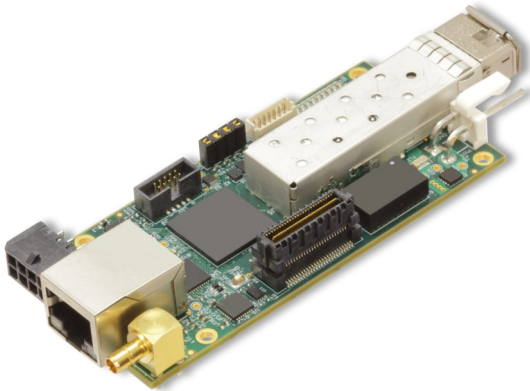


HD Video, Ethernet and Serial Data Multiplexer

Model 914-HDE

Focal Technologies Corporation, a Moog Inc. company, has over 30 years of expertise in supplying standard and custom products for harsh environment applications 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 Focal 914-HDE is an extremely compact, single card solution for High Definition (HD) video, Gigabit Ethernet and multiple serial data channels.

The 914-HDE is targeted for use with small Remotely Operated Vehicles (ROVs), HD video broadcast, ROV survey upgrades or defense Electrical Optical (EO) pods.

The 914-HDE fiber optic multiplexer combines Focal's expertise in Time Division Multiplexing (TDM) and replaces multiple media converters and optical multiplexers reducing size, weight, power and cost.

The 914-HDE supports advanced features, such as: real-time diagnostics over a dedicated RS-232 channel, video overlay with real time user updates (e.g. for GPS, altimeter), field-upgradable firmware, and software configurable serial data formats.

Diagnostic readings may be accessed via an RS-232 serial link in real time by using Focal™ Graphical User Interface (GUI) software, based on the Microsoft® .NET Framework, or by using a customer's own software configured to read Focal's serial ASCII protocol or Modbus ASCII format.

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Features

- Supports SD-SDI, HD-SDI and 3G-SDI video
- Supports Fast Ethernet and Gigabit Ethernet
- Supports two non-isolated, configurable serial channels for camera controls and sensors
- Real-time diagnostics and Graphical User Interface (GUI)
- Rugged design for harsh environments
- Expansion connector for added interfaces
- LED header for enclosure diagnostics
- Relocked video
- Advanced diagnostics

Benefits

- Reduces cost and size of systems requiring HD video, Ethernet and serial interfaces
- Supports a wide range of optical options, including CWDM wavelengths and multi-mode configurations
- Simplifies troubleshooting with advanced diagnostics

Applications

- ROVs
- Pipe Inspection Robots
- Bomb Disposal Robots
- Camera/ Sonar Add-ons for ROVs
- Remote Video Security Platforms
- Remote Video Broadcast Platforms
- EO Pods

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Specifications

HD Video	
No. of Channels	1
Format	3G-SDI SMPTE-424M-A (optional) HD-SDI SMPTE-292M SD-SDI SMPTE-259M-C
Data Rates	3G-SDI: 2.970 Gbps (optional) HD-SDI: 1.485 Gbps SD-SDI: 270 Mbps
Impedance	75 Ω
Latency	< 20 μs (not including fiber)
Ethernet	
No. of Channels	1
Format	10 BASE-T, 100 BASE-TX 1000 BASE-T (optional)
Serial Data	
No. of Channels	2
Format	RS-232, RS-485, RS-422, configurable, non-isolated
Data Rate	RS-232: 230 kbps NRZ max RS-422 / 485: 2.5 Mbps max
Optical	
Optical Fiber	1 or 2 singlemode (9/125 μm)
Baud Rate	4.25 Gbaud standard
Wavelength	1310 / 1550 nm or CWDM
Optical Budget	> 20 dB
Options	Bidirectional transceivers, higher or lower optical budgets, multimode, higher optical data rates for 3G and GbE
Expansion Cards	
914-VDX	Two analog video channels & 4 non-isolated serial channels (RS-232 / 422 / 485)
914-EX	Two Gigabit Ethernet Channels (non-switched)
914-DX	Six isolated (in pairs) serial channels (RS-232 / 422 / 485)

914-HDE supports up to 6 expansion cards, but depends on unused bandwidth. Contact Factory for expansion options and configurations

Electrical Power	
Voltage	+4.5 to +13.5 VDC
Consumption	5 W typ., 7.5 W max.
Protection	Overvoltage, reverse voltage, time delay fuse
Diagnostics	
LEDs	Power status, video status, optical status, serial activity, Ethernet status and activity
LED Header	Power status, video status, optical status, serial activity, Ethernet status and activity
RS-232 to PC	Diagnostics from remote and console through GUI
Mechanical	
Weight	< 80 g (0.18 lb)
Dimensions	40.6 mm x 88.9 mm
Connectors	
Video	SMB, 75 Ω
Ethernet	RJ-45
Serial Data	Molex MicroFit, 8-pin
Power	2-pin Molex, 0.156" spacing
Diagnostics	Molex 1.2mm W-T-B Connector
LED Header	FCI Minitek 127
Environmental	
Temperature	-10 °C to + 60 °C, operational -40 °C to + 85 °C, storage
Humidity	85% RH, non-condensing
Shock	30 g, 11 ms half sine, 3 axis
Vibration	5 g, 25 - 1000 Hz, 3 axis
ESD	±15 kV air/HBM, ± 8 kv contact
Options	Extended temperature

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

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