

## 903

### *Video/Data Multiplexer*

#### **Description**

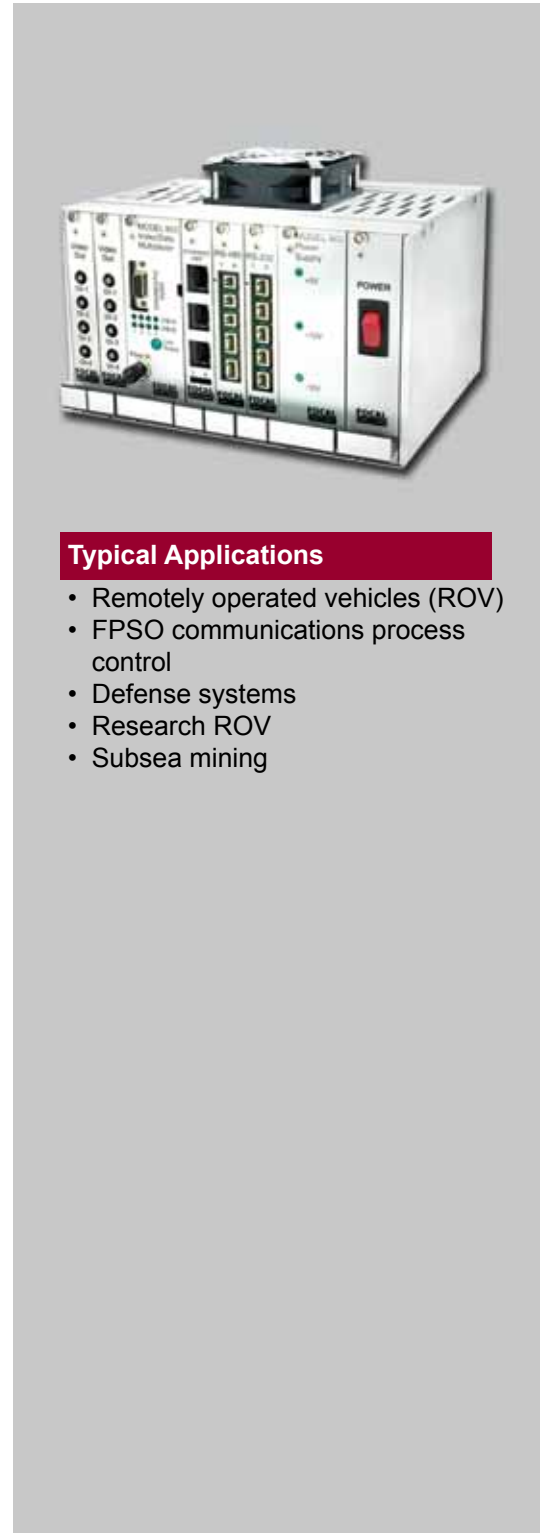
Model 903 multiplexers provide highly reliable fiber optic transmission of video and data signals in demanding environments. A modular Eurocard design based around the FMB-X-2.5 fiber-optic motherboard and a wide range of supported video and data formats ensure the flexibility needed for easy system configuration. Individual data channels can be mixed and matched with a variety of plug-in interface modules. Advanced optical multiplexing (CWDM, DWDM) enables system expansion to 32 video and 256 data channels as well as additional high data rate signals such as HD-SDI, ECL for advanced sonars, and Gigabit Ethernet. Integrated diagnostics and software provide real time display and logging of all critical parameters.

#### **Features**

- Compact, modular, 3U sub-rack
- Highest quality digitized video
- Wide range of supported video and data formats
- Robust protection on I/O lines
- Singlemode and multimode fiber options
- Automatic fiber switching
- Extensive diagnostics monitors power system, video, data, temperature and fiber-optic link

#### **Benefits**

- Easily reconfigured at card level and individual channel level
- Diagnostics verifies health of umbilical and tether cables
- Continually updated with the newest data formats, including HD-SDI, and Gigabit Ethernet, to provide an extended upgrade path (custom interfaces available)
- Successful installation assured by factory acceptance tests at temperature extremes and 20 years of experience providing technical support for fiber-optic systems



#### **Typical Applications**

- Remotely operated vehicles (ROV)
- FPSO communications process control
- Defense systems
- Research ROV
- Subsea mining

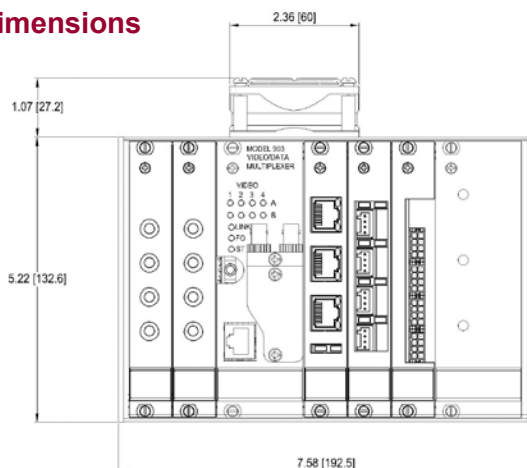
# Model 903 Datasheet

Model 903

Video	
<b>No. Slots</b>	1 - 2 (3 - 8 optional with CWDM)
<b>No. Channels</b>	4 per slot (8 with switched video)
<b>Format</b>	NTSC/PAL composite signals, RGB, Y/C (S-Video), YPrPb, HD-SDI optional
<b>Digitization</b>	10-bit
<b>Bandwidth</b>	6.0 MHz
<b>SNR</b>	> 60 dB (62 dB typical)
<b>Impedance</b>	75 Ohms
Data	
<b>No. Slots</b>	2 - 4
<b>Serial Data</b>	4 - 16 channels per slot RS-232/485/422, TTL (2.5 Mbps NRZ max)
<b>Ethernet</b>	3 ports, 10 Base-T (electrical) 3 ports, 100 Base-TX (optical) 1 port, 10/100 BaseT(X) (electrical on front panel of FMB) 4 ports, 1000 Base TX (optical)
<b>ARCNET</b>	1 - 4 Tritech ARCNET channels per slot
<b>Hydrophone</b>	1 - 4 channels per slot, 12bit, 16 Hz 28 kHz
<b>Analog Sonar</b>	1 - 4 bidirectional channels per slot MS900/971 compatible
<b>Control Lines</b>	10 bidirectional control lines per slot
<b>ECL (optical)</b>	1 - 2 high speed ECL/sonar lines per slot, 30 - 150 Mbaud, 50/75 Ohm in/out
<b>Other</b>	Digital video, industrial control bus, CAN Bus, IRIG-B, HD-SDI
Electrical	
<b>Power Supply</b>	AC: 120/240 VAC (50/60 Hz) DC: 24 VDC, 48 VDC < 40 W each end typical
<b>Isolation</b>	Varies with signal type (consult factory)

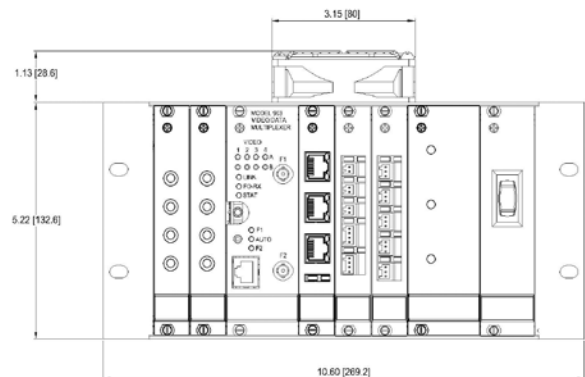
Optical	
<b>Optical Fiber</b>	1 or 2 singlemode (9/125 μm) 1 or 2 multimode (50/125 μm and 62.5/125 μm)
<b>Baud Rate</b>	FMB-X-2.5: 2.5 Gbaud, uplink and downlink
<b>Wavelength</b>	1310/1550 nm standard (CWDM Optional, 1471-1611 nm)
<b>Flux Budget</b>	> 20 dB (24 dB typical)
Mechanical	
<b>Chassis</b>	Eurocard 3U subracks (28 - 84 HP) Rack width (mm) = 9.65 + (#HP x 5.08) 100 x 160 mm cards
<b>Dimensions</b>	Height = 133 mm, Depth = 210 mm Remote Rack Width = 28 - 84 HP Console Rack Width = 34 - 84 HP Fans add 27 - 29 mm to rack height See 903HD datasheet for 12 or 16 HP remote racks. Custom racks available
<b>Weight</b>	Remote 5.0 kg (11 lb), typical Console 5.4 kg (12 lb), typical
Connectors	
<b>Optical</b>	ST front panel bushing (FC optional)
<b>Video</b>	SMB
<b>Data</b>	2 x 6-pin Wago, BNC, D-Sub, RJ45, SMB
<b>Diagnostics</b>	DB-9S (Console FMB)
Environmental	
<b>Temperature</b>	-10°C to +60°C (operational) -20°C to +85°C (storage)
<b>Humidity</b>	85% RH, non-condensing
<b>Vibration</b>	5 g, 251000 Hz, 3 axes
<b>Shock</b>	30 g, 11 ms half sine, 3 axes

## 903 Dimensions



**Remote (ROV) Module**

Dimensions in inches [millimeters]



**Console (Surface) Module**

**Note:** Standard chassis shown with typical cards. Racks are available in a variety of widths up to 84 HP, corresponding to a size compatible with installation in a standard 19" equipment rack.

These are standard commercial products that are available with many options or configurations not explicitly shown.