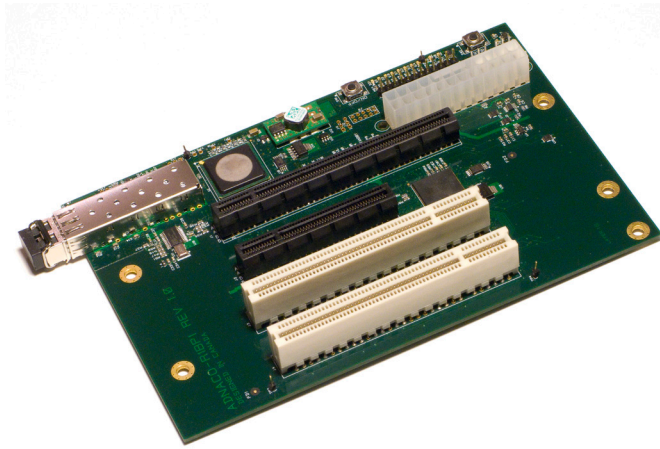# Adnaco Technology

PCI/PCIe® Expansion Backplane

Features

- **PCI/PCIe over fiber optic extension**
- **2 PCIe slots, 2 PCI slots**
- **Data rates up to 2.5 Gbps**
- **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**

PCI EXPRESS®

Overview

The Adnaco-R1BP1 (R1BP1) is an expansion backplane which extends the I/O card capabilities of a host computer over fiber optic cable at distances up to 250 meters. The R1BP1 provides two PCI and two PCIe slots suitable for standard PCI/PCIe devices. The two PCIe slots (x8 and x16) are wired as x1. An on-board PCIe-to-PCI bridge provides the connection for standard PCI devices in order to support Legacy PCI devices. The installed PCI/PCIe devices operate transparently over the PCIe extension. No additional host software drivers are required during installation or operation. The R1BP1 can be mounted in a standard microATX case.

Applications

- Split-systems: remote desktop console.
- Medical: complete isolation.
- Military: COTS - Radar, Sonar.
- NAS: remote and secure data storage.
- Data Acquisition: modular instruments.

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-R1BP1 PCI/PCIe Expansion Backplane

Product Name	Adnaco-R1BP1
Expansion Capabilities	One PCIe x16 (electrical x1) connector One PCIe x8 (electrical x1) connector Two PCI, 32 bit, 33 MHz, 5V connectors
Specification Compliance	PCIe slots: PCIe Base r1.1 PCI slots: PCIe Base r1.0a, PCI Local Bus r2.3, PCIe to PCI/PCI-X Bridge r1.0
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	2A @ 3.3V maximum (without PCI/PCIe cards) 24 pin connector for ATX compliant power supply
Operating Environment	Temperature: 0° C to +70° 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	171.5 mm (6.75") x 111.8 mm (4.40") microATX mounting holes (B, C, H, R, S)
Mechanical	Mechanical drawings are available upon request

Transceiver and Cable Information:

Transceiver	LC connectors, 850 nm VCSEL – 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

Related Documents and Products:

Adnaco-H1-DS	Adnaco-H1 PCI Express Host Adapter Data Sheet
Adnaco-Sirius-R1TK-UG	PCI Express Extension Over Fiber Optic Test Kit

Ordering Information

Adnaco-R1BP1-01	Adnaco-R1BP1 PCI/PCIe Expansion Backplane
Adnaco-ATXIO-01	ATX I/O Shield for Adnaco-R1BP1 Backplane