ORDERING

FOM-6MP/*/+
Asynchronous fiber optic multipoint modem

* Specify number of fiber optic links:
SL for single link
DL for dual link

\+ Specify fiber optic interface:
ST85 for 850 nm multimode, ST connector
FC85 for 850 nm multimode, FC connector
ST13 for 1300 nm single mode, ST connector
FC13 for 1300 nm single mode, FC connector
ST13L for 1300 nm laser diode single mode, ST connector
FC13L for 1300 nm laser diode single mode, FC connector

P/S-AC/12/800
12 VDC/90 to 264 VAC power supply

RAD
data communications
www.rad.com

International Headquarters
24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel: (972) 3-6458181
Fax: (972) 3-6498250, 6474436
Email: rad@rad.co.il

U.S. Headquarters
900 Corporate Drive
Mahwah, NJ 07430
Tel: (201) 529-1100
Toll free: 1-800-444-7234
Fax: (201) 529-5777
Email: market@radusa.com

314-100-02/01

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FOM-6MP

RAD

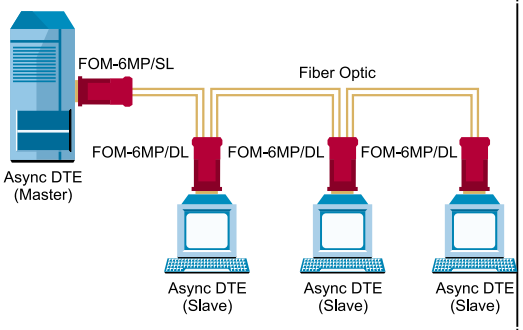
Asynchronous Fiber Optic Multipoint Modem

Order from: Cutter Networks Ph:727-398-5252/Fax:727-397-9610 www.bestdatasource.com

FEATURES

- Asynchronous fiber optic modem for multidrop data distribution
- Data rates up to 38.4 kbps
- Transmission range up to 16 km (10 miles) over single mode fiber
- Automatic disabling in case of streaming
- Variety of fiber optic interface options, including single mode, multimode and laser diode over single mode
- Compact, lightweight and easy to install
- Wide input DC supply, 10V to 30V

APPLICATION



DESCRIPTION

- FOM-6MP, asynchronous fiber optic multipoint modem, is used for multidrop data distribution connecting full or half duplex async computers and DTEs.
- FOM-6MP ensures integrity of data transmission over fiber optic link at distances up to 16 km (10 miles). Only one fiber optic link is required between DTEs for transferring data in full duplex.
- FOM-6MP is available with a single or dual fiber optic interface. The single fiber optic interface modem must be connected to the host (master) and the dual link versions must be attached to the slave DTEs.
- FOM-6MP/DL contains bidirectional optical interfaces and a single V.24/RS-232 DTE interface. Data received on optical link A is sent to the DTE and repeated to optical port link B for transmission to the upstream FOM-6MP. When data is received on link B, it is repeated and transmitted to link A to respond to the master computer's request.
- FOM-6MP should be used only in a multidrop application, where data from host (master) is transmitted to all DTEs (slaves), but only one slave responds. The responding DTE contends for transmission either by raising RTS or by data transmission (user-selectable).
- To prevent blockage in the event of streaming, a DTE port can be disabled by automatic circuitry, if it remains active for more than 1 or 13 seconds (time interval is user-selectable). The automatic disable resets if DTE RTS drops or data is not being transmitted.
- Diagnostics include indication of DTE data receive and transmit status, as well as streaming detection.
  If FOM-6MP does not receive data from the fiber optic link, the LINK FLT A indicator lights up. If transmission is not received by the remote unit, FOM-6MP sends back a signal which causes the local FOM-6MP LINK FLT B indicator to flash.
- FOM-6MP is delivered in a plastic enclosure and is powered by an external power supply or via the V.24/RS-232 DTE connector.

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SPECIFICATIONS

- **Data Rate**
  Up to 38.4 kbps
- **Transmission Line**
  Duplex optical cable
- **Transmission Mode**
  Asynchronous, full or half duplex
- **Fiber Optic Interface**
  ST or FC (see *Ordering*)
- **Optical Output Levels**
  -12 dBm into 9/125 fiber with 1300 nm laser diode
  -20 dBm into 9/125 fiber with 1300 nm LED
  -20 dBm into 62.5/125 fiber with 850 nm LED
- **Receiver Sensitivity**
  -36 dBm @ 850nm
  -38 dBm @ 1300 nm
- **Operating Wavelength**
  850 nm or 1300 nm (see *Ordering*)
- **Optical Budget**
  16 dB @ 850 nm
  18 dB @ 1300 nm
  26 dB @ 1300 nm laser diode
- **DTE Interface**
  V.24/RS-232, 25-pin, female connector
- **Transmission Controls**
  - Controlled by RTS or data contention (user-selectable)
  - Automatic disabling when RTS is OFF or no data is being transmitted

- **Indicators**
  Fiber Optic Interface:
  LINK FLT A, LINK FLT B
  OFF – Normal operation
  ON – Not receiving optical transmission
  Flashing – Remote side is not receiving optical transmission
  DTE Interface:
  TD
  ON – Transmit data
  RD
  ON – Receive data
  STREAM
  OFF – Normal operation
  ON – Streaming detected
  General:
  PWR
  ON – Power on
  OFF – No power received
- **Power**
  Powered by an external power supply (10–30 VDC) or via DTE interface connector, pin 9
- **Physical**
  Length: 182 mm / 7.2 in
  Height: 32 mm / 1.3 in
  Width: 114 mm / 4.5 in
  Weight: 325g / 11.4 oz
- **Environment**
  Temperature: 0–50°C / 32–122°F
  Humidity: Up to 90%, non-condensing

Declaration of Conformity

Mfr. Name: RAD Data Communications Ltd.
Mfr. Address: 24 Raoul Wallenberg St.
Tel Aviv 69719
Israel

declares that the product:

Product Name: FOM-6MP

Conforms to the following standard(s) or other normative document(s):

EMC: EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment.
EN 50082-1 (1992): Electromagnetic compatibility – Generic immunity standards for residential, commercial and light industry.

Supplementary Information:
The product herewith complies with the requirements of the EMC Directive 89/336/EEC. The product was tested in a typical configuration.

Tel Aviv, October 2nd, 1996

Haim Karshen
VP Quality

European Contact: RAD Data Communications GmbH, Berner Strasse 77, 60437 Frankfurt am Main, Germany

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INSTALLATION

Caution. *Be careful when setting jumpers or performing any actions within the product so that you do not bend or break any components.*

Installation of FOM-6MP is simple and straightforward. Follow these instructions:

1. Configure FOM-6MP, using the DIP switch located on the modem's side panel (see *Figure 1, Table 1* and *Table 2*).
2. Connect the DTE (see *Figure 2* for the DTE connector pinout).
3. Remove the plastic dust caps from the fiber optic connectors and connect the cables to the unit:
   - Connect the link B Tx of the local FOM-6MP to the link A Rx of the remote upstream unit.
   - Connect the link B Rx of the local FOM-6MP to the link A Tx of the remote upstream unit.
4. Connect the external power supply to FOM-6MP if the unit is not powered up via the DTE connector pin 9, and plug the power supply into the mains.

Warning

This product may be equipped with a laser diode. For your safety:

- **Do not look directly into the optical connectors while the product is operating.**
- **Do not attempt to adjust the laser drive current.**

The use of optical instruments with this product will increase eye hazard.

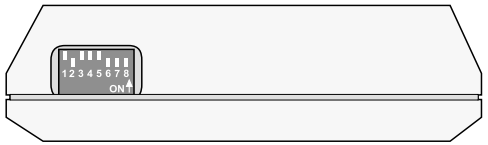

Figure 1. DIP Switch Location

Table 1. DIP Switch Settings (SW1, SW2, SW6, SW7)

Identity	Function	Position
SW1, Anti-streaming	Controls the anti-streaming	↑ **Enable*** ↓ Disable
SW2, Anti-streaming timeout	Controls the anti-streaming timeout period	↑ 1 sec **↓ 13 sec***
SW3–SW5	See *Table 2*	
SW6, CTS delay	Control delay between RTS ON and CTS ON	↑ 1 msec **↓ 13 msec***
SW7, Contention mode	Selects the contention mode	↑ Data **↓ RTS***
SW8	–	NC

* – Factory setting

Table 2. Selecting the Data Rate (SW3, SW4, SW5)

Data Rate (kbps)	Position		
	SW3	SW4	SW5
1.2	↓	↑	↓
2.4	↓	↑	↑
4.8	↑	↓	↓
9.6	↑	↓	↑
19.2	↑	↑	↓
38.4	↑*	↑*	↑*

* – Factory setting

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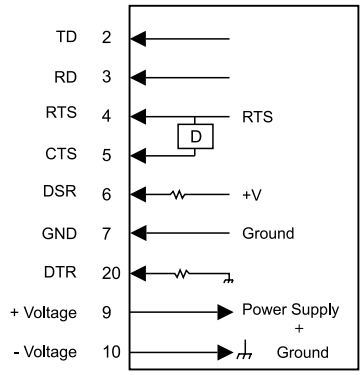

Figure 2. DTE Connector Pinout

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