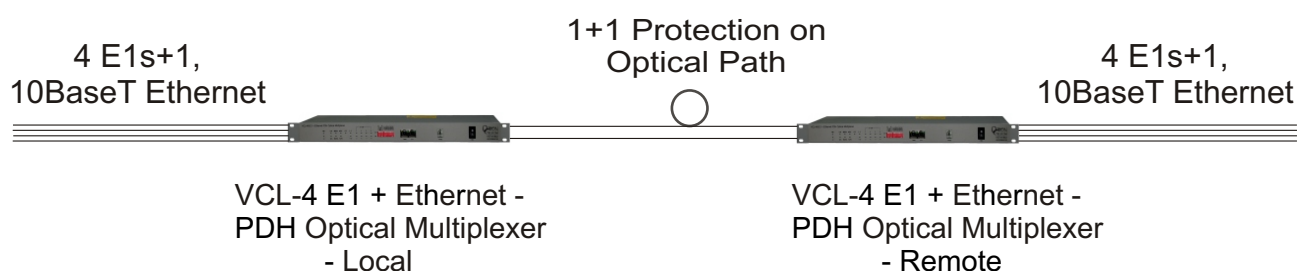
VCL-4 E1 + Ethernet PDH Optical Multiplexer



Features and Highlights

- Integrated E1 Plus Ethernet Optical Multiplexer
- Compact design that performs E1 and Ethernet channel multiplexing & de-multiplexing to an optical output
- Provides visible and audible alarm indication
- Provide Remote power detection (RPD)
- Low power consumption
- Orderwire (EOW) channel for end to end installation and maintenance
- Local and remote loop back test for diagnostics
- 1+1 Fiber Path protection
- ALS (Auto Laser Shutdown) facility for eye safety
- 10/100M Ethernet Port - 100 Mbps Ethernet data transmission rate complies with IEEE8 02.3
- Supports auto negotiation and flow control (pause)
- Clock options: internal/loop-timed
- Provides visible and audible alarm indications
- Local & remote loopback controls for diagnostics and troubleshooting
- Local configuration management through RS232 Serial Port
- Provide a customer RS232 transparent data channel upto 115.2 Kbps
- Remote configuration and management through 10/100BaseT Ethernet Port - Telnet (english text commands)
- SNMP (V1 and V2C).

Application Diagram VCL-4 E1 + Ethernet PDH Optical Multiplexer



Technical Specifications

Electrical Interface	E1
Channel capacity	Upto 4E1
Bit rate	2.048 Mbps \pm 50 ppm
Line code	HDB3
Frame Structure	As per G.704
Electrical Interface	As per G.703
Nominal impedance	120 Ω balanced / 75 Ω unbalanced (optional)
Jitter character	ITU-T G.742, G.823 compliant
Connectors	DB37 interface with RJ-45 connectors (120 Ω balanced) DB37 interface with BNC coaxial connectors (75 Ω unbalanced)

Optical

Type of Transmitter	Class 1 Laser
Transmitter power	\geq - 3dBm, \geq - 6dBm, \geq - 9dBm options, as ordered
Bit rate	155 Mbps
Wavelength	850/1310/1550nm (optional)
Optical connector	FC/PC
Receiver Sensitivity	\leq - 36 dBm
Typical output power	\geq -9dBm
Fully Compliant with ITU-T G.957, G.958 Specification	
Class 1 Laser Product, Compliant with IEC 60825-1	
Compliant with Telcordia (Bellcore) GR-468-CORE	

Safety

Class 1 Laser
Auto Laser Shut Down in the event of fiber break.

Ethernet Interface

10/100BaseT (optional)

Number of Interfaces	1
Interface	RJ45 Ethernet 10BaseT or 100BaseT-TX (auto sensing)
Compliance	Ethernet Version 2.0 IEEE802.3 10Base-T & 100Base-TX Activity, Full/half duplex.
Interface Rate	100 Mbps Ethernet data transmission rate
Connector	RJ-45
Flow Control	Pause

Order Wire Interface

Phone set	Standard 2-wire phone set
Bandwidth	64Kb/s
Coding	PCM

RS232 Interface

Bit rate	9600b/s
Data width	8bits
Stop bit	1bit
Parity check bit	None
Connector	DB9

System Management and Access

Windows XP and Windows 7 compatible Graphical User Interface (GUI)
Telnet - CLI (Command Line Interface)
SNMP V2 (MIB File provided with the equipment).

Management and Control Ports

Serial Management Port (RS232) - COM Port
10/100BaseT for remote management over a LAN / TCP/IP network.

Power Supply

Power Input	AC, DC, AC + DC
DC power	DC - 48V(-36~-72V) / DC 24V optional
AC power	AC 220V (185~265V)
Power consumption	18 Watts maximum

Environment

Temperature	- 5°C ~ +55°C for operation - 40°C to +70°C for storage
Humidity	5% to 95% (35°C)- non-condensing

Physical

Width	434 mm
Depth	155 mm
Height	44 mm
Weight	2 kg.
Rack Type	EIA 19-Inch

Ordering Information

S. No.	Product Description	Part No.
1.	VCL-4 E1 + Ethernet PDH Optical Multiplexer - AC	2041:1-4E1-ETH-AC
2.	VCL-4 E1 + Ethernet PDH Optical Multiplexer - DC	2041:1-4E1-ETH-DC

Technical specifications are subject to changes without notice.
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