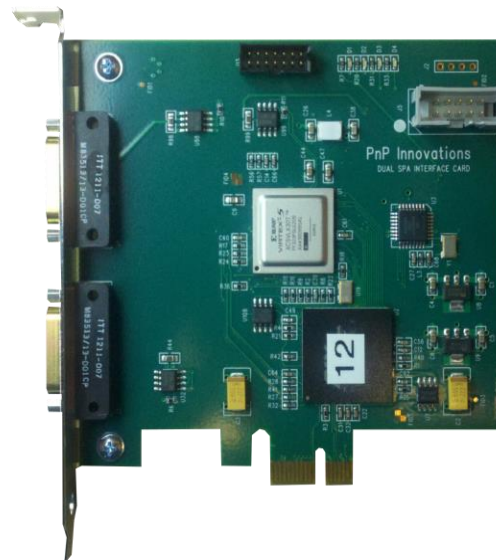


Dual SpaceWire Plug-and-Play Interface Card

PnP Innovations, Inc has developed several key avionics components to support spacecraft data communications and simulations. In order to accommodate ground based testing and integration support, a single PCIe based computer board was developed which integrates two key areas of system design by providing a network entry point for SpaceWire (SpW) and Timing Synchronization. The SpaceWire ports provide standard SpaceWire network connections. Time synchronization provides a method for sending or receiving a 1 to 1000 Hz synchronization pulse which can be coupled into PC based simulations via an interrupt.

This board leverages off the popular single port version of this card, but exchanges the asynchronous serial channels for an additional high performance SpaceWire port.



SPACEWIRE

- Two high speed SpaceWire ports
- Industry proven SpaceWire IP
- Protocol compliant with ESA Specification
- Max link speed of 320 Mbps
- Supports sending and receiving Time Codes
- Direct support for RMAP

TIMING SYNCHRONIZATION

- Can receive & process timing pulse on either port
- RS422 signaling levels
- Provides software interrupt for synchronization
- Programmable interrupt multiplier rate

BOARD INFORMATION

- Two MicroD 25 pin connector SpW
- Expansion bracket provided for Timing
- PCIe x1 Form Factor (Single Lane)

APPLICATIONS

- Sensor Simulation
- Component Integration
- Network Experimentation
- General Ground Support for SpW

DELIVERABLES

- Board User Guide
- RMAP Software Library
- RMAP Library User Guide
- Windows Driver
- Optional Cabling