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 fiberoptic 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

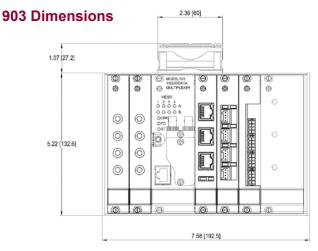
- Remotely operated vehicles (ROV)
- FPSO communications process control
- Defense systems
- Research ROV
- Subsea mining

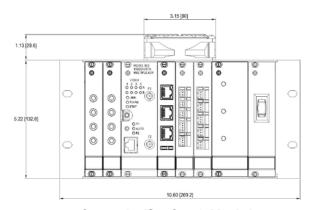
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Model 903 Datasheet

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

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





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.