903HD

Fiber optic multiplexers

Description

The High Density 903HD remote module provides the features of a full-sized 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 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 reconfigured with plug-in modules for various data formats. A standard 903 console module at the surface includes powerful diagnostics software with real-time display and logging of critical remote / console parameters.

Features

- Less than half the size of the standard 903
- Wide range of supported video and data formts
- Highest quality digitized video
- Singlemode and Multimode fiber options
- 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

- Small work-class remotely operated vehicles (ROV's)
- Defense systems

FOCAL TECHNOLOGIES

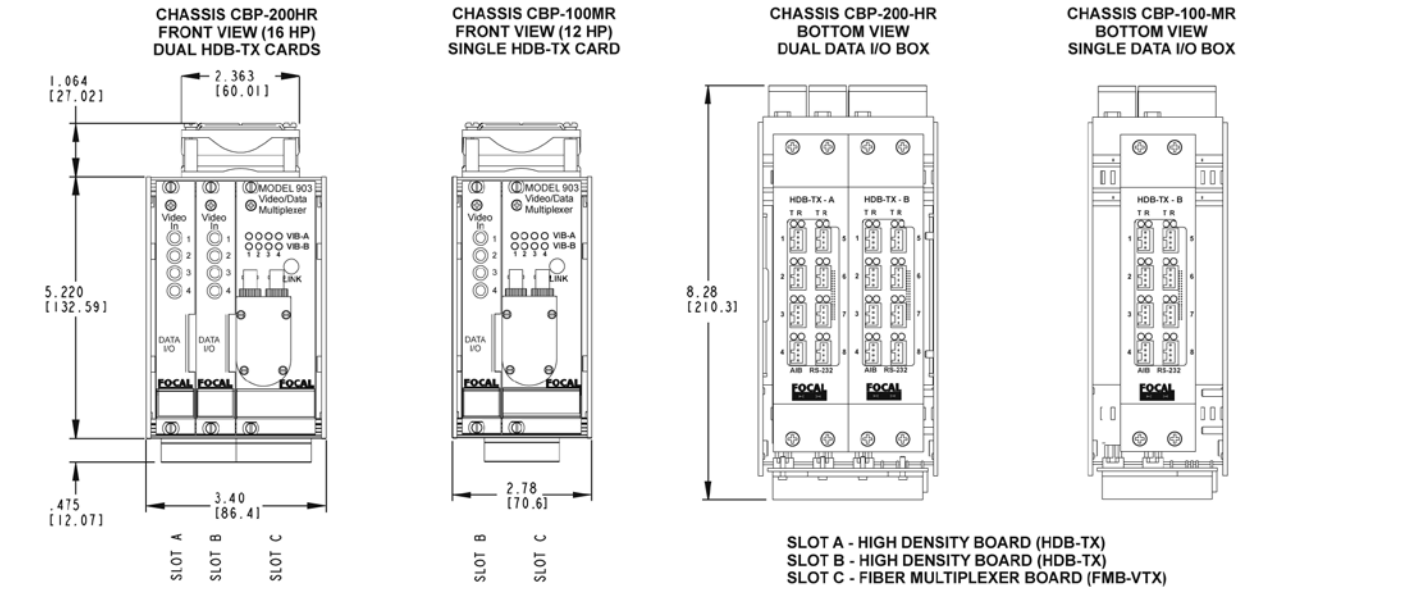
Fiber Optic Multiplexers

Video	
No. Channels	4 per HDB-TX card
Format	1 V NTSC, PAL (optional Y / C, RGB)
Digitization	8, 9 - bit selectable
Bandwidth	5.5 MHz
SNR	> 60 dB, typical
Data	
RS-232	4 bidirectional channels per HDB-TX card 120 kbaud
AIB Modules	4 plug-in modules per HDB-TX card
RS-422 / 485	1 bidirectional channel per plug-in 625 kbaud max. (2.5 Mbaud available)
RS-232	1 bidirectional channel per plug-in 120 kbaud max.
ARCNET	1 Tritech sonar ARCNET port per plug-in156 kbps max.
Hydrophone	1 uplink analog channel per plug-in 12 bit resolution, 16 Hz - 28 kHz bandwidth
Analog Sonar	1 bidirectional analog sonar link per plug-in Compatible with MS900 / 971
Other	MIL-STD-1553, CANBUS, Ethernet
Electrical	
Power Supply	24 VDC or +5 / +12 / -12 VDC regulated and isolated supply required < 30 W power consumption typical
Isolation	Varies with signal type (consult factory)

Optical	
Optical Fiber	1 singlemode or multimode (2 fibers with fiber switching option)
Data Rate	Uplink = 1.375 Gbaud or 687 Mbaud Downlink = 172 Mbaud
Wavelengths	1310 nm, 1550 nm (optional 8 x CWDM)
Flux Budget	20 dB (min.), 26 dB (high power) min.
Mechanical	
Chassis*	Eurocard 3U sub-rack, 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	FC / PC or ST / PC front panel bushings
Video	SMB
Data	4-pin WAGO Cage Clamp, data I/O box or ribbon cable (optional) at front panel
Diagnostics	DB-9S (Console Module)
Environmental	
Temperature	-10 to +60 degrees C (operating) -20 to +85 degrees C (storage)
Humidity	85% relative, non-condensing
Vibration	MIL-STD-167-1 (ships), 3-axis
Shock	MIL-STD-810E

*see Model 903 data sheet for console module specifications.

903HD Dimensions



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.

Dimensions in inches [millimeters]