

# Fiber Optic Multiplexers

**PRIZM** *Product Guide*



**MOOG**  
COMPONENTS GROUP

# Multiplexers and Media Converters

Moog offers a complete Prizm™ product line of multiplexer and media converter solutions for the most demanding applications.

- Remotely Operated Vehicles (ROVs)
- Industrial Automation Equipment
- Explosive Ordinance Disposal (EOD)
- Ruggedized Defense Applications

## Product Overview

The expanded Prizm™ product line now gives customers more fiber optic, video and data multiplexer solutions for harsh environments. Combined with Moog's fiber optic rotary joints and slip rings, our technology and experience allows us to support a variety of custom and standard modems in operation around the world.

Our 24/7 commitment to service ensures our customers that we will quickly respond to their needs and results in minimum downtime in the field. Our products are the choice of defense and commercial subsea researchers and explorers in many applications, including oil and gas, terrestrial robotics and remote sensing.

We can provide modules for use in an OEM system to provide optimum flexibility. In addition, we offer standard modules or combinations in a stand-alone package for bench top or other environments.

We offer fiber optic modems and multiplexer systems, a variety of standard interfaces, including video (NTSC, PAL, Y/C, RGB, S Video, HD-SDI and others) data (RS-232, RS-422, RS-485 and / or various custom protocols with rates up to 10 Mbps) Ethernet, Sonar, Hydrophone and a variety of custom interfaces.

## Video 3 Multiplexer Series

The Prizm™ Video 3 is the third generation of our industry leading multiplexer product family for remote telemetry applications. Developed for the subsea vehicle industry, the Video 3 system provides high quality video and data links.

- 3U VME form factor
- Up to 1.5 Gbps of bandwidth
- Up to 12 video channels, 64 bidirectional data channels
- PC based diagnostic software
- Ethernet, ARCNET, Sonar and Hydrophone interfaces
- Expandable to 12 Gbps bandwidth using CWDM technology
- Designed for operation in harsh environments (-20°C to +70°C)
- Available for link lengths over 100 km
- Custom configurations available



Base Part Number	Description
200460	4 Channel Video Input Board
200470	4 Channel Video Output Board
200530	Fiber Optic Modem
200560	6 Channel RS-422 Interface Board
200600	4-port 10 Mbps Ethernet Board
200690	4 Channel RS-422 / 485 Submux Motherboard
970381	4 Channel RS-232 Submux Motherboard
970391	4 Channel RS-232 Submux Daughterboard
980430	4 Channel RS-422 / 485 Submux Daughterboard
200700	4 Channel Trigger Interface Board
201360	10 Channel 16-bit Analog Board
201830	Standalone 4-port Gigabit Ethernet Switch
201840	Standalone Dual Port Gigabit Ethernet Board
201850	Standalone Dual Beam Reson / Simrad Sonar Board

# Multiplexers and Media Converters

## Mini 4 Multiplexer Series

The Prizm™ Mini 4 Series combines the best of our proven MiniMux 2 and Video 3 technologies to provide an elegant solution for high density applications. The Mini 4 motherboard is a fully integrated fiber optic digital multiplexer / modem that is capable of supporting up to two Mini 4 / MiniMux 2 daughterboards. Other boards in the Mini 4 series provide stand-alone solutions for interfaces such as serial data, Gigabit Ethernet and HD-SDI and Sonar.

- Fully transparent video and data link
- Four 10 bit video channels
- Two isolated RS-485 / 422 channels
- Four isolated RS-232 / digital I / O channels
- Full system diagnostics with GUI output
- Designed for operation in harsh environments (-20°C to +65°C)
- Custom configurations available
- Supports up to two Mini 4 / MiniMux 2 daughterboards



Base Part Number	Description
201580	Mini 4 Multiplexer Input Motherboard
201590	Mini 4 Multiplexer Output Motherboard
201500	HD-SDI SMPTE Interface
201630	Reson 8XXX and Simrad EM3002 Dual Beam Sonar Interface
201640	4 port Gigabit Ethernet Switch
201780	4-port RS-232 + 4-port RS-422 / 485 Data Mux

## MiniMux 2 Multiplexer

The Prizm™ MiniMux 2 provides an elegant solution for limited space applications. The unit is a fully integrated fiber optic digital multiplexer / modem. The MiniMux 2 is available in a pressure tolerant version designed to operate at ambient pressures of 7,500 psi in oil.

- Fully transparent video and data link
- 2x NTSC / PAL video channels, 3x serial data channels onboard
- Supports one Mini 4 / MiniMux 2 daughterboard
- Designed for operation in harsh environments (-20°C to +70°C)
- Custom configurations available
- LEDs provide on-board diagnostics



Base Part Number	Description
200610	MiniMux 2 Input Motherboard
200620	MiniMux 2 Output Motherboard

## Mini 4 and MiniMux 2 Daughterboards

The Prizm™ line of Mini 4 / MiniMux 2 daughterboards provides additional channel capacity to Mini 4 and MiniMux 2 motherboards. Mini 4 motherboards support up to two daughterboards while MiniMux 2 supports a single daughterboard.

- Provides maximum interface flexibility



Base Part Number	Description
200720	10 Mbps Ethernet Daughterboard
200860	RS-422 / 485 Daughterboard
201070	RS-232 / 422 / 485 Daughterboard
201140	10 Mbps Ethernet + Audio Daughterboard
201600	Tritech and Trigger Daughterboard
201610	16-port RS-232 Daughterboard
201750	4-port 10 / 100 Mbps Ethernet Daughterboard
201760	8-port RS-422 / 485 Daughterboard



# Multiplexers and Media Converters

## MicroMux Multiplexer

The Prizm™ MicroMux provides an elegant solution for limited space applications. The unit is a fully integrated fiber optic digital video and data multiplexer / modem. The MicroMux is available in a pressure tolerant version designed to operate at ambient pressures of 7,500 psi in oil.

- Fully transparent video and data link
- Provides 1 video channel, 2x RS-232 and 1x RS-422 / 485 data channels
- Designed for operation in harsh environments (-20°C to +70°C)
- Optional daughter boards available
- Custom configurations available

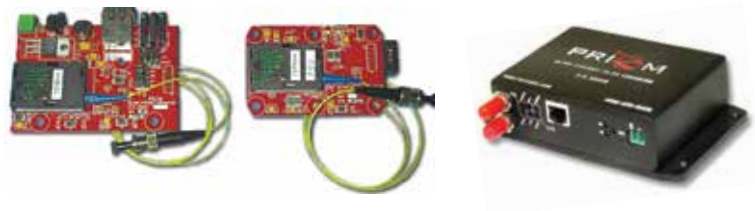


Base Part Number	Description
200790	MicroMux Input Motherboard
200800	MicroMux Output Motherboard
201150	Audio Daughterboard

## Media Converters

The Prizm™ TEL Series of Ethernet Media Converter provides an elegant solution for converting standard twisted pair media to fiber optic media.

- Fully transparent Ethernet link
- 10 / 100 Mbps auto configuring
- IEEE 802.3 compliant
- Designed for operation in harsh environments (-20°C to +65°C)
- Multimode or singlemode links
- Custom configuration available



Base Part Number	Description
200750	10 / 100 Mbps Ethernet Board
200910	10 / 100 Mbps (RJ-45) Ethernet Board
201350	Single Port Gigabit Ethernet Board

## Custom Solutions

If one of our standard Prizm™ products does not match your requirements, Moog's engineering staff is available to support an innovative, custom solution. We will work together with your development staff to provide just the right product. Our engineers lead the way with ongoing developments in fiber optics designs across a broad range of customer requirements.

**Call our knowledgeable staff and ask to speak to one of our Application Engineers for more information: +1-610-328-4000**

Specification and information are subject to change without prior notice.  
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