

PCI Express® Host Adapter



Features

- PCI Express over fiber optic extension
- One 2.5 Gb/s lane
- Cable length up to 250+ meters
- Optical Isolation
- Host Processor and OS Independent
- SFP transceiver with LC connectors
- RoHS Compliant
- Works with Adnaco-Sirius™ products



Overview

The Adnaco-H1 (H1) is a host adapter for Adnaco PCI Express (PCIe) over fiber optic systems. The H1 provides an interface between a host computer PCIe bus and a duplex multi-mode fiber optic cable with LC connectors. The fiber optic cable connects the H1 to remote PCI/PCIe devices at distances up to 250 meters. The H1 can be installed in any PCIe slot and supports one full duplex 2.5 Gbps link. This link is transparent to software applications and drivers, so industry-standard desktop computers and servers can communicate to remote PCI/PCIe devices with no additional programming.

Applications

- Industrial: wide temperature range.
- Medical: complete isolation.
- Military: COTS - Radar, Sonar
- NAS: remote and secure data storage.
- Data Acquisition: modular instruments.
- High-Speed USB: 480 Mbps extension.

Adnaco PCI Express over fiber optic technology

PC-centric, data-intensive embedded system applications place demanding requirements on high-performance I/O interconnect bus architectures. For inside-the-PC communications, the most commonly used buses for commercial and embedded applications have been the PCI and PCIe ones. Adnaco Technology, with its breakthrough Adnaco-Sirius PCI Express fiber optic solution, brings the PCI and PCIe buses out of the PC and extends them over fiber optic cable up to 250 meters. The unique feature of this technology is its transparent access to remote PCI/PCIe devices without compromising performance. Even at 250 meters they appear as local devices to the host PC. Installation is simple and requires no additional drivers for the remote PCI/PCIe devices.

Specifications: Adnaco-H1 PCI Express Host Adapter:

Product Name	Adnaco-H1
Specification Compliance	PCIe Base r1.1, PCIe CEM r1.1
Communication	Support for one full duplex 2.5 Gbps link over fiber optic cable
Software	Transparent to software applications and drivers
Card Link Width	x1 lane operable in x1, x4, x8, x16 slots
Power Requirements	1.5A @ 3.3V maximum
Operating Environment	Temperature ranges: <ul style="list-style-type: none"> • Commercial: 0° C to +70° C • Extended: -20° C to +85° C • Industrial: -40° C to +85° C Relative Humidity: 10 to 90%, non-condensing
Storage Environment	Temperature: -40° C to +85° C Relative Humidity: 5 to 95%, non-condensing
Regulatory Compliance	FCC class B, ICES-003 class B, EN 55022 class B, EN 55024, RoHS Compliant
Physical Dimensions	Low profile PCIe card with standard height I/O card bracket 64.5 mm (2.54”) x 65.3 mm (2.57”) without bracket
Mechanical	Mechanical drawings are available upon request

Transceiver and Cable Information:

Transceiver	LC connectors, 850 nm VCSEL – SFP MSA compatible
	LC connectors, 1300 nm – SFP MSA compatible
Fiber Optic Cable	LC-LC, Multi-mode, 50/125 μm, 2 m to 250 m
	LC-LC, Multi-mode, 62.5/125 μm, 2 m to 150 m
	LC-LC, Single-mode, 9/125 μm, 250+ m

Related Documents and Products:

Adnaco-R1BP1-DS	Adnaco-R1PB1 PCI/PCIe Expansion Backplane Data Sheet
Adnaco-Sirius-R1TK-UG	PCI Express Extension Over Fiber Optic Test Kit User’s Guide
Adnaco-R1USB-DS	Hi-Speed USB 3-Port Remote Host Data Sheet

Ordering Information

Adnaco-H1-01	Adnaco-H1 PCI Express Host Adapter (for USB extension) Commercial temperature, 850 nm transceiver
Adnaco-H1-02	Adnaco-H1 PCI Express Host Adapter (for PCI/PCIe extension) Commercial temperature, 850 nm transceiver
Adnaco-H1-03	Adnaco-H1 PCI Express Host Adapter (for PCI/PCIe extension) Extended temperature, 850 nm transceiver
Adnaco-H1-04	Adnaco-H1 PCI Express Host Adapter (for PCI/PCIe extension) Industrial temperature, 1300 nm transceiver

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