

# SPACEWIRE PCI<sup>4SpW</sup> BOARD

## Equipment for Integration, Simulation and Tests

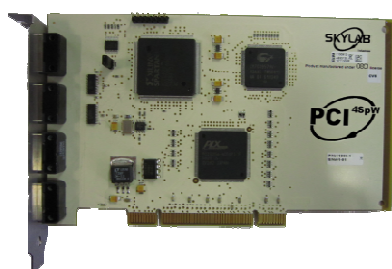


Figure 1 : SpaceWire PCI<sup>4SpW</sup> board

PCI<sup>4SpW</sup> is a PCI compliant PC board featuring 4 SpaceWire ports, with full compliance with regard to ECSS-E-ST-50-12C. A programmable logic device implements multiple SpW IP cores. Data are transferred using a PCI interface chip, which supports DMA through a dedicated DPRAM.

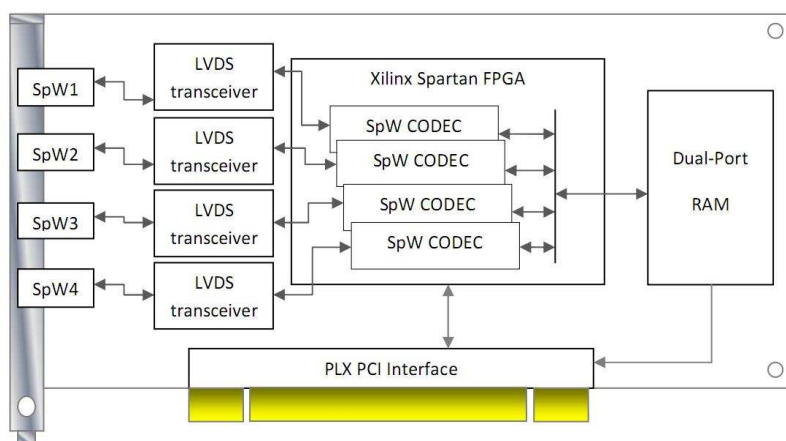


Figure 2 : SpaceWire PCI<sup>4SpW</sup> Block Diagram

PCI<sup>4SpW</sup> board implements 4 SpaceWire IP cores in a Xilinx Spartan3 FPGA which are plugged to a common interface bus with a simple priority mechanism. SpaceWire transmitted and received data can be memorized in a Dual-Port RAM if required. PLX PCI interface chip is used as a bridge from SpaceWire to PCI. It also configures PCI<sup>4SpW</sup> FPGA registers. The PCI integrated circuit has a DMA controller for improving data transfer bi-directional performances.

### PCI<sup>4SpW</sup> FEATURES

- Standard PCI board with front panel bracket
- Four micro-D9 SpW receptacle connectors
- 32-bit x 33 MHz throughput
- Maximum Link Speed: 200Mbps
- Rich set of transmit clocks using DCMs
- SpW link errors generator (conformance)
- 32K x 36 Dual Port RAM
- External LVDS transceivers (NS or equivalent)
- EMC CE/FCC marking: please contact us

Option : Routing capability with RMAP support by software (trafficController<sup>4SpW</sup>).

### SOFTWARE DRIVERS

PCI<sup>4SpW</sup> board PC drivers are available for Windows XP, Vista, Seven, and Linux 2.6 kernels Operating Systems.

### PCI<sup>4SpW</sup> OPTIONS

- compatibleCable<sup>4SpW</sup> is an ideal cable solution for interconnecting PCI boards.
- trafficController<sup>4SpW</sup>, through a Device Virtualization Service layer, a rich API and an intuitive Graphical User Interface, allows SpW data control, spying, internet networking and processing of real or emulated nodes and routers.

## Your contact



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PCI<sup>4SpW</sup> is manufactured and supported by SKYLAB INDUSTRIES under CEA exclusive license. This board implements their SpW IP core, which is on board Herschel PACS. SKYLAB INDUSTRIES and CEA represents 15 years cumulated expertise with SpW technology.