MXH532 PCIe 5.0 x16 Transparent Adapter

Features

- ✓ PCI Express Gen5 - 32.0 GT/s per lane
- ✓ Microchip Switchtec® Gen 5.0 PFX
- ✓ Link compliant with PCIe 1.0, 2.0, 3.0, 4.0 and 5.0
- ✓ Selectable host Clock isolation support, Automatic support for host running CFC or SSC
- ✓ Quad SFF-8614 x4 connectors
- ✓ Passive Copper cable support
- ✓ EEPROM for multiple system configurations
- ✓ RDMA support through PIO and DMA
- ✓ Link status LEDs through the face plate
- ✓ ~600ns – application to application latency.
- ✓ ~100ns -Chip latency.
- ✓ eXpressWare™ software suite license
- ✓ Low Profile, Half Length PCIe form factor

The MXH532 PCIe 5.0 NTB Host/Target Adapter represents our High-Performance networking solution. It accommodates cables that are compliant with the PCI-SIG External Cabling Specification 5.0 and employs the Microchip Switchtec® PCIe 5.0 PFX switch to facilitate reliable and fast Host or Target to IO expansion applications.
It is installed in a server or workstation as a host adapter to provide a transparent bridge to the I/O expansion subsystem. As a target, the adapter is installed in a PCIe slot in the I/O expansion system and connects to the host adapter to expand the I/O connectivity.

The MXH532 Adapter card comes with the optional eXpressWare Board Management software for simplified monitoring and management. The adapter also comes with optional support for SMBus and configuration via a Board Management Controller.

The card is delivered with a passive heat sink by default, but it is also available with a fan for open desktop use.

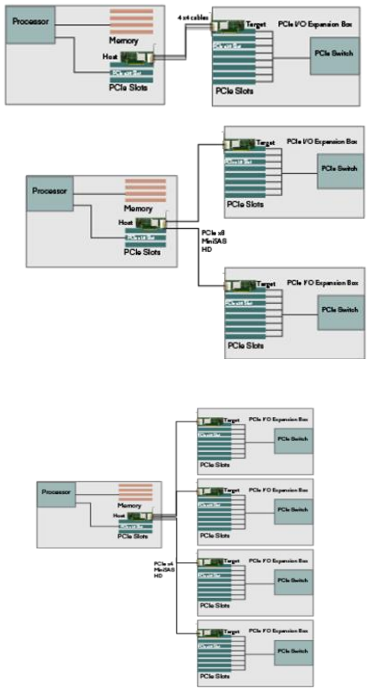
www.dolphinics.com/products/MXH532.html

Configurations

The MXH532 adapter functions as a versatile cable, configurable as a host or a target adapter. The topology sample demonstrates a range of potential configurations.

When used as a host adapter, the MXH532 connects to PCIe targets via an SFF-8614 connector and supports up to four PCIe expansion units without needing an external switch.

This adapter's configurations allow for flexible connectivity, supporting x16, x8, or x4 link widths.



Sample Topology Configurations

Specifications

PCI Express	➢ Base Specification 5.0 ➢ External Cabling Specification 5.0 ➢ Card Electromechanical Specification 5.0	Operating Environment	➢ Operating Temperature: 0˚C - 45˚C (32˚F - 131˚F) ➢ Airflow: TBD ➢ Relative Humidity: 5% -95% non-condensing
Application to Application latency	~600ns (system dependent)	Storage Environment	➢ Storage Temperature: -40˚C to 70˚C (-40˚F to 158˚F) ➢ Relative Humidity 95% (non-condensing) at 35°C
Application to Application Maximum DMA Throughput	~ 57 GBytes/s (system dependent)	Mechanical Dimensions	Low profile, half-length, 167.65mm- (6.6 inches) x 68.90 mm (2.731 inches)
Active Components	Microchip Switchtec® Gen5 PFX Switch	Dolphin Software	➢ No software needed ➢ eXpressWare Board Management Software available
Max Link Speeds	128 Gb/s per cable port, 512Gb/s in total	Usage Modes	Transparent Host/Target
Configuration	DIP-switch	Operating Systems	All
Topologies	➢ One x16 connection ➢ Two x8 connection ➢ Four x4 connection	Regulatory markings	➢ CE ➢ FCC ➢ KCC ➢ Canada/IC ➢ RCM
		Regulatory Compliant	➢ Reach ➢ RoHS ➢ UL94V-0
Cable Connections	➢ SFF-8614 connector for copper/fiber cables ➢ Supports quad x4 cables. ➢ Passive PCIe 5.0 copper, up to 3 meters	Mounting Brackets	➢ Full height Bracket installed. ➢ Half-height bracket is included in the shipping box.
Maximum power rating	➢ 12V: 2.8A (no port power) 3.3A (max port power) ➢ 3.3V Not connected. ➢ 3.3V Vaux: 100mA (no port power)	Product Codes	➢ MXH532 Transparent Host Adapter – Passive Heatsink
Typical power rating	➢ 12V: 2.5A (no port power) ➢ 3.3V Not connected ➢ 3.3V Aux: Max 100mA (Copper Cables)	Regulatory Approvals	➢ EN 55032:2012 ➢ EN 55035:2017 ➢ EN 61000-3-2:2014 ➢ EN 61000-3-3:2013 ➢ EN 61010-1:2010 ➢ EN 61326-1:2013 ➢ ICES-003 ➢ KS C 9832:2019, KS C 9835:2019 ➢ 47 CFR Part 15, Subpart B (Clause 15.107 and 15.109) in conjunction with ANSI C63.4:2014 ➢ CISPR 35:2016 Edition 1.0 (CISPR/I/412/CDV) Korean Harmonized standard, KN 35

13th February 2025