

# Tactical Fiber Optic Communications

*Product Guide*



**MOOG**  
COMPONENTS GROUP

## Tactical Fiber Optic Communications Multiplexers

The Tactical Fiber Optic Communications Multiplexer (TFOCM) product family is based on the combined capabilities of Moog Components Group and the Prizm™ electronic products. The Moog TFOCM product strategy is to offer military customers a menu of electrical multiplexing options, optical multiplexing options and mechanical packaging options that allow users to design their own solution from off-the-shelf components. All Moog TFOCM components are specifically designed with the military user in mind.

Our engineers are available to help you design the optimal tactical fiber optic multiplexer for your application or select a solution from our wide menu of product offerings. If it needs to be transmitted via fiber, Moog has it – digital, analog, video, audio, telephony, satellite, RF and custom products.

### Features

- Multi protocol capable
- Up to 16 Gbps bandwidth
- Transmission distances up to 80 kilometers
- Singlemode or multimode compatible
- Comprehensive remote diagnostics capability
- Fully self-configuring (no menu options)
- Compact packaged solutions
- High reliability - low maintenance
- Wide operating temperature range
- Mil-Std 810D Shock

### Packaging Options

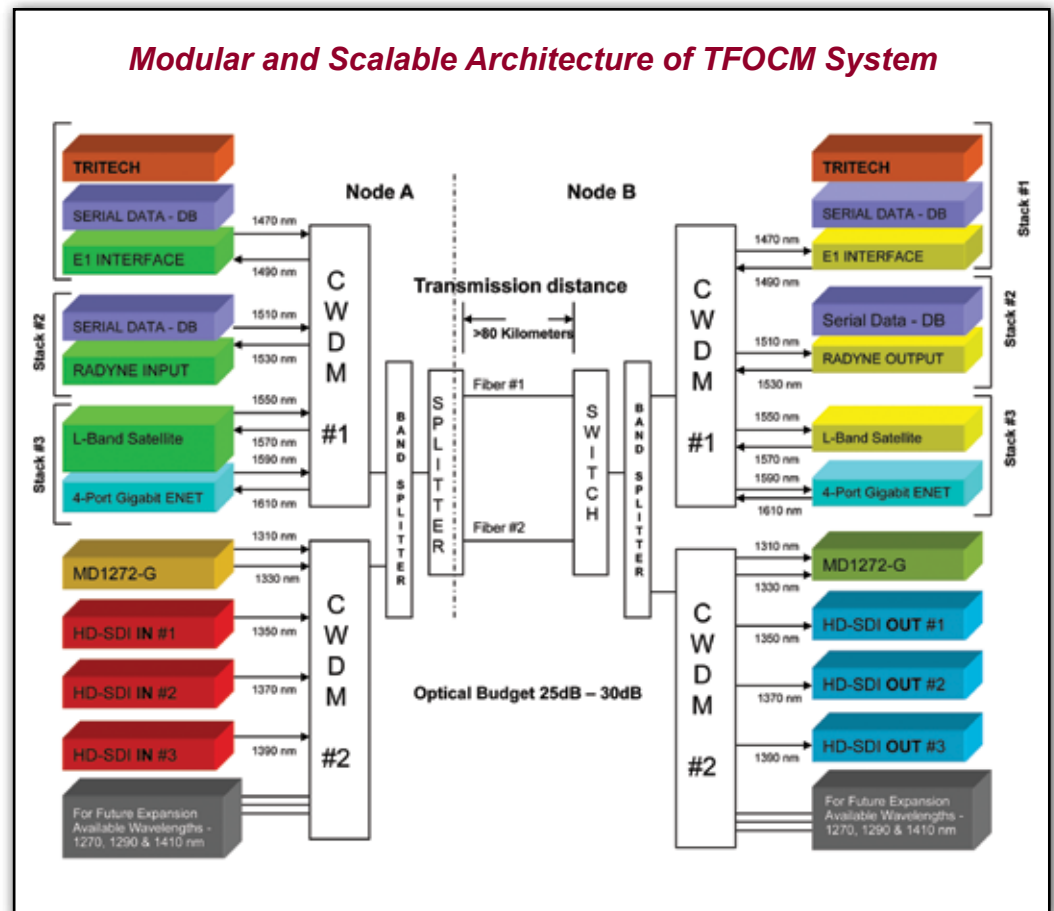
- 1 RU, 2 RU and 3 RU rack enclosure with power supply, LED status and discrete connectors
- Moog Cube FOM
- Unpackaged board level solutions
- Custom enclosures

### Interface Options

- Satellite - L, X, K bands
- 10 / 100 / 1000 Ethernet
- Serial Data - RS-232 / 485 / 422
- USB 2.0
- Analog - 16 bit A-D
- Video - NTSC and PAL compliant
- HD-TV
- Eurocom B
- Eurocom C
- Voice - (PTT optional)
- Arcnet
- MD1272 / G functionality
- DS3
- Protocols: RF, DeviceNet, ControlNet, PROFIBUS, Firewire and Hotlink

### Optical Options

- Single or multiple fiber
- Fully redundant transmission
- Optical budgets > 35 dB
- 4 / 8 / 16 optical channels
- Wavelengths
- Wavelengths (optical) available 1270 nm - 1610 nm



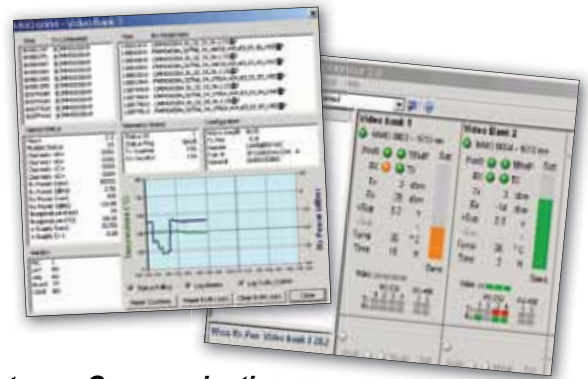
## Remote System Diagnostics

All Moog fiber optic telemetry interfaces include PMON remote diagnostics as a standard feature. PMON is a Microsoft® Windows® based tool used to remotely monitor the status of the fiber optic systems. PMON communicates with an embedded processor located on each system board. The embedded processor collects a variety of operational status information and reports it via a shared RS-485 or Ethernet communications link. Remote diagnostics can be posted to a web page making remote system status viewable from anywhere in the world via the internet. Status conditions monitored include: input DC power level, operating temperature, optical transmitter power, optical receiver sensitivity, bit error rate, data traffic present. This data is monitored and can be stored for future analysis.

PMON collects data from all the boards in a system and displays it on a series of status pages. In addition to real-time data displays, trend graphs and periodic log files may also be created. PMON can detect alarm conditions and generate audible alarms.

PMON is supplied on a standard Auto-Run CDROM as part of the system documentation package. Simply insert the CDROM into any drive and wait for the installation program to start.

Optionally, PMON data can be streamed directly into the end users diagnostic system and can be presented as part of any customer developed GUI.



## Mobile Military Markets

### Missile Launcher

- Tri Tac FOM (1 RU Enclosure)
  - 1 Channel RS-530
  - 3 Channels of 10 / 100 Ethernet
- Modular Data Mux (3 RU Rack)
  - 10 / 100 / 1000 Ethernet
  - MD1272-G
  - DS-3
  - Serial Data RS-232 / 485 / 422
- E1 Interface (1 RU, 3 RU, Cube FOM, Mud Box)
  - 1 Channel
  - 4 Channel
  - 16 Channel



### Mobile Communications Centers

- Remote RF Antenna Telemetry (1 RU Rack)
- Modular Mux (3 RU Rack)
  - 10 / 100 / 1000 Ethernet
  - MD1272-G
  - DS-3
  - Serial Data RS-232 / 485 / 422
- L-Band Satellite Transmission
- Multi-Port Ethernet for Secure IP Networking
  1. Tri Tac FOM
  2. MD1272 / G Cube FOM
  3. 10 / 100 / 1000 Ethernet to Fiber System
  4. Moog Pac



### Radar Antenna Communications

- Modular Mux (3 RU Rack)
  - 10 / 100 / 1000 Ethernet
  - MD1272-G
  - DS-3
  - Serial Data RS-232 / 485 / 422
- Cube FOM
  - MD1272-G
  - Ethernet
  - E1



### Satellite Communication Solutions

- L-Band to Fiber System
  - L-Band Channel
  - 10 Mhz Reference Channel
  - 10 / 100 Ethernet Channels
- Modular Satellite Communication Data Mux (3 RU Rack)
  - RS-530 Channels at up to 52 Mbps (HSSI)
  - 10 Mbps Timing Channel
  - 1 PPS GPS Timing
- Tri Tac FOM (1 RU Enclosure)
  - 1 Channel RS-530
  - 3 Channels of 10 / 100 Ethernet



Specifications and information are subject to change without prior notice. Photo credit: Department of Defense.

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