# VLM-210

**DATA SHEET**

***VLM-210*** is designed to provide fiber connection for communication equipment with RS-449, RS-530, or V.35 Interface. Capable of transmitting synchronous data with external clock at speeds from 9600 bps up to 2.048 Mbps, the modem can also be set to transmit asynchronous data at speeds from DC up to 64 Kbps. In synchronous mode, the VLM-210 encodes the data with the clock pulse, received from the RS-449/RS-530/V.35 interface, into serial data stream and sends out to the optic transmitter. In asynchronous mode which has no external clock signal, the modem encodes the data with its internal clock. On the receiving side, the modem recovers clock and data from the received optical data stream, and then sends the recovered clock/data to the appropriate pins of the RS-449/RS-530/V.35 interface set by the DCE/DTE switch. Because the encoder/decoder are independent from the interface transceivers, two VLM-210 modems with different interface can be connected to the same pair of fiber cables to pass data. In this case, the VLM-210 modems not only extend the transmission distance, they also eliminate the need of external interface converters.


## Features:

- RS-449, RS-530, or V.35 Interface
- Synchronous Data up to 2.048 Mbps
- Asynchronous Data up to 64 Kbps
- Internal/External Clock Selectable
- DTE/DCE Switchable
- 18 dB Optical Link Margin
- Link/Data/Power Indicators



## Sspecifications:

**Electrical**

Clock Mode External, Internal

Data rate

- External Clock 9600 to 2048K bps
- Internal Clock 64K, 128K, 256K, 384K, 512K, 768K, 1024K, and 2048K bps.
- Asynchronous 0 to 64K bps

RS-449

- Connector DB-37 Female
- Pinout
  - Data In - 4/22 (DCE), 6/24 (DTE)
  - Clock IN - 17/35 (DCE), 8/26 (DTE)
  - Data Out - 6/24 (DCE), 4/22 (DTE)
  - Clock Out - 8/26 (DCE), 17/35 (DTE)
  - Tx Timing – 5/23 (DCE)

RS-530

- Connector DB-25 Female
- Pinout
  - Data In - 2/14 (DCE), 3/16 (DTE)
  - Clock IN - 11/24 (DCE), 9/17 (DTE)
  - Data Out - 3/16 (DCE), 2/14 (DTE)
  - Clock Out - 9/17 (DCE), 11/24 (DTE)
  - Tx Timing – 12/15 (DCE)

V.35

- Connector 34-pin Female
- Pinout
  - Data In - P/S (DCE), R/T (DTE)
  - lock IN - U/W (DCE), V/X (DTE)
  - Data Out - R/T (DCE), P/S (DTE)
  - Clock Out - V/X (DCE), U/W (DTE)
  - Tx Timing – Y/AA (DCE)

**Optical**

850 nm, multimode
- TX power -15.0 dBm (min.)
- RX sensitivity -33.0 dBm (Max.) (2.048Mbps)

1310 nm, multimode
- TX power -18.0 dBm (min.)
- RX sensitivity -33.0 dBm (Max.) (2.048Mbps)

1310 nm, single mode
- TX power -15.0 dBm (min.)
- RX sensitivity -33.0 dBm (Max.) (2.048Mbps)

Connector ST / FC

**System**

Power 5 VDC @ 300 mA
Dimension 5.0"W x 3.5"D x 1.3"H
Weight 16 oz.
Temperature 0 to 50°C
Humidity 0 to 95%

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## Cconfigurations:

The VLM-210 includes a dipswitch that provides the following configuration selection:

**DCE/DTE -** Selecting direction of the data flow to eliminate the need of external null cable.

**Synchronous/Asynchronous -** Selecting Synchronous mode enables the encoder to use the external receive clock; selecting Asynchronous mode enables the encoder to use the internal clock.

**Internal/Loop Clock -** Selecting internal clock mode with the DCE mode enables the modem to use the internal clock (set by the clock rate select) as the transmit timing signal; selecting loop clock mode with the DCE mode enables the modem to use the recovered fiber link clock as the transmit timing signal.

**Clock Rate –** This configuration selects the one of the following clock rates for the internal clock source: 64K, 128K, 256K, 384K, 512K, 768K, 1024K, and 2048K bps.

## Status Indicators:

The VLM-200 also provides 3 LED indicators to display the following status:

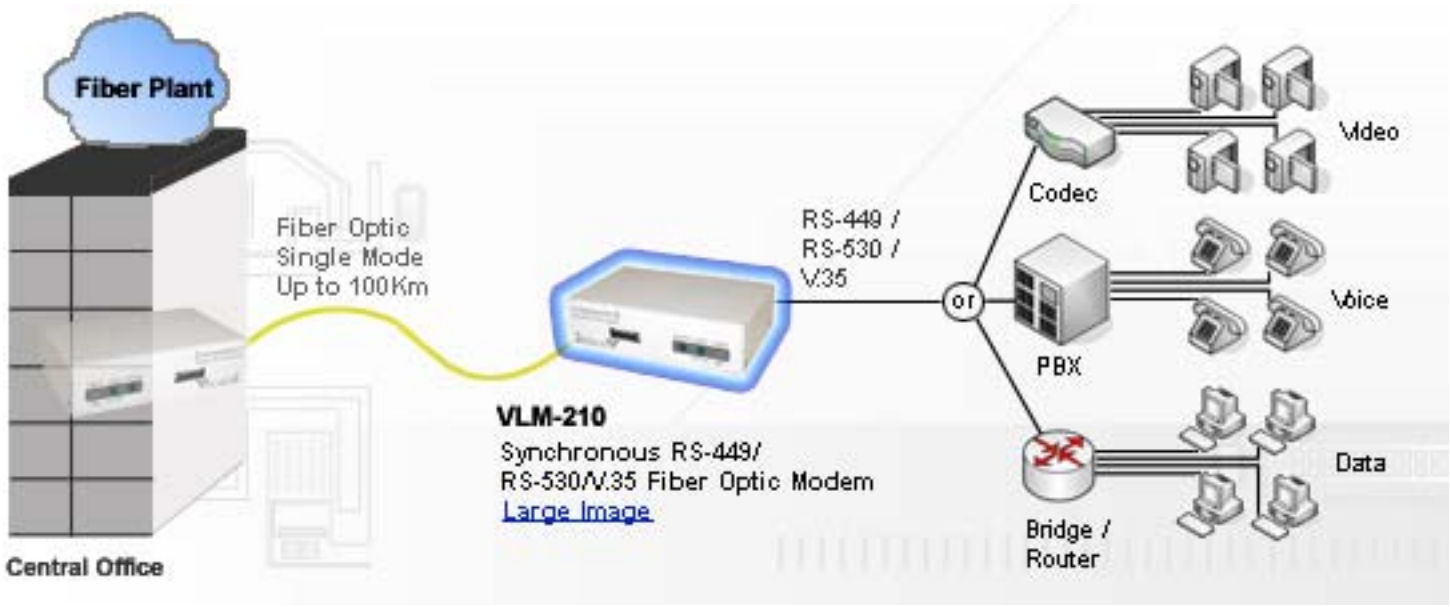
**POWER -** indicating that the unit is properly powered.

**DATA -** indicating that valid external clock is be received from the electrical interface.

**LINK -** indicating that valid optical signal is being received from the optic receiver, and the fiber link is good.

## Applications:

Applications of the VLM-210 include connecting distributed PABX, or channel banks networks, and extending synchro-nous/asynchronous transmission distance for LAN or Video Conferencing. Because of the advantage of fiber optic system, the modems are the best solutions for applications that require EMI/RFI immunity, electrical isolation, and data security.

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