

# PXH832 Host/ Target Adapter

## Gen3 PCIe Host Adapters



The PXH832 Gen3 Host/Target Adapter is our high performance cabled interface from host to I/O subsystems. Based on Broadcom® Gen3 PCI Express bridging architecture, the PXH832 adapter enables transparent PCIe connections and clock isolation. The PXH832 card utilizes the new MiniSAS-HD / iPass+™ HD connectors currently being standardized by the PCI-SIG as the new PCIe Gen3 cable option.

For high performance application developers, the PXH832 adapter provide 128 Gb/s performance with the low latency of PCI Express. The PXH832 Transparent Host and Target adapter is ideal for I/O Expansion systems. The PXH832 can be configured as four x4 PCIe connections, two x8 or one x16 PCIe connection.

For GPU farms, test and measurement equipment, medical equipment, and storage subsystem, the PXH832 delivers flexibility and 128 Gb/s with extremely high data quality. The adapter is configurable as both a host adapter or target adapter.

The PXH830 is carefully designed for maximum cable length and supports MiniSAS-HD copper cables up to 9 meters at full PCI Express Gen3 speed. Fiber optic cables extend this distance to 100 meters.

The PXH832 supports two types of copper cables. With the PXH832 as both Host and Target, standard MiniSAS-HD cables support basic transparent Host and Target operations including propagation of Host reset signal to the downstream device.

When the PXH832 is used in conjunction with the new PCI-SIG external PCIe cables, any target can be used for basic transparent operation. The card also supports the new (Cable Management Interface ) CMI protocol including WAKE and POWER-ON functionality.

The PXH832 uses an on-board DIP-Switch to select between Host and Target operations.

## Features

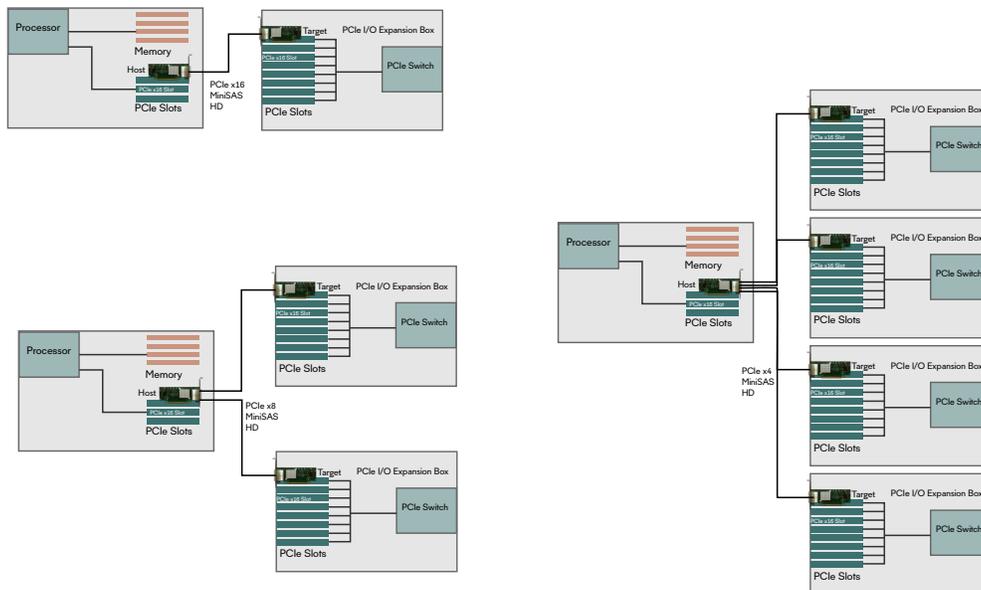
- PCI Express Gen3 compliant - 8.0 Gb/s per lane
- Link compliant with Gen1, Gen2, and Gen3 PCIe
- Host and target operation
- PCI Express iPass+ HD interconnect System/ SFF-8644/ MiniSAS-HD® Connectors
- Four x4 Gen3 PCI Express cable ports that can be configured as:
  - One - x16 PCI Express port
  - Two - x8 PCI Express ports
- Copper and fiber-optic cable connectors
- Full host clock isolation. Supports hosts running both CFC and SSC
- Low Profile, half length PCIe form factor
- EEPROM for custom system configuration
- Link status LEDs through face plate



## I/O Expansion

The PXH832 adapter is capable of being configured as a host or a target adapter. Figure 1 illustrates the various configurations supported by the PXH832. It can support up to 4 PCIe expansion units without an external switch. As a host adapter, the PXH832 connect to PCIe targets via MiniSAS HD cables. It can connect to other PXH832 boards as a target or a custom target adapters. The PXH832 can be configured as a x16, x8, or x4 connection.

Figure 1:PXH832 I/O Expansion Configurations



## Specifications

Link Speeds	32 Gb/s per port / 128 Gb/s
Application Performance	<130 nanoseconds cut through latency port to port
Active Components	Broadcom /PLX Gen 3 PCIe Switch
PCI Express	Base Specification 3
Topologies	Transparent Host/Target up to 4 devices
Cable Connections	Four x4 iPass®+ HD / MiniSAS-HD /SFF-8644 copper cables, 0.5 - 9 meters
Power Consumption	10 Watts (typical, 14 Watts worst case ) + 800 miliwatts (typical) pr connected x4 AOC
Mechanical Dimensions	Low profile, Half Length - 68.90 mm (2.731 inches) x 167.65 mm (6.600 inches)
PCIe Bracket	Full height plate mounted Half height plate included
Regulatory	CE Mark FCC Class A UL94V-0 compliant RoHS Compliant

Operating Environment	Operating Temperature: 0°C - 55°C (32°F - 131°F) Operating Temperature with AOC: 0°C - 45°C (32°F - 113°F) Air Flow: 150 LFM
	Operating Temperature: 0°C - 50°C (32°F - 122°F) Air Flow: ~0 LFM
	Relative Humidity: 5% - 95% (non- condensing)
Configuration	DIP-switch Host /Target /Long cable /short cable /safe boot
Product Codes	PXH832 Host/Target Adapter