

VLM-100/VLM-300 is designed to provide fiber connection for T1 and E1 equipment. It includes a T1/E1 Line Interface Unit that provides DSX-1/E1 line driver/receiver, data/clock recovery, jitter attenuation, AMI/B8ZS/HDB3 encoding, AIS (Alarm Indication Signal) detection, BPV (Bi-Polar Violation) detection, and loop back mode. The recovered T1/E1 RX clock and data are encoded and sent to the fiber through the optical transmitter. The encoded data received by the optical receiver are decoded, and clock and data are again recovered before they are sent to the T1/E1 line through the Line Interface Unit. Both the encoder and the decoder include an individual Phase Lock Loop (PLL) to ensure the accuracy of the data. The VLM-100/300 offers two modes of Loopback for testing the connection integrity. In the Local Loopback mode, the modem loops back the received T1/E1 signal. In the Remote Loopback mode, the modem sends loopback codes to cause the far-end modem to loop back the received optical data. In the event of loss valid receive signal, either from the T1/E1 line or the fiber, the VLM-100/300 can be set to automatically sent Alarm Indication Signal (unframed all 1's) to the down-stream device.

Features:

- T1 DSX-1 or E1 G.703 Interface
- T1/E1 Signal Jitter/Wander Attenuation
- T1 AMI/B8ZS Codes, E1 AMI /HDB3 Codes
- Local Loopback and Remote Loopback
- Automatic Alarm Signaling on both Line and Fiber
- 18 dB Typical Optical Link Margin
- Multiple Link Status Indicators



Specifications:

Electrical

VLM-100

Interface T1 DSX-1
 Data rate 1.544 Mbps +/- 50 ppm
 Impedance 100 Ohm balanced
 Connector DB15 female
 Line code AMI / B8ZS
 Cable length 0 - 655 feet (5 length settings)

VLM-300

Interface E1 G.703
 Data rate 2.048 Mbps +/- 50 ppm
 Impedance 75 Ohm unbalanced
 120 ohm balanced
 Connector BNC female coaxial
 DB15 female twisted pair
 Line code AMI / HDB3

Optical

Wave length 850 nm/1310 nm multimode
 1310 nm single mode
 Link Margin 18 dB (min.) multimode @ 62.5 m
 18 dB (min.) single mode @ 9 m
 Connector ST / FC

System

Bit Error Rate < 1x 10⁻¹⁰
 Power 100 - 230 VAC, 50-60 Hz
 Dimension 9.0"W x 6.0"D x 1.6"H
 Weight 42 oz. (AC)
 Temperature 0 to 50°C
 Humidity 0 to 95%, non-condensing

Configurations:

The VLM-100/300 includes a dipswitch that provides the following configuration selection:

DSX-1 Cable Length - 5 different impedance selections to match DSX-1 cable at length from 0 to 655 feet.

T1/E1 Line Coding Format - AMI/B8ZS for VLM-100, AMI/HDB3 for VLM-300.

Local Loop Back - enabling Local unit to Loopback the T1/E1 signal.

Remote Loop Back - enabling the local unit to command the remote unit to loopback its fiber signal.

T1/E1 Line AIS - enabling the alarm signal to the DSX-1/E1 line.

Fiber Link AIS - enabling the alarm signal to the fiber.

Status Indicators:

The VLM-100/300 also provides 5 LED indicators to display the following status:

POWER - indicating that the unit is properly powered.

LINE AIS - indicating that the alarm signal is being received from the T1/E1 line.

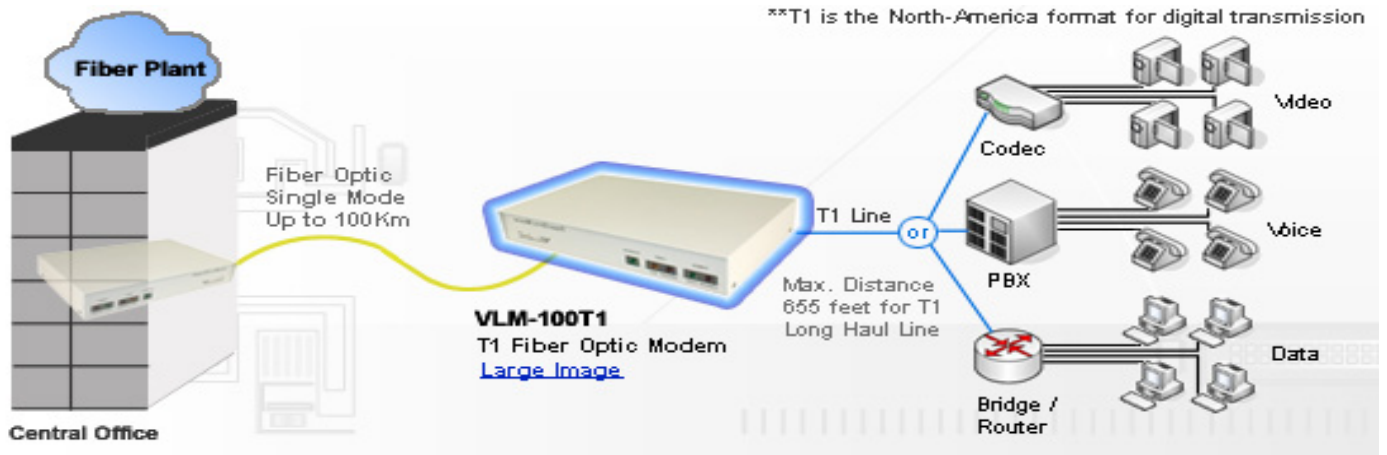
LINE ERROR - indicating that the received T1/E1 signal is either not valid or having bipolar error.

FIBER LINK - indicating that the good signal is being received from the fiber.

FIBER ERROR - indicating that the received optic signal is either not valid or having coding error.

Applications:

Applications of the VLM-100/VLM-300 include connecting distributed PABX and channel banks, connecting, wireless receiver to its base station, and extending T1/E1 transmission distance for LAN or Video Conferencing. Because of the advantage of fiber optic system, the VLM-100/300 modems are the best solutions for applications that require EMI/RFI immunity, electrical isolation, and data security.



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