



## PCI Express Gen 2 Host Adapter

### Features

- **PCI Express over fiber optic extension**
- **One lane 2.5 GT/s or 5.0 GT/s**
- **Fiber optic cable length:**
  - 1+ km SM at 2.5 GT/s or 5.0 GT/s
  - 250 m MM 2.5 GT/s
  - 100 m MM 5.0 GT/s
- **Optical isolation**
- **Host processor and OS independent**
- **SFP transceiver with LC connectors**
- **RoHS compliant**
- **Works with Adnaco products**

### Overview

The Adnaco-H1A (H1A) is a host adapter for Adnaco PCI Express (PCIe) over fiber optic systems. The H1A 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 H1A to remote PCI/PCIe devices at distances 1 plus kilometer (depending on transceivers and cable). The H1A can be installed in any PCIe slot and supports one full duplex 2.5 GT/s or 5.0 GT/s 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

- Computer bus expansion
- Industrial: wide temperature range
- Medical: complete isolation
- Military: COTS – Radar, Sonar
- NAS: remote and secure data storage
- Data Acquisition: modular instruments
- USB 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 PCI and PCIe types. Adnaco Technology, with its breakthrough Adnaco PCI Express fiber optic solution, brings the PCI and PCIe buses out of the PC and extends them over fiber optic cable up to 1 km. The unique feature of this technology is its transparent access to remote PCI/PCIe devices without compromising performance. Even at long distances 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-H1A Gen2 PCI Express Host Adapter:

Product Name	Adnaco-H1A
Specification Compliance	PCIe Base r2.0, backward compatible with PCIe Base r1.1 and 1.0a
Communication	Support PCIe Gen1 (2.5 GT/s) and Gen2 (5.0GT/s)
Software	Transparent to software applications and drivers
Card Link Width	x1 lane operable in x1, x4, x8, x16 slots
Power Requirement	3.3V @ 1.5A maximum
Operating Environment	Temperature: 0° C to +70° C Relative humidity: 10 to 90%, 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

## Transceiver and Cable Information:

Transceiver	LC connectors, 850 nm VCSEL – SFP MSA compatible
	LC connectors, 1300nm – SFP MSA compatible
Fiber Optic Cable	LC-LC, Multi-mode, 50/125 μm
	Length:
	2 m to 250 m at data rate 2.5 Gb/s
	2 m to 100 m at data rate 5.0 Gb/s
	LC-LC, Multi-mode, 62.5/125 μm
	Length:
2 m to 150 m at data rate 2.5 Gb/s	
2 m to 50 m at data rate 5.0 Gb/s	
	LC-LC, Single-mode, 9/125 μm
	Length: 1000+ m

## Compatibility matrix:

Device	R1BP1	R1BP1A	R1BP1B	RA3	R1USB30
H1A	NO	YES	YES	YES	YES
H1	YES	YES	YES	YES	NO

## Related Documents and Ordering Information:

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