

# Video/Data Multiplexer

Model 907Plus

**Focal Technologies Corporation, a Moog Inc. company, has over 30 years of expertise in supplying standard and custom marine products for harsh environments and is a leading manufacturer of high performance and high quality multiplexers. Contact Focal for any assistance in selecting the best solution for your requirements.**



The 907Plus is a multiplexer that extends the capabilities of standard 907 motherboards with an added video channel, galvanically isolated data channels, and a comprehensive, integrated diagnostics network. System expansion is easy with a family of compatible expansion cards and media converters. A diagnostics add-on card is available that offers end-to-end performance monitoring and identification for multi-card systems via an Ethernet connection at the console, and Graphical User Interface (GUI) software.

Expansion cards may be stacked on the motherboard to add up to 48 data channels in a variety of formats, including RS-232, RS-485/422, TTL, Ethernet, CAN Bus, analog sonar, hydrophone, audio, and Trittech ARCNET. Depending on transceiver options, optical power budgets are typically 20-26 dB with 10 km or more of singlemode fiber.

## Features

- 4 Analog composite video channel
- 4 RS232 channels
- 2 RS485 channels (or 1 RS422)
- I2C bus supports diagnostic communications with expansion cards and media converters
- Galvanically isolated serial data channels
- Compatible with 907-DIAG-E diagnostic card and Graphical User Interface (GUI) software
- On-board diagnostic LEDs for power, optical link, and video sync, and serial data Tx/Rx
- Interchangeable SFP optical transceiver
- Supports up to six 907 expansion cards

## Benefits

- Isolated data channels provide more robust interface to external equipment
- Supports a wide range of optical options, including CWDM wavelengths and multimode configurations
- No motherboard data channels are disabled when expansion cards are added
- Simplifies troubleshooting with advanced diagnostics

## Applications

- Remotely Operated Vehicles (ROVs)
- Pipe inspection robots
- Bomb disposal robots
- Video Security Systems
- Tether management systems
- Tactical Networks
- Aerostat Balloons

# Specifications

Analog Composite Video	
No. of Channels	4
Format	NTSC/PAL, RGB, Y/C (S-video, YPrPb)
Digitization	10-bit
Bandwidth	6.0 MHz
SNR	> 56 dB (60 dB typical)
Impedance	75 Ohms
Data	
RS-232	4 isolated channels (120 kbps NRZ)
RS-485/422	2 isolated RS-485, or 1 isolated RS-422 (2.5 Mbps NRZ)
Options	907 expansion cards
Optical	
Fiber Type	1
Baud Rate	1.2 GBaud
Wavelength	1310/1550 nm (standard)
Flux Budget	> 20 dB standard
Options	CWDM (> 24 dB, 1271– 1611 nm), Higher / lower optical budget
Diagnostics	
LEDs	Power (electrical), optical link, optical fault, serial Tx/Rx, video sync
Ethernet to PC	Diagnostics from remote and console through 907-DIAG-E card at console

Electrical	
Power Voltage	+5.0 VDC $\pm$ 10%, regulated
Power Used	3.5 W typical (5 W max.)
Protection	Overvoltage, reverse polarity, 2 A time delay fuse
Mechanical	
PCB Dimensions	PC/104 standard, 3.550" x 3.775"
Mounting Holes	PC/104 standard
Weight	< 120 g (0.25 lb, including SFP)
Backplane Connector	Proprietary (Non-standard) pinout
Options	Custom enclosures
Connectors	
Optical	Single or Dual LC (SFP)
Video	4 x SMB
Data	RS-232: 1 x 12-pin Molex (Micro-Fit Series) RS-485/422: 1 x 6-pin Molex (Micro-Fit Series)
Power	2-pin Molex, 0.156 inch pin spacing
Stacking	PC/104 (for stacking 907 cards only)
Environmental	
Temperature	-10°C to +60°C (operational) -40°C to +85°C (storage)
Humidity	85% RH, non-condensing
Vibration	5g, 25-1000 Hz, 3 axes
Shock	30 g, 11 ms half sine, 3 axes
Options	6000 psi pressure tolerant, extended temperature, stress screened or qualified

All specifications and information are subject to change without notice. Please contact Focal for the latest updates.

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