LUXCOM Technologies Inc.

OM-10B

Fiber Optic Serial Data Modem

Applications

- Computer to computer
- Computer to printer
- Computer to encrypter
- Server to PC links

Description

The OM-10B modem transmits and receives serial asynchronous and synchronous data over a pair of optical fibers. The interface can be set to EIA530, EIA530A, RS232, or RS485. The modem is data rate transparent from DC to 128K Baud. Data, two clocks, and all hand-shake lines are passed across the link. There are two models of the OM-10B, a DCE and a DTE. The OM-10B-DCE connects to Data Terminal Equipment such as a computer. It has an on-board bit rate generator which outputs standard clock frequencies, if a clock is desired for synchronous communication. The OM-10B-DTE connects to Data Communication Equipment such as a modem.

Features:

- Compact
- Programable interface
- Data plus two clocks
- DC to 128K baud
- DCE and DTE version
- All handshake lines implemented
- Wide operating temperature (-40°C to 75°C)
- EMI/RFI immune
- Low power consumption
- 5 year warranty

Specifications

Optical

Light source ..... 850 nm LED M multimode fiber version
1300 nm SLED MM multimode fiber version
1300 nm ELED SM singlemode fiber version

Optical connectors ..... ST

Optical sensitivity ..... >-32 dBm (10-9 BER)

Operating distance

M version	-18dBm launch,	62.5/125 fiber,	3 dB loss/Km	5 Km
MM version	-18dBm launch,	62.5/125 fiber,	1 dB loss/Km	14 Km
SM version	-16dBm launch,	9/125 fiber,	.4 dB loss/Km	40 Km

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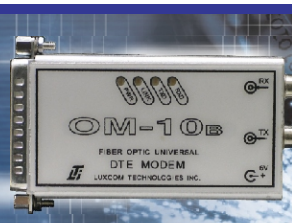

Specifications (continued)

Electrical

Data rate	Transparent up to 128k Baud
Baud clock (on OM-10B DCE only)	1.2K, 2.4K, 4.8K, 9.6K, 19.2K,
(Note that 112K and 128K are above RS232 data rates)	56K, 64K, 112K, AND 128K
Data I/O connector	OM-10B-DCE DB25 FEMALE OM-10B-DTE DB25 MALE (terminal block is optional)
Interfaces (switch selectable)	EIA-530, EIA-530A, RS-232, EIA-485 -2 wire
Power source (supplied)	External 6V DC power cube
Supply voltage range	5-8V
Power consumption (6 V supply)	< 2 Watts

General

Operating temperature	-40°C to 75°C
Humidity (RH)	10% to 95%
MTBF	>100,000 hrs.
Dimensions	8 *1.6 * 5 cm

***Specifications subject to change without notice**

I/O Interface

Switches on the side of the OM-10B are used to select any of the following interfaces: EIA-530, EIA-530A, RS-232, EIA-485 -2 wire. The modems will work with different interfaces at each end. For instance, one end may be configured as EIA-530 and the other as RS-232.

The OM-10B-DCE usually connects to another OM-10B-DTE; in this configuration, the modem simulates a straight through cable connection; however an OM-10B-DCE to OM-10B-DCE or OM-10B-DTE to OM-10B-DTE configurations is valid. Two possible configurations are shown below.

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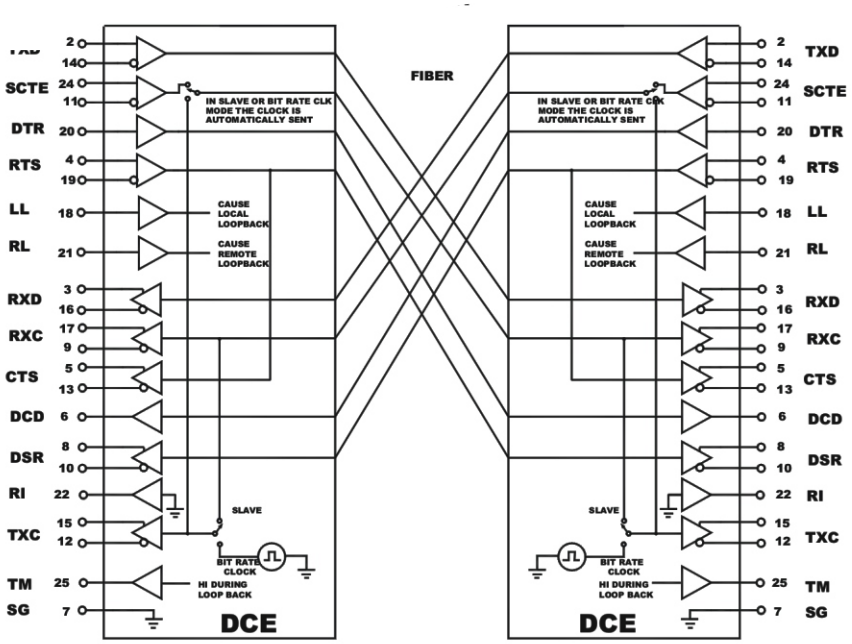
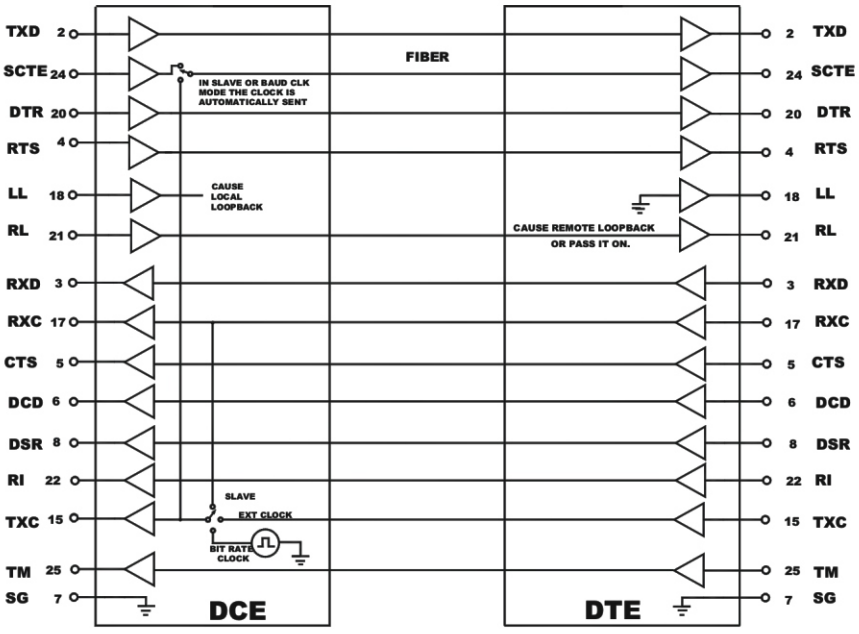
Interconnect Examples

EIA-530A DCE to DCE



RS-232 DCE to DTE



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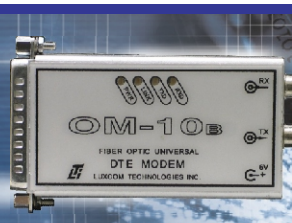

Part Numbers

OM10B-XX-YY

M	850nm standard version
MM	1300nm multi-mode version
SM	1300nm singlemode version

DCE	for DCE interface
DTE	for DTE interface

Accessories

Mounting Clip (MC-OM10B)

This is a machined plastic mounting clip which is used for surface mounting the modem. The clip may be mounted to any flat surface with user provided screws, or double-sided adhesive tape. The modem snaps into the clip.

Mounting Panel, non-powered (MP-3)

Mounting Panel, powered (MP-3P)

The MP-3 mounting panel provides rack mounting for up to six OM-10B modems. The panel is 1RU (1.75") high, 19' wide. It comes complete with all mounting hardware with the exception of the 10-32 screws for attaching the panel to the rack. This panel is also available with a power supply/harness which powers all six modems. The photo on the right shows the powered version; the non-powered version is the same minus the power supply and harness.

I/O DCE-DTE

The I/O DCE-DTE is a DB25 to terminal block breakout box for the OM-10B modems

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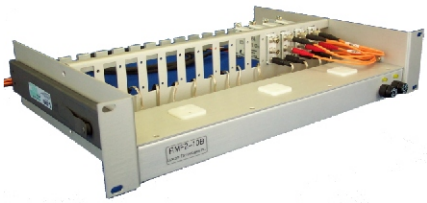
Rack Mount Unit For 14 OM-10B MODEMS (RMF-2-10B)

The mounting unit provides rack mounting for up to 14 OM-10B modems. The panel is 2RU (3.5") high, and fits a 19' wide rack. Two built-in power supplies give redundancy and reliability. The slide rails allow easy access.



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