

**Introduction:**

The VCL- E3-OLTE is a 34Mbps Optical Line Transmission Equipment which converts and transports a ITU-T compliant standard E3, 34Mbps signal on optical fiber. The optical link, between two OLTE terminals is established on one pair of optical fibers. One fiber link is used for Transmit and the other fiber link is used for Receive.

A complete optical line transmission system comprises of two OLTE terminals one at each end of the optical fiber cable.

Both the Local and the Remote terminals can be monitored and controlled by a Windows based GUI (Graphical User Interface).

The VCL- E3-OLTE is available in the configuration.

- 34Mbps E3, OLTE (Optical Line Transmission Equipment)

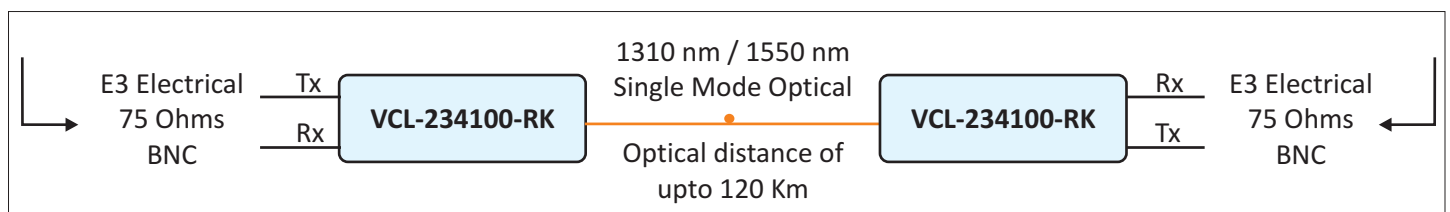
**Features and Highlights:**

- Single - card implementation
- Standard CCITT (ITU-T) compliant interfaces
- Extensive alarms and status indication facility
- Operate on nominal 48V DC input and 220V AC, 50Hz Mains
- Distributed on-board power supply
- Microprocessor controlled with powerful diagnostic facilities for both remote and local systems
- Highly reliable and compact

**Programming and Monitoring**

VCL-OLTE offers programming via an RS232 port for control and monitoring of the terminals. Both local and remote terminals can be monitored and controlled using a PC loaded with the NMS software connected to the local terminal.

**Application Diagram**



**Alarm Status Monitoring**

- Loss of electrical signal at 34 Mbps port
- System Active
- Status of audible alarm
- Loss of optical signal
- Loss of auxiliary frame signal
- Bit error rate out of limit

**Monitoring VCL-OLTE via LED Indications**

- Optical transmitter inactive
- Loss of incoming signal at 34Mbps electrical port
- Loss of incoming signal at 34 Mbps optical port
- AC Input failure
- DC Input failure
- In addition to the above monitoring facilities, VCL-OLTE is provided with LEDs, which indicate various fault conditions.

**External Interface:**

VCL-OLTE unit provides the following interfaces to the external world:

- 1, 34Mbps, 75 Ohms unbalanced electrical interface
- 34Mbps, optical interface
- 48V DC and 220V AC, 50 Hz Mains inputs for VCL-OLTE on-board power supply
- RS232 interface for connection to Network Management System, used for configuration and monitoring of VCL-OLTE system
- 2 alarm extensions for visual and audible alarms.

## Technical Specification

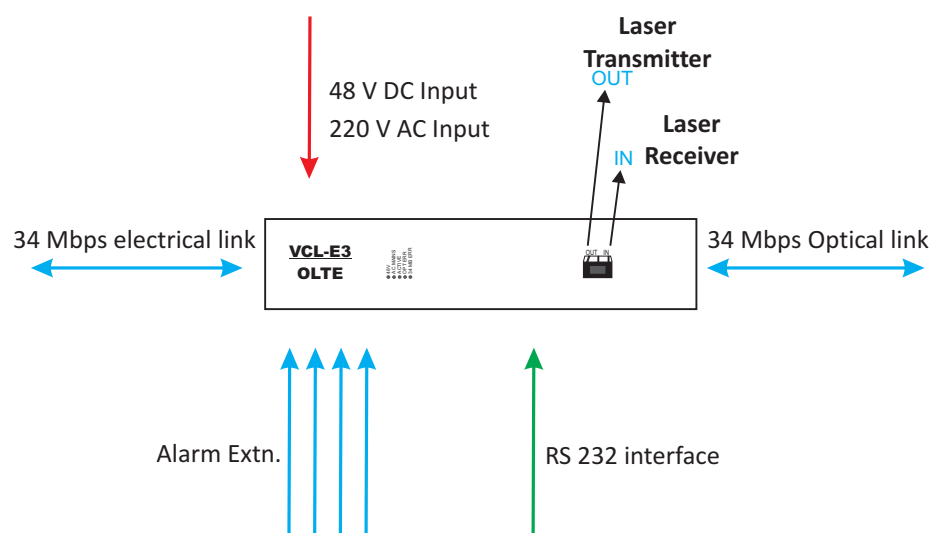
### 34Mbps, E3 Electrical Interface

Number	1
Nominal bit rate	34368kbps
Bit rate tolerance	± 20ppm
Line code	HDB3
Frame structure	As per G.751
Interfaces	As per G.703
Input Jitter Acceptance	100Hz to 1KHz - ≤ 1.5UI 10KHz to 800KHz - ≤ 0.15UI
Maximum Output Jitter	≤ 0.05UI
Connectivity	BNC (Female) 75 Ohms
Cable	75 Ohms unbalanced
Permissible attenuation	12dB at 17184KHz

### 34Mbps, Optical Interface

Type of Transmitter	Class 1 Laser
Number	1
Nominal bit rate	34368kbps
Optical Interface	1310nm (standard) 1550nm (optional)
Transmit Spectral Width	<4nm
Transmit Power	- 11 dBm to - 2.5 dBm
Receiver dynamic range	≤ 34dBm
Receiver sensitivity	- 28 dBm to - 34 dBm
Optical Connectors	LC connectors

## Front View of Shelf



The LEDs provide the following indications:

- LED 1: 48V DC
- LED 2: AC Mains
- LED 3: System Active
- LED 4: 34Mbps Link Optical Error
- LED 5: 34Mbps electrical interface (Error)

- OUT: Optical Transmit link
- IN: Optical Receive link

Technical specifications are subject to changes without notice.  
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## Safety

- Class I Laser
- Meets the optical safety requirements: G.958, IEC-825-1 and IEC 825-2

## Power Consumption

- Power Consumption: 9.60 Watt

## Mechanical Specification

Width	480 mm (19 inch rack mountable)
Depth	260 mm
Height	44 mm (1U)
Weight	2.0 kg

## Ordering Information

Part No.	Product Description
234100-RK	E3, 34 Mbps Optical Line Transmission Equipment, OLTE/OLTU (48 V DC input) Stand Alone - 19-inch Rack Mount Version