

Portable Diagnostic SpaceWire Interface

P-DSI-2

Overview

4Links Portable Diagnostic SpaceWire Interface (P-DSI-2) was designed specifically to support, test and debug SpaceWire Networks. It is a transparent interface that allows SpaceWire packets to be sent and received over Ethernet via a TCP/IP socket connection. 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.

Features

Ethernet and TCP/IP provide a standard interface mechanism that is supported by all major operating systems, so no additional software drivers are required

Each Packet received may be time-tagged to a resolution better than 2 ns. There is no limit to the length of the SpaceWire packets that can be transferred

Use it simply as an interface, to detect and resolve issues, or to measure the performance parameters.

Use it with devices, instruments, boards, subsystems or complete systems on both ports.

Use it from almost any computer, any operating system, anywhere, via the Internet and Ethernet

Full software is provided including an API and examples (all with source code), and user interfaces with comprehensive scripting capability

Can detect issues such as incorrect initialization, loss of flow-control credit, inability to recover after a noise disturbance, loss of occasional data characters, timeouts beyond the limits specified in the standard.



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

Supplied in a 3U x 8HP housing, with external power supply

Available as DSI board

Firmware function change (SLR) available

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

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