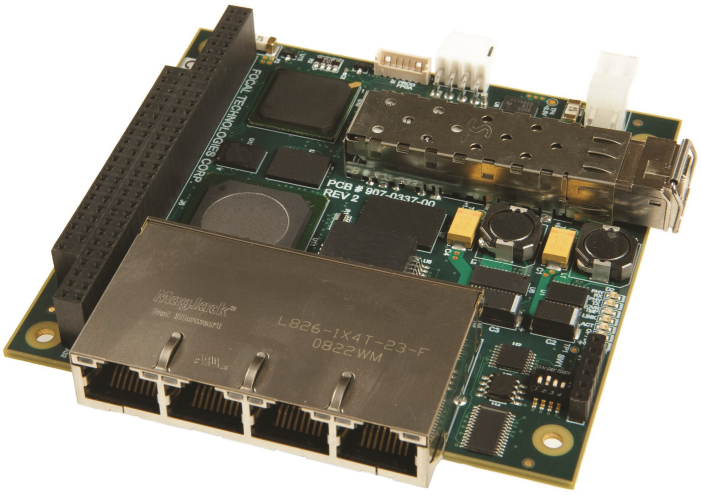
Gigabit Ethernet Switch Media Converter

Model 907-GBES

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 907-GBES Gigabit Ethernet (GbE) Switch 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 harsh environments, including 6000 psi pressure tolerant version
- Compatible with 907-DIAG-E diagnostic card and Graphic User Interface (GUI) software

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
- Simplifies troubleshooting with advanced diagnostics

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

Specifications

Data	
No. Copper Ports	4 (switched)
Data Rates	10/100/1000 BASE-T(X)
Total Throughput	~ 1000 Mbps (0.01% used for embedded diagnostics)
Latency	< 0.1 ms (single channel) < 10 ms (10 Mbps port, all ports active) typical, per RFC 2544
Options	Managed switched options for VLAN, port mirroring, quality of service, etc. Contact Moog for details
Optical	
Optical Fiber	1 or 2 singlemode (9/125 µm)
Baud Rate	1.25 Gbaud
Format	AME-EP (Moog proprietary)
Wavelength	1310/1550 nm standard (CWDM optional, 1471 - 1611 nm)
Flux Budget	> 20 dB (24 dB typical)
Options	Bidi (bidirectional) transceivers; 2.5 Gbaud optical link
Electrical	
Power Supply	+5.0 VDC ±10%, regulated
Current Draw	1.2 A typical (2 A max.)
Power Used	6 W typical (10 W max.)
Voltage Protection	Overvoltage, reverse polarity, 3 A time delay fuse

Diagnostics	
LEDs	Power (electrical), over temperature limit, optical link valid, PHY Rx/Tx activity, Ethernet port link speed
Ethernet to PC	Diagnostics from remote and console through 907-DAIG-E card at console
Mechanical	
Dimensions	PC/104 (form-factor only) 3.550” x 3.775”
Weight	< 125 g (0.27 lb) including SFP
Options	Custom enclosures
Connectors	
Optical	Dual LC (SFP)
Data (Ethernet)	4 x RJ-45
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	5 g, 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.