

## 903

### *Fiber optic multiplexers*

#### **Description**

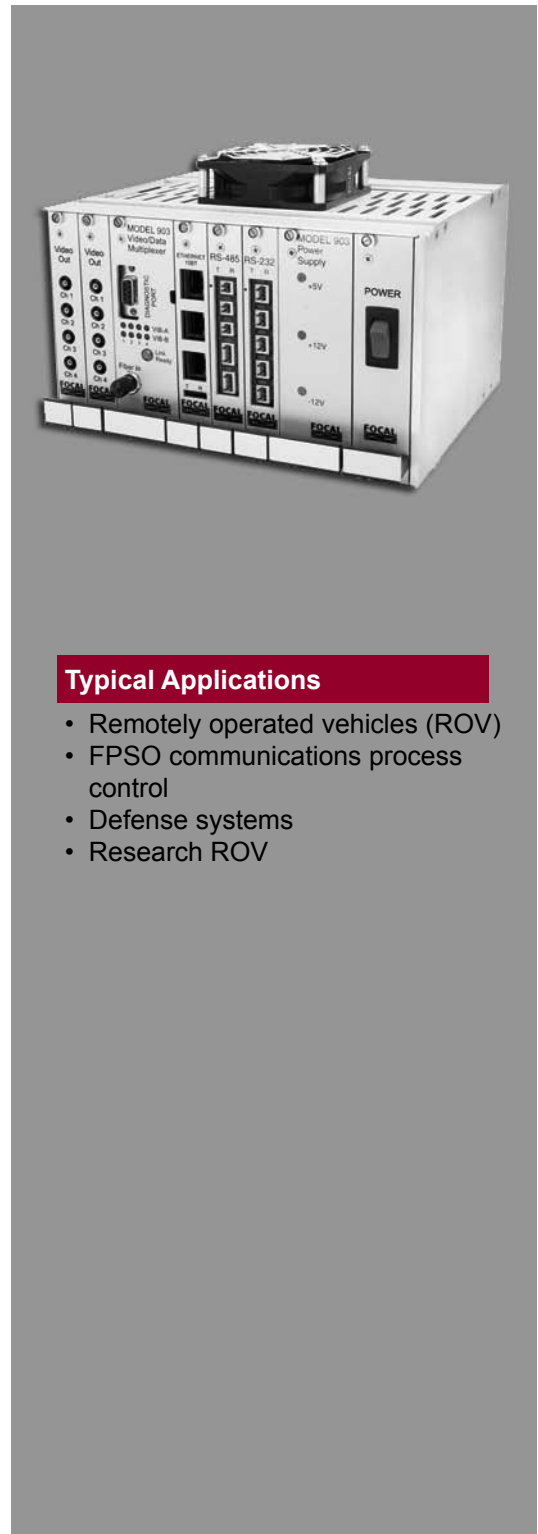
903 multiplexers provide highly reliable fiber-optic transmission of video and data signals in demanding environments. A modular Eurocard design and a wide range of supported video and data formats ensure the flexibility needed for easy system configuration. Individual data channels can be mixed and 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 HDTV (HD-SDI), ECL for advanced sonars and Fast 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 option
- 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, IEEE-1394, 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**

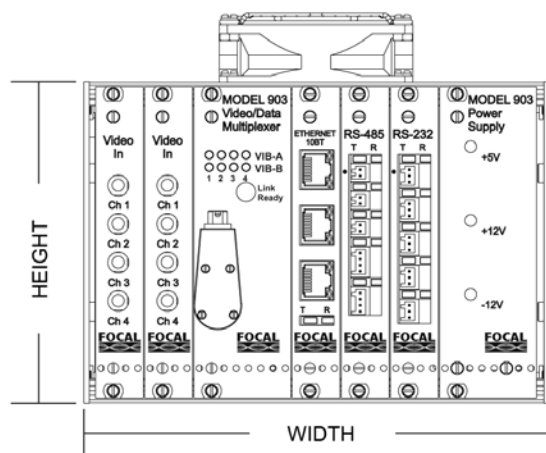
- Remotely operated vehicles (ROV)
- FPSO communications process control
- Defense systems
- Research ROV

# Fiber Optic Multiplexers

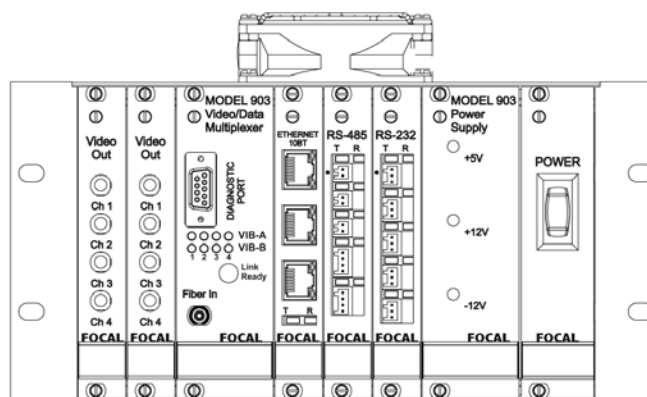
Video	
<b>No. Slots</b>	1 - 2 (3 - 8 optional with CWDM)
<b>No. Channels</b>	4 per slot (8 with switched video)
<b>Format</b>	NTSC, PAL, Y / C, RGB, pseudo-video (sonar)
<b>Digitization</b>	8-, 9-, or 10-bit selectable
<b>Bandwidth</b>	6 MHz (standard) or 12 MHz (optional)
<b>SNR</b>	> 60 dB, typical
Data	
<b>No. Slots</b>	2 - 10 per system
<b>Serial Data</b>	4 - 16 bidirectional channels per slot RS-232 / -485 / -422, TTL (2.5 Mbaud max.)
<b>Ethernet</b>	3 ports, 10Base-T (10 Mbps, electrical) 3 ports, 100Base-TX (100 Mbps, optical)
<b>ARCNET</b>	1 - 4 Tritech ARCNET channels per slot
<b>Hydrophone</b>	1 - 4 analog channels per slot (analog) 12 bit resolution, 16 Hz - 28 kHz
<b>Analog Sonar</b>	1 - 4 bidirectional channels per slot MS-900 / 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 or 75 ohm in / out
<b>Other</b>	Digital video, MIL-STD-1553, industrial control bus, CANBUS, IRIG-B, HDTV
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 singlemode or multimode (2 fibers with fiber switching option)
<b>Data Rate</b>	Uplink = 1.375 Gbaud or 687 Mbaud Downlink = 172 Mbaud
<b>Wavelengths</b>	1310 nm, 1550 nm (optional 8 x CWDM)
<b>Flux Budget</b>	20 dB (min.), 26 dB (high power) min.
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 heights. See 903-HD data sheet for 12 or 16 HP remote racks. Custom racks are available.
<b>Weight</b>	Remote 5.0 kg (11 lb), typical Console 5.4 kg (12 lb), typical
Connectors	
<b>Optical</b>	FC / PC or ST / PC front panel bushings Video, ECL: SMB
<b>Data</b>	2 - 6 pin WAGO, BNC, D-Sub, RJ-45, SMB
<b>Diagnostics</b>	DB-9S (Console FMB)
Environmental	
<b>Temperature</b>	-10 to +60 degrees C (operating) -20 to +85 degrees C (storage)
<b>Humidity</b>	85% relative, non-condensing
<b>Vibration</b>	MIL-STD-167-1 (ships), 3-axis
<b>Shock</b>	MIL-STD-810E

## 903 Dimensions



Remote (ROV) Module



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.