

Diagnostic SpaceWire Interface DSI-RG408-MS



Overview

The Diagnostic SpaceWire Interface (DSI) is a high-performance Ethernet-to-SpaceWire Bridge that can relay traffic from a single TCP/IP Ethernet connection to up to eight concurrently-operating bidirectional SpaceWire ports. It provides remote access to a SpaceWire network for software simulation of devices, remote monitoring and distributed system integration activities. In addition, it provides for the detailed analysis of SpaceWire components, including routing switches. The DSI may be purchased with firmware that supports fewer than eight SpaceWire connectors on the RG408 hardware platform. In this case, only the lowest-numbered SpaceWire connectors are usable - e.g. ports 1 and 2 for 2-port firmware and ports 1-4 for 4-port firmware. The remaining ports are disabled. Firmware upgrades to enable further ports are available.

Features

- Use it as an interface, to detect and resolve bugs, or to measure the performance parameters;
- Use it with devices, instruments, boards, subsystems or complete systems, with from one to eight ports;
- Use it from any computer, any operating system, anywhere, via the Internet and Ethernet
- Software is provided including an API and examples (all with source code), and user interfaces

Product Facts

- Products conform to ECSS-E-ST-50_12C (31st July 2008)
- Receive speeds in the range from 1.2Mb/s to more than 400Mb/s
- User selected transmit speeds, available from 1Mb/s up to more than 400Mb/s
- Two standard 9-way Micro-miniature D-type SpaceWire socket connectors
- External Synchronization with eight SMA connectors on the back of each unit

Options

- ER: Error Reporting—tokens defined as errors can be made visible for recording purposes
- EI: Error Injection – Precise error injection and full control over flow-control-credit and Nulls
- EW: Event Waveforms – Waveform capture available from a wide range of trigger sources including errors
- TT: Time Tags – to a resolution of less than 1.5ns and synchronization between units of plus/minus 3ns
- SO: Synchronized Outputs– synchronized within one unit or between many units to plus/minus 20ns
- CO: Controlled Outputs- Synchronises the transmission of any character in the transmit stream to an external clock transition
- OE: Output Enable- Enables SpaceWire outputs when a high-level input signal is present on SMA connectors
- OD: Output Disable- Disables the SpaceWire signals when the test system detects an abnormal condition.

Ordering information

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|---------------------|----------------|
| Two Active Ports | DSI-RG402/8-MS |
| Four Active Ports- | DSI-RG404/8-MS |
| Eight Active Ports- | DSI-RG408-MS |

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