

907-HDM2

Dual High Definition Video Multiplexer

Description

The 907-HDM2 is an expandable High Definition (HD) Video Multiplexer that provides transmission of up to two HD-SDI camera signals along with four on-board serial channels (RS-232/485) for camera controls (e.g. pan and tilt) and sensors. Dual HD inputs on the remote card support connection of two HD-SDI cameras with either one channel at full 4:2:2 sampling and the other sub-sampled at 2:1:1, or both channels sampled at 4:1:1. The 4:2:2 channel can be selected via diagnostic software.

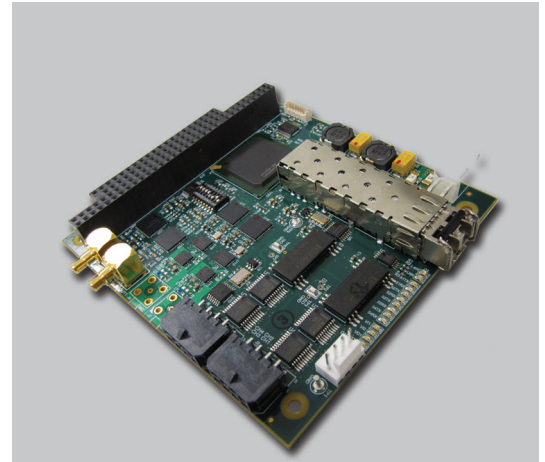
The 907-HDM2 can be used as a standalone card or stacked with a wide range of 907 expansion cards available in a variety of formats, including RS-232/485/422, TTL, Ethernet, CAN Bus, analog sonar, hydrophone, audio, and Tritech ARCNET. It may also be optically integrated into a larger 907 system via CWDM modules. Optical power budgets are typically 20-26 dB over 10 km of singlemode fiber. Enhanced diagnostics are supplied by on-board LEDs and through a dedicated Ethernet link when used with a diagnostics card (907-DIAG-E) and corresponding graphical user interface (GUI) software.

Features

- Dual HD inputs include cable equalization and reclocking to improve recovery of low level or distorted input signals
- Regenerated HD-SDI outputs to minimize jitter
- Interchangeable SFP transceiver
- 4x on-board bidirectional serial channels (RS-232 or RS-485)
- Compatible with 907-DIAG-E diagnostic card and Graphical User Interface (GUI) software
- Rugged design for harsh environments
- Supports up to six 907 expansion cards

Benefits

- Reduces cost and size for systems with need for combined data and HD video
- Supports a wide range of optical options, including CWDM wavelengths
- Simplifies troubleshooting with advanced diagnostics
- Maximum jitter margin available for cabling



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
- Remote HD Video for Television

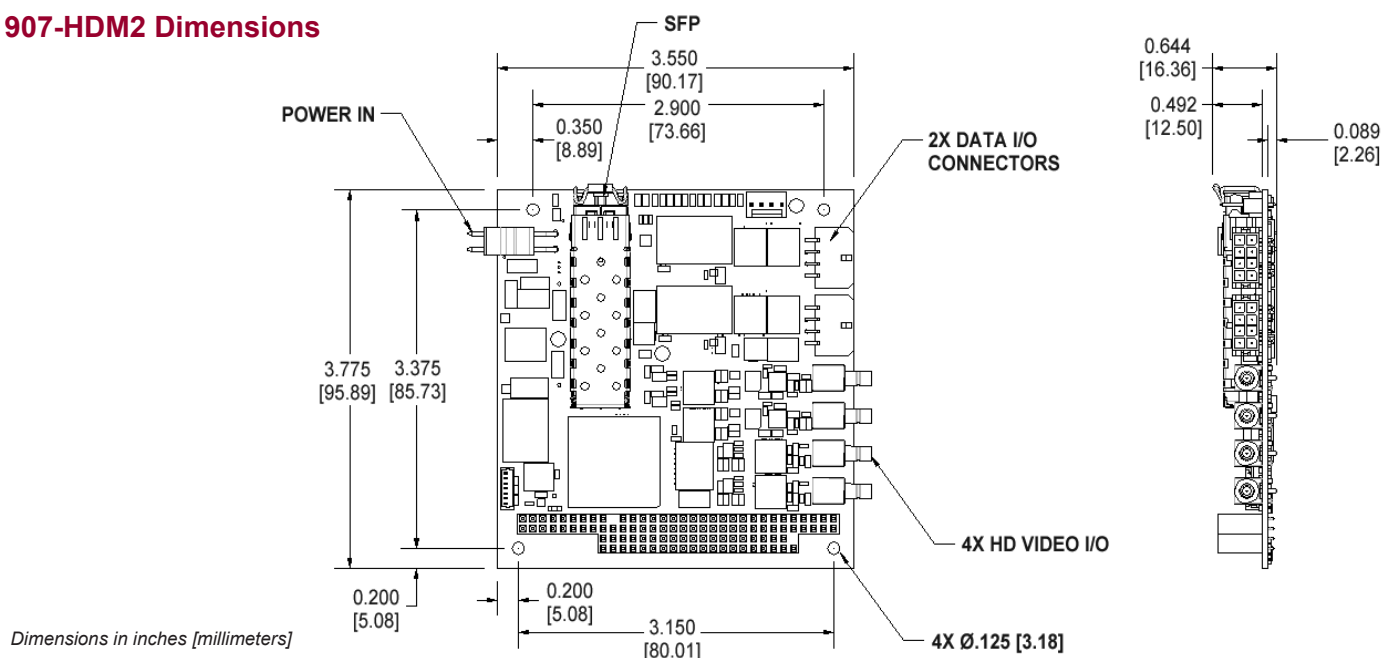
Model 907 Datasheet

Video	
No. Channels	1 or 2
Format	HD-SDI (SMPTE-292M) @ 720p, 1080i and 1080p
Data Rate	1483 or 1485 Mbps
Input Buffer	Adaptive cable EQ and reclocker
Output Voltage	800 mVpp nominal
Impedance	75 Ohms, input/output
Modes*	Dual Video, optimized (default): 1 x 4:2:2 and 1 x 2:1:1 or 2 x 4:1:1 with serial/backplane data, no ancillary data Dual Video, full HD-SDI: 2 x 4:2:2 no serial/backplane data, no ancillary data Single Switched Video, full HD-SDI: 1 x 4:2:2 (2 inputs) with serial/backplane data, with ancillary data
Data	
No. Channels	4
Format	RS-232, RS-485 (selectable)
Data Rate	120 kbps NRZ max.
Options	Expansion cards
Optical	
Optical Fiber	1 or 2 singlemode (9/125 μ m)
Baud Rate	2.5 Gbaud (3.125 Gbaud optional)
Wavelength	1310/1550 nm standard (CWDM optional, 1471 - 1611 nm)
Flux Budget	> 20 dB (24 dB typical)
Options	Bidi (bidirectional) transceivers

*Factory configured modes

Electrical	
Power Voltage	+5 VDC +/-10%, regulated
Current Draw	1.3 A typical (2 A max.)
Power Used	6.5 W typical (10 W max.)
Voltage Protection	Overvoltage and reverse polarity
Current Protection	Time delay fuse (3 A)
Mechanical	
Dimensions	PC/104 (form-factor only)
Weight	< 125 g (0.27 lb), including SFP
Options	Custom enclosures
Connectors	
Optical	Dual LC (SFP)
Video	Mini-SMB (75 ohm)
Data (Serial)	2 x 8-pin Molex (Micro-Fit Series)
Power	2-pin Molex, 0.156 inch pin spacing
Stacking Header	PC/104 (for stacking 907 cards only)
Environmental	
Temperature	-10°C to +60°C (operational) -20°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
Diagnostics	
LEDs	Power (electrical), optical link, optical fault, serial Tx/Rx, video status
Ethernet to PC	Diagnostics from remote and console through 907-DIAG-E card at console

907-HDM2 Dimensions



Note: These are standard commercial products that are available with many options or configurations not explicitly shown.