903HD

High Density Video/Data Multiplexer

Description

The high density 903HD remote module provides the features of a fullsized subsea video/data multiplexer in a package of half the volume. This reduction enables installation in constrained spaces while supporting transmission of 4-8 high quality video channels and 8-16 bidirectional data channels over a single optical fiber. Since the 903HD uses the same FMB-X-2.5 fiber multiplexer boards (FMBs) as the standard 903, including CWDM versions, it supports singlemode or multimode fiber as well as dual fiber operation with automatic fiber switching. Data channels are easily configured with plug-in modules for various data formats. A standard 903 console module at the surface includes powerful diagnostics software with realtime display and logging of critical remote/console parameters.

Features

- Less than half the size of the standard FO903
- Wide range of supported video and data formats
- High quality digitized video
- Singlemode and multimode fiber options
- Extensive diagnostics monitors power systems, 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 operation assured by factory acceptance tests at extremes and 20 years of experience providing technical support for fiber optic systems

Typical Applications

- Workclass Remotely Operated Vehicles (ROVs)
- Defense systems
- Subsea Mining

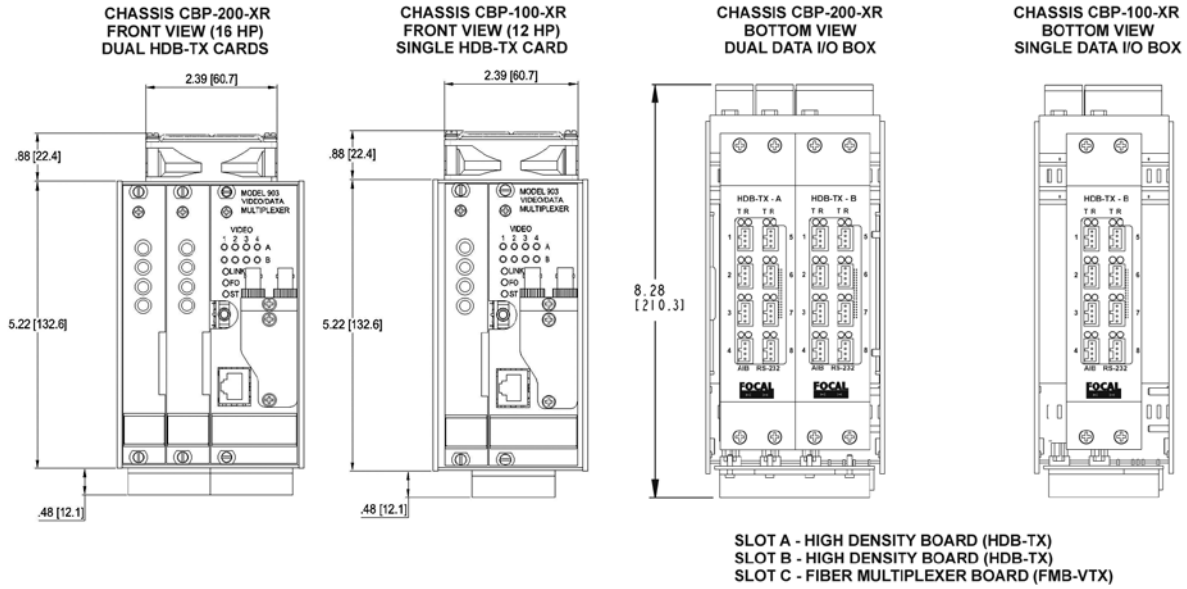
Model 903 Datasheet

Video	
No. Channels	4 per HDB-TX card
Format	NTSC, PAL (optional Y/C, RGB)
Digitization	10-bit
Bandwidth	> 6 MHz
SNR	> 60 dB (62 dB typical)
Data	
RS-232	4 channels per HDB-TX (120 kbps NRZ)
AIB Modules	4 plug-in modules per HDB-TX card
RS-232	1 channel per plug-in (120 kbps NRZ)
RS-422/485	1 channel per plug-in (2.5 Mbps NRZ)
ARCNET	1 Tritech sonar ARCNET port per plug-in (156 kbps max.)
Hydrophone	1 uplink analog channel per plug-in 12-bit resolution, 28 kHz bandwidth
Analog Sonar	1 MS900/971 analog sonar link per plug-in
Other	CAN Bus, Ethernet
Diagnostics	
LEDs	Power (electrical), optical link, optical fault, Ethernet port status, serial data Tx/Rx, video sync, over temperature limit
Ethernet to PC	Diagnostics from remote and console through Ethernet port on console FMB

Optical	
Optical Fiber	1 or 2 singlemode (9/125 µm) or multimode (50/125 µm and 62.5/125 µm)
Baud Rate	FMB-X-2.5: 2.5 Gbaud uplink/downlink
Wavelength	1310/1550 nm, CWDM (1471-1611 nm)
Flux Budget	> 20 db (24 db typical)
Mechanical	
Chassis*	Eurocard 3U subrack, 12 HP and 16 HP CBP-100-MR uses CBP-121-MC console CBP-200-MR uses CBP-241 HC console
Weight*	< 2 kg (4.4 lb), CBP-100-MR (typical) < 3 kg (6.6 lb), CBP-200-HR
Connectors	
Optical	ST/PC (FC/PC optional)
Video	SMB
Data	4-pin WAGO Gage Clamp, data I/O box or ribbon cable (optional) at front panel
Diagnostics	DB-9S (Console Module)
Environmental	
Temperature	-10°C to +60°C (operational) -20°C to +85°C (storage)
Humidity	85% RH, noncondensing
Vibration	5 g, 25-1000 Hz, 3 axes
Shock	30 g, 11 ms half sine, 3 axes
Options	Extended temperature, stress screened or qualified

*See Model 903 data sheet for console module specifications.

903HD Dimensions



Dimensions in inches [millimeters]

Note: Dual (16 HP) and single (12 HP) high density chassis shown with 1 - 2 high density boards (HDB-TX), fiber multiplexer boards (FMB-VTX), and fiber option for use with automatic fiber switching at console module.

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