

OM - 64

Fiber Optic Multi-Protocol Modem

Applications

- Computer-to-computer links
- Computers to PLC
- Router to Cryptographic equipment
- Computer to terminal links
- Server to PC links



Description

The OM-64 fiber optic modem transmits serial data over a pair of optical fibers. The interface can be set to EIA-530, EIA-530A, or V.35. Data, one or two clocks, and all handshake lines are passed across the link. The modem is data rate transparent from DC to 10 Mbps, and can supply a clock at 14 common frequencies for synchronous applications. The modem acts either as a DCE or as a DTE. The T1/E1 optional interface allows

four T1 (AMI/B8ZS) or four E1 (HDB3) telephony channels to be passed across the link. The front panel displays the status of all I/O signals. Pushing a button shows the display of the "remote" OM-64; pushing the button again gives control over the remote modem via the local switches. This is helpful for trouble-shooting and initial setup. The case is rugged, and RFI shielded for very low EMI/RFI emission.

Features:

- Transmits EIA-530/530A, or V.35
- Emulates a DCE or DTE
- Optional four port T1/ E1 interface
- Data rate transparent to 10Mb
- Up to two clocks can be passed across link
- Multi-mode or Singlemode optics
- 5 Year warranty
- Low EMI/RFI
- Remote monitor and setup
- Internal Bit Rate Clock at 14 rates
- Remote/Local Loopback of data
- Rack mountable
- Co-directional or Contra-directional timing
- Extended temperature range (-40°C to 75°C)

Specifications

Optical

Light source	MM option	1300 SLED multi-mode fiber
	SM option	1300 LASER singlemode fiber
TX output	50/125 fiber	-22 dBm min.
	62.5/125 fiber	-19 dBm min
	9/125 fiber (SM option)	-15 dBm min
RX sensitivity	MM option 10 ⁻¹⁰ BER	-32 dBm
	SM option	-34 dBm
Optical connectors	SC or ST
Operating distance	MM option with 3dB safety margin	5 Km
	SM option with 3dB safety margin	20 Km

OM-64

Fiber Optic Multi-Protocol Modem



Interface I (Serial Data)

Interface I is a programmable interface which can be set to EIA, EIA-530A, or V.35.

Bit Rate Select: The BIT RATE CLOCK button controls the output from the TX-CLOCK pins 15/12 on the OM-64 DCE connector. The table below shows the available clocks.

64 KHz Clock	2.048 MHz Clock
112 KHz Clock	3.156 MHz Clock
128 KHz Clock	4 MHz Clock
256 KHz Clock	6.312 MHz Clock
384 KHz Clock	8 MHz Clock
512 KHz Clock	10 MHz Clock
768 KHz Clock	SLAVE Mode ¹
1.536 MHz Clock	EXTernal Clock ²

¹In SLAVE Mode both clock outputs receive the clock being input the remote OM-64 (RX Clock for a DTE and TX Clock for a DCE); therefore local transmission equipment is "slaved" to the remote end.

²EXTernal Clock allows the clock being input the remote OM-64 DTE pins 15/12 to come out the local OM-64 DCE equipment pins 15/12.

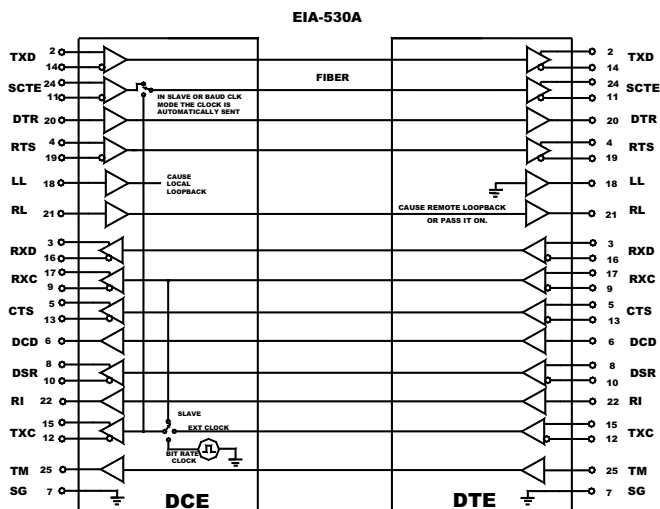
The OM-64 passes data and two clocks below 6 MHz.

Above 6 MHz only one clock is passed; the modem preferentially passes the remote OM-64 DTE pins 17/9, and in its absence passes pins 15/12; this clock is output pins 17/9 and 15/12 of the OM-64 DCE.

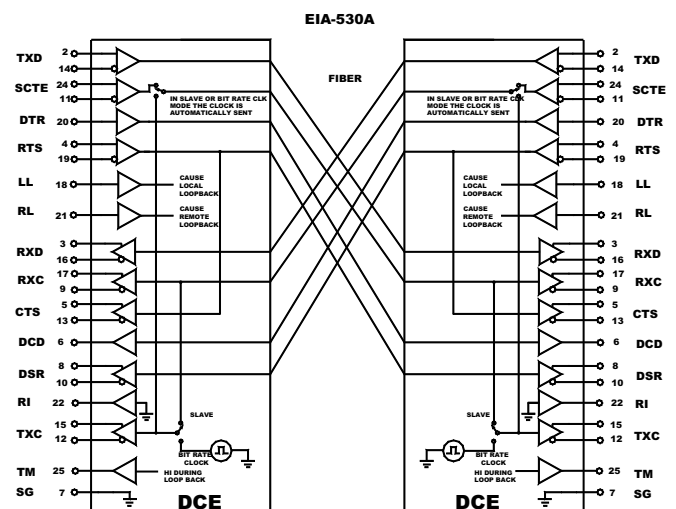
Contra-directional timing is when a DCE type equipment gives a TX-Clock on pins 15/12, and expects to clock the TX-Data from the attached equipment with this clock; this often causes a problems because the TX-Data has an undetermined delay. Setting the OM-64 to RETIME RXD aligns the RX-Data with the TX-Clock.

Interconnect Examples

EIA-530A DCE-DTE Connection



EIA-530A DCE-DCE Connection



OM - 64

Fiber Optic Multi-Protocol Modem



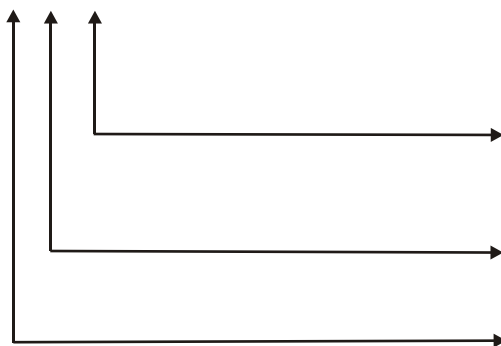
Interface - 2 (T1/E1 DATA)

When INTERFACE-2 is installed, the front panel display allows either T1 mode or E1 mode to be selected. The T1 (1.544 M baud) is transparent to both

B8ZS encoding, while the E1 (2.048 M baud) is HDB3 encoded.

Part Numbers

OM64-XX-YY-ZZ



- 1 = serial EIA-530/a, V.35 interface
- 2 = T1/E1 4 port interface balanced, RJ45 connector
- 3 = T1/E1 4 port interface unbalanced, BNC connector

SC type optical connector
ST type optical connector

MM = 1300nm multi-mode optics

LTIPS-10: Extra power supply (110 Vac, 60 Hz)

Rack Mount Panel

The OM-64 is suitable for table top use, or it may be rack mounted in a 19" IU high rack mount panel.

Rack Mount Panel Part No. **MP-OM24/OM44**

LUXCOM Technologies Inc.

102 Walgreen Road, Ottawa, Ontario K0A 1L0 Canada Tel.: 1-(613) 831-7777 Fax: 1-(613) 831-7778
email: sales@luxcom.com www.luxcom.com

11/14/07