

907-GBES

Gigabit Ethernet Media Converter

Description

The Model 907-GBES Gigabit Ethernet (GbE) Media Converter is a 4-port switched version of the popular PC/104 form-factor cards. Compatible with 10/100/1000 Mbps devices, the switched interface card can manage traffic from multiple gigabit devices or allow simultaneous 100 Mbps Ethernet links to be transferred optically with bandwidth to spare.

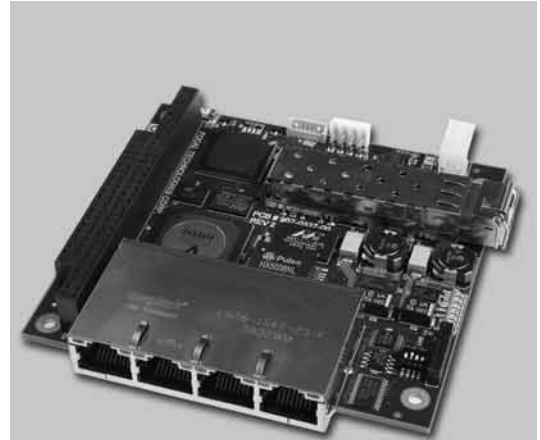
The 907-GBES may be used as a standalone card or optically integrated into a 907 system stack via CWDM modules. Optical power budgets are typically 20 - 26 dB over 10 km of singlemode fiber. Enhanced diagnostics are provided by on-board LEDs and through a dedicated Ethernet link when used with diagnostics card (907-DIAG-E) and corresponding graphical user interface (GUI) software.

Features

- Ethernet switch with four 10/100/1000 Mbps RJ-45 copper ports and one 1.25 Gbaud optical port
- Wavelength selectable/interchangeable SFP transceivers
- Rugged design for marine environment, including 6000 psi pressure tolerant version
- Diagnostics embedded in optical link for remote access

Benefits

- Provides multi-port Ethernet to optical conversion with a reliable small form-factor card
- Configures RJ-45 ports automatically to link with connected Ethernet device
- Supports a wide range of optical options, including CWDM wavelengths/transceivers for combining multiple cards on a single optical fiber
- Optical and on-board remote diagnostics simplify troubleshooting when used with the 907-DIAG-E



Typical Applications

- Remotely Operated Vehicles (ROVs) and Tether Management Systems
- Pipe Inspection Robots
- Bomb Disposal Robots
- Video Security Systems
- Tactical Networks and Defense Systems
- Industrial Process Control

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Fiber Optic Multiplexers

Data	
No. Copper Ports	4 (switched)
Data Rates	10/100/1000 Mbps
Formats	10/100/1000 BaseT
Total Throughput	~ 1000 Mbps (0.01% used for embedded diagnostics)
Latency (Remote + Console)	< 0.1 ms (single channel) < 10 ms (10 Mbps port, all ports active) typical, per RFC 2544
Options	Managed switch options for VLAN, port mirroring, quality of service, etc. Contact Moog for details.
Optical	
Optical Fiber	1 or 2 singlemode (9/125 um)
Baud Rate	1.25 Gbaud
Format	AME-EP (Moog proprietary)
Wavelengths	1310/1550 nm standard (CWDM optional)
Flux Budget	20 dB min. standard (others available)
Options	CWDM wavelengths for combining multiple 907 cards on one singlemode fiber; bidirectional transceivers; extended temperature; 2.5 Gbaud optical link
Electrical	
Power Supply	+5 VDC +/-10%, regulated input required
Current Draw	1.2 A typical (2 A max.), all ports active
Power Used	6 W typical (10 W max.), all ports active
Voltage Protection	Overvoltage and reverse polarity
Current Protection	Time delay fuse (3 A)

Diagnostics	
LEDs	Power (electrical), over temperature limit, optical link valid, PHY Rx/Tx activity, Ethernet port link speed
Ethernet to PC	Available through 907-DIAG-E card
Mechanical	
Dimensions	PC/104 (form factor only)
Weight	125 g (0.27 lb), including SFP
Enclosures	Contact Moog for custom enclosures
Stacking Spacers	0.72 inch standoffs required when stacked
Stacking Pins	Short pins on PC/104 standard for all wavelengths
Connectors	
Optical	Dual LC (SFP)
Data (Ethernet)	4 x RJ-45
Power	2-pin Molex, 0.156 inch pin spacing
Stacking Header	PC/104 (for stacking 907 cards only)
Environmental	
Temperature	-10 to +60 °C (ambient, operational) -40 to +85 °C (ambient, storage)
Humidity	85% RH, non-condensing
Shock	30 g, 11 ms, per ISO 13628-6 Q1 level
Vibration	5 g, 25 - 1000 Hz, per ISO 13628-6 Q1 level
Options	6000 psi pressure tolerant version; extended temperature; stress screened or qualified units

907 GBES Dimensions

