



# ORION TELECOM NETWORKS INC.

## VCL-8 E1 + Ethernet PDH Optical Multiplexer

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### Product Brochure & Data Sheet

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## Product Description

VCL-8 E1 + Ethernet PDH Optical Multiplexer is a high performance optical line transmission equipment, combines 8, 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.

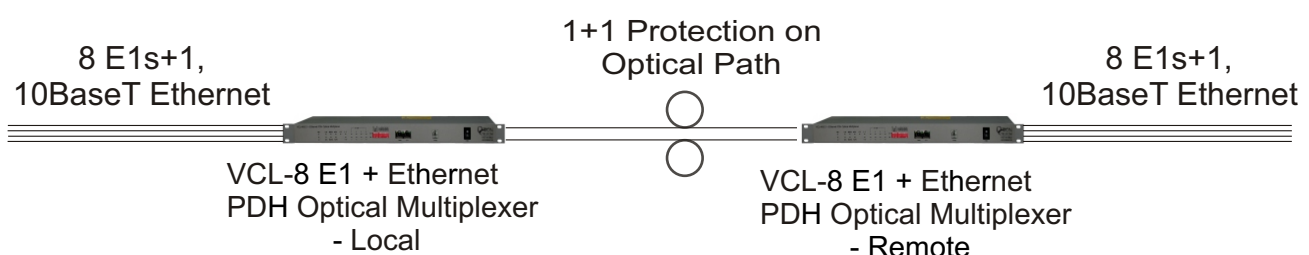
### VCL-8 E1 + Ethernet PDH Optical Multiplexer



## 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-8 E1 + Ethernet PDH Optical Multiplexer



## Technical Specifications

Electrical Interface	E1
Channel capacity	Upto 8E1
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 $\Omega$ balanced / 75 $\Omega$ unbalanced (optional)
Jitter character	ITU-T G.742, G.823 compliant
Connectors	DB37 interface with RJ45 connectors (120 $\Omega$ balanced) DB37 interface with BNC coaxial connectors (75 $\Omega$ unbalanced)

## Optical

Type of Transmitter	Class 1 Laser
Transmitter power	$\geq$ - 3dBm, $\geq$ - 6dBm, $\geq$ - 9dBm options, as ordered
Bit rate	155 Mbps
Wavelength	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

## 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-8 E1 + Ethernet PDH Optical Multiplexer - AC	2081:1-8E1-ETH-AC
2.	VCL-8 E1 + Ethernet PDH Optical Multiplexer - DC	2081:1-8E1-ETH-DC

Technical specifications are subject to changes without notice.  
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