

907

Fiber optic multiplexer

Description

The 907 video / data multiplexer provides digital transmission over 1 or 2 singlemode or multimode optical fibers for 3 high quality video channels and 6 bidirectional data channels (4 x RS-232 and 2 x RS-485 / 422 / TTL) in a single, compact PC / 104 form factor card.

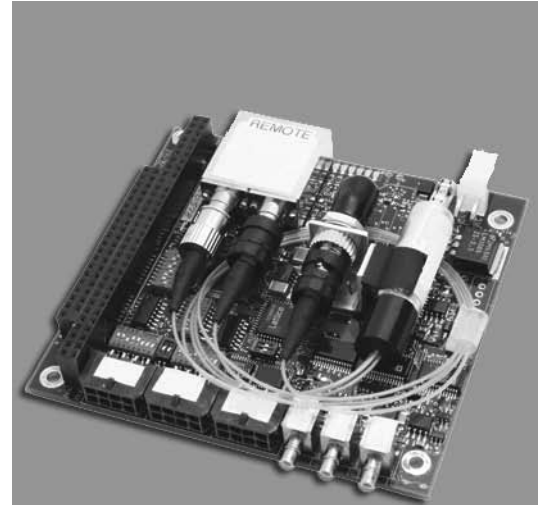
Expansion cards may be added to convert data channels on the motherboard to other data formats, such as Ethernet, analog sonar, hydrophone and Tritech ARCNET, or to replace each motherboard channel with up to 8 lower data rate serial channels. Optical power budgets are typical 20-26 dB with 2-4 km of multimode fiber or 10 km of singlemode fiber. LEDs provide on-board diagnostics for data, video and optical link status.

Features

- High quality digitized video
- Standalone, single card multiplexer with expansion capability
- Standard PC / 104 form factor
- Rugged design suitable for harsh environments
- Wide range of supported video and data formats
- Singlemode and multimode fiber options
- CWDM expansion for high speed data links, such as HD-SDI, ECL and IEEE-1394

Benefits

- Highest channel density allows extremely compact solution for space limited applications
- Easily reconfigured with a wide range of expansion cards including the same AIB plug-in modules used on the FO903
- Extended temperature options allows use in the harshest environments
- Successful installation assured by factory acceptance tests at temperature extremes and 20 years of experience providing technical support for fiber optic systems



Typical Applications

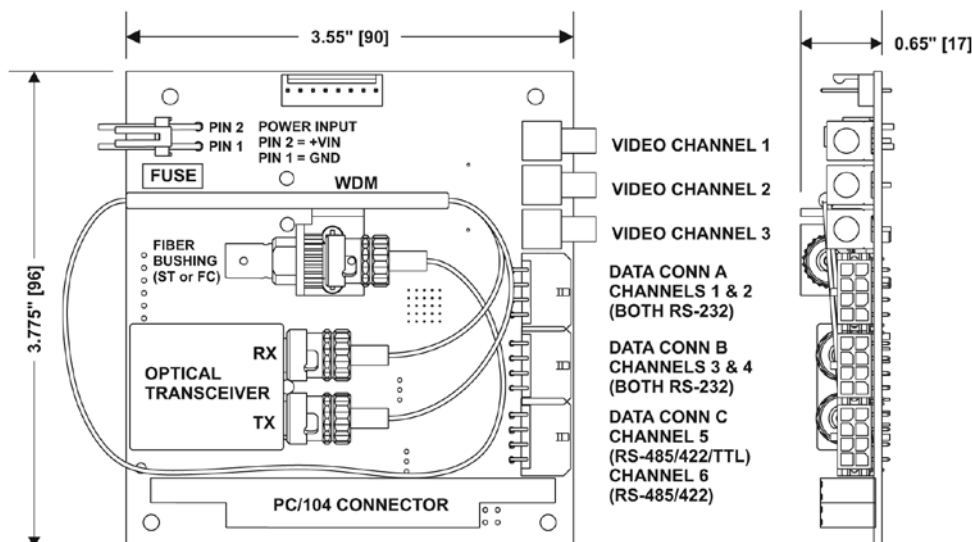
- Small subsea remotely operated vehicles (ROV's)
- Pipe inspection robots
- Bomb disposal robots
- Video security systems
- Tether management systems
- Armoured vehicles

Fiber Optic Multiplexers

Video	
No. Channels	3
Format	NTSC, PAL, Y / C, RGB, 1 Vpp nom.
Digitization	8 bit (3 channels) or 10 bit (2 channels)
Bandwidth	6.0 MHz
SNR	> 56 dB, typical
Impedance	75 Ohms
Options	1 x non-video analog channel (1 Vpp) 1 x 12-bit, 12 MHz analog channel (replaces all video channels)
Data	
RS-232	4 bidirectional channels, 120 kbaud
RS-422/485	2 bidirectional channels, 2.5 Mbaud Supports AC-coupled RS-485, TTL
RS-232	1 bidirectional channel per plug-in 120 kbaud max.
Options	Expansion cards for Ethernet, serial data isolation, Tritech ARCNET, MS-900/971, Hydrophone / Analog, CANBUS, IRIG-B, HD-SDI, ECL, IEEE-1394
Optical	
Optical Fiber	1-2 singlemode or multimode
Data Rate	600 Mbaud uplink and downlink
Wavelengths	1310 nm uplink, 1550 nm downlink standard
Flux Budget	20 dB standard (others available)
Options	CWDM wavelength for combining multiple Model 907 and / or Model 903 systems on one singlemode fiber; bidirectional transceivers (low cost)

Electrical	
Power Supply	+5 VDC regulated input required
Power Used	< 5 W typical, each end
Grounding	Shared common for power, data, video
Options	Isolated power / data card
Mechanical	
Dimensions	PC / 104 form factor (adapter card available for integration with PC / 104 bus)
Weight	120 g (0.25 lb)
Enclosures	Standard and custom versions available
Options	Eurocard adapter for installation in a standard 3U Eurocard rack with front panel access to video/data connectors
Connectors	
Optical	ST/PC bushing (FC / PC optional)
Video	SMB
Data	3 x 8-pin Molex, dual row Micro-Fit
Power	1 x 2-pin Molex, 0.156" pin spacing
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

907 Dimensions



Dimensions in inches [mm]. 907 shown with singlemode WDM option.