

OM-44

Fiber Optic Universal Modem

Applications

- Computer to computer links
- Computers to PLC
- Computer to terminal links
- Server to PC links
- Computer to controller
- Router to cryptographic equipment
- PBX to router connection



Description

The OM-44 fiber optic modem transmits serial asynchronous or synchronous data over a pair of optical fibers. The interface can be set to EIA-530/A (RS-422 level), V.35, or RS-232. Data, two clocks, and all handshake lines are passed across the link. The modem is data rate transparent from DC to 2.048 Mbps and can supply an internal clock at 13 common frequencies for synchronous applications. The

modem acts either as a DCE or as a DTE. Local and Remote Loopback can be initiated with front panel switches. All option settings are accessed externally. The OM-44HSM is a heavily shielded version of OM-44; it has an RFI tight case and extra power supply filtering for very low EMI/RFI emission.

Features:

- Data rate transparent to 2.048 Mbps
- Synchronous/Asynchronous data
- Interfaces to EIA-530/530A, V.35 or RS-232
- Bit Rate Clock output if desired
- Remote/Local Loopback of data
- Rack mountable
- Two clocks can be passed across link
- Multi-mode and singlemode fiber versions
- Passes all handshake lines
- Very low EMI/RFI version available
- DCE and DTE port
- Alarm contact

Specifications

Optical

Light source	850 nm SLED M version 1300 nm SLED MM version 1300 nm ELED SM version
Optical connectors	ST
Optical Sensitivity	-32 dBm (10^9 BER)
M version -18dBm launch, 62.5/125 fiber, 3.0 dB loss/km	2 Km
MM version -18dBm launch, 62.5/125 fiber, 1.0 dB loss/km	14 Km
SM version -16dBm launch, 9/125 fiber, 0.4 dB loss/km	40 Km

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Specifications

ELECTRICAL

Data I/O	EIA-530, EIA-530A,V.35,RS-232
Data connector DCE	DB 25S (female)
DTE	DB 25P (male)
Data rate	DC to 2.048 Mbd
Data format	Data Rate Transparent
Data jitter	25 ns p-p
Data input-output delay (short link)	820 ns
Power consumption	4 Watts
Power source	External 12V from power cube LTIPS-10 (Supplied)

GENERAL

Weight	1 Kg.
Operating temperature	0°C to 50°C
Humidity (RH)	10% to 95%
Dimensions (H * W * D)	14.0 x 4.0 x 20.0 cm

*Specifications subject to change without notice

Baud Clock Switch

This switch controls the output from the TX-CLOCK pins 15/12 on the OM-44 DCE connector.

- Setting 0 allows the clock being input at the remote OM-44 DTE (pins 15/12) to be output on pins 15/12 of the local modem's DCE port.
- Setting 1 to 13 outputs an internally generated baud clock.
- Setting 14 makes pins 15/12 follow pins 17/9; therefore the transmission from the attached equipment is "slaved" to the remote end.
- Setting 15 Hi Speed is the same as setting 0, except it is used when data rates exceed 1.5 Mbps.

SWITCH	FUNCTION	SWITCH	FUNCTION
0	Remote Clock	9	384 Khz Clock
1	4.8 Khz Clock	10	512 Khz Clock
2	9.6 Khz Clock	11	768 Khz Clock
3	19.2 Khz Clock	12	1.544 Mhz Clock
4	56 Khz Clock	13	2.048 Mhz Clock
5	64 Khz Clock	14	Slave Mode
6	112 Khz Clock	15	High Speed Clock > 1.5 Mhz
7	128 Khz Clock		
8	256 Khz Clock		

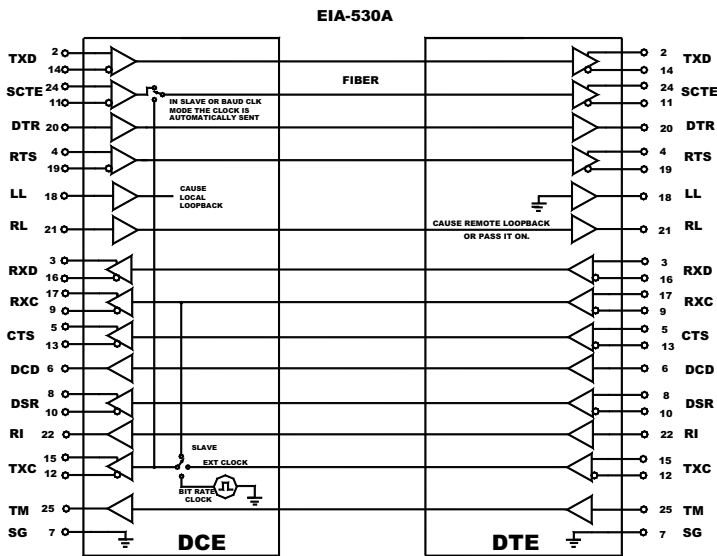
OM-44

Fiber Optic Universal Modem

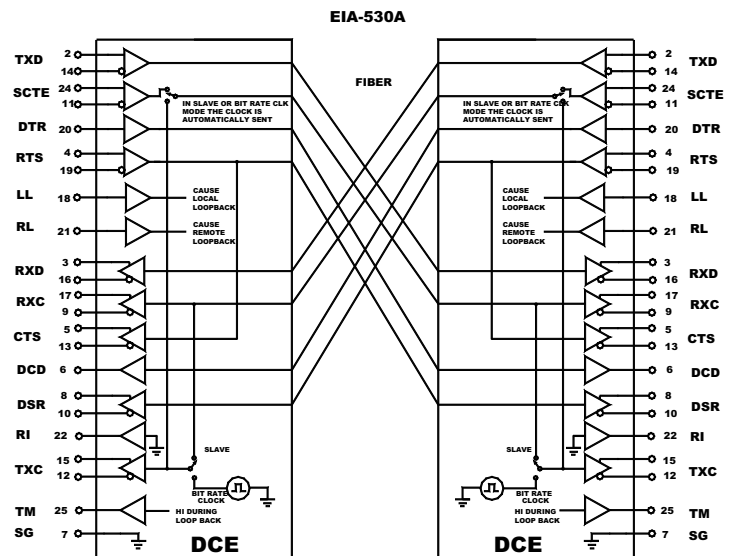


Interconnect Examples

EIA-530A DCE-DTE Connection



EIA-530A DCE-DCE Connection



Note: An OM-44 DTE optically connected to another OM-44 DTE is a valid system; however it is not shown. Interfaces at either end of the link do not have to be the same type; ie. if one OM-44 is V.35, the other OM-44 can be EIA-530.

Part Numbers

OM44 - XX (standard case)



- M = 850nm multi-mode optics (standard)
- MM = 1300nm multi-mode optics
- SM = 1300nm singlemode optics

OM44HSM - XX (EMI/RFI case)



- M = 850nm multi-mode optics (standard)
- MM = 1300nm multi-mode optics
- SM = 1300nm singlemode optics

Accessories

Rack Mount Kit

The OM-44 is suitable for table-top use. Alternately, it may be rack mounted in a 19" 1U high rack mount panel (MP-OM15) which is available as a separate order. This bracket will mount three OM-44s.

The OM-44HSM mounts into the MP-OM24/OM44 panel which can hold two modems.