



实验室常用 PCIe Gen 5 主机卡，转接卡和延长线图解 Ver 6.92

随着国内越来越多的公司开始进行 PCIe Gen 5 相关产品的开发、验证和测试，例如各类芯片，模块，插卡，主机、网络、存储系统等，针对 PCIe Gen4&5 总线的问题诊断分析和测试工具也需要提前提到议事日程。

本文针对实验室测试中各种高品质的支持 PCIe Gen5 信号质量的常用主机卡 (switch card)，Retimer 卡，各类接口转接卡，转接线，延长线进行了图文介绍和产品描述，同时提供了产品价格供参考。

本文推荐的产品都是在全球业内各大知名芯片设计、系统集成设计公司获得普遍使用的针对 PCIe Gen 5 总线测试搭建环境常用的各种工具，这些产品广泛适用于当前国内从事计算、网络、存储、SSD、AI、大数据、GPU/DPU/MaPU 等数据加速产品，SmartNIC，移动通讯，嵌入式系统设计，汽车电子等诸多领域的 PCIe Gen 5 高速总线的开发和测试过程中。

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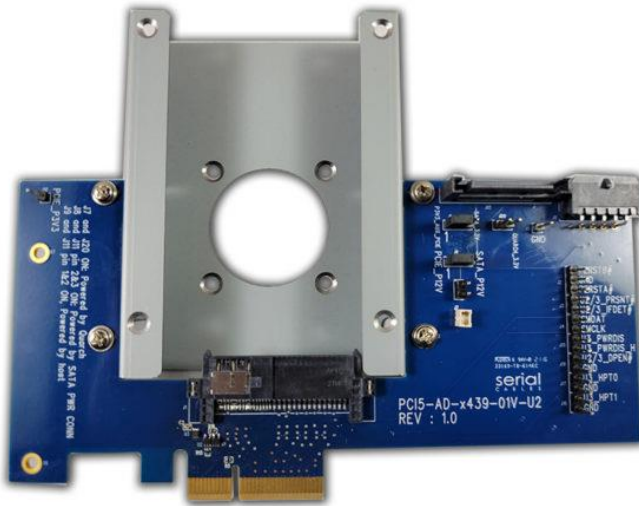
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1. GEN5 ADAPTERS

1.1 PCIe GEN5 U.2 ADAPTERS

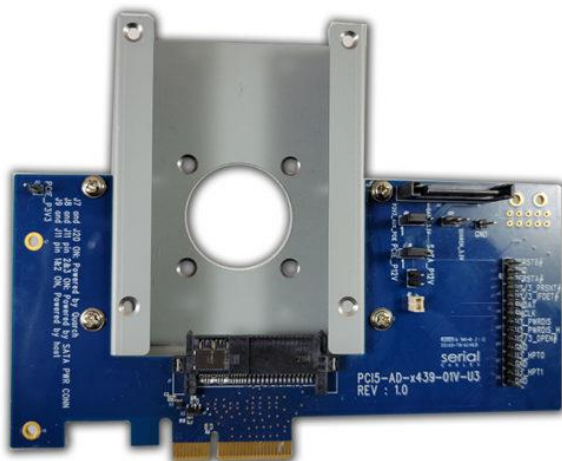


PCI5 GEN5 X4 TO U.2 VERTICAL ADAPTER

Part #: PCI5-AD-x439-01V-U2

Description: PCIe Gen5 Vertical x4 slot – U.2 adapter

1.2 PCIe GEN5 U.3 ADAPTERS



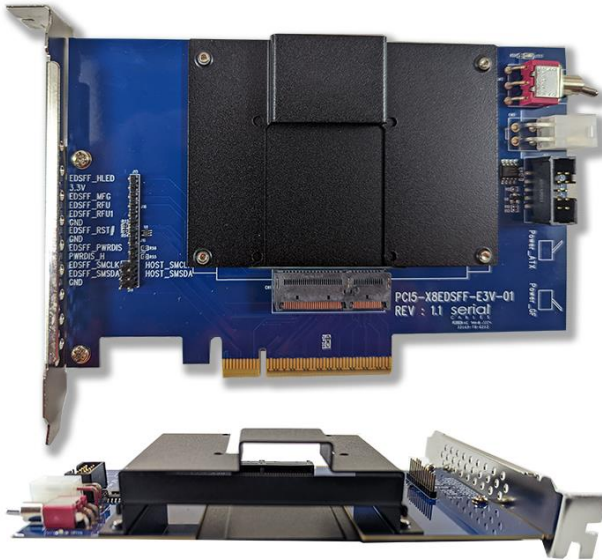
PCI5 GEN5 X4 TO U.3 VERTICAL ADAPTER

Part #: PCI5-AD-x439-01V-U3

Description: PCIe Gen5 Vertical x4 slot – U.3 adapter

1.3 PCIe GEN5 EDSFF ADAPTERS

E3



PCIE GEN5 X8 SLOT TO E3 EDSFF VERTICAL ADAPTER

Part #: PCI5-AD-x8EDSFF-E3V-01/E3

Description: PCIe Gen5 capable x8 slot – x8 EDSFF E3.S/L and E3.S.2T/E3.L.2T. Supports x4 as well

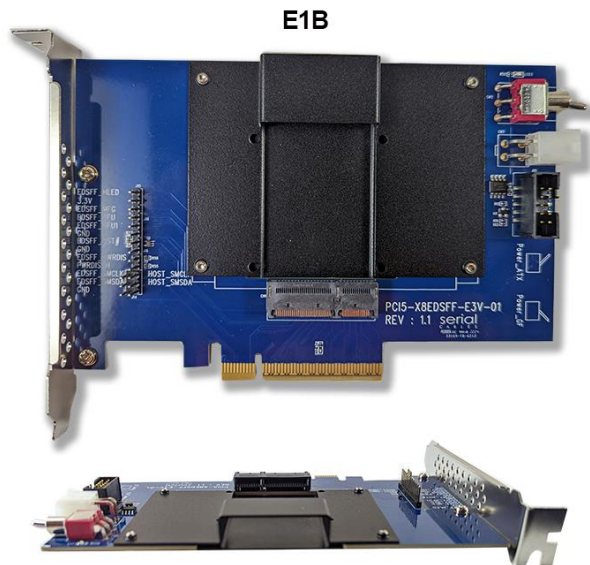
E1A



PCIE GEN5 X8 SLOT TO E3 EDSFF VERTICAL ADAPTER

Part #: PCI5-AD-x8EDSFF-E3V-01/E1A

Description: PCIe Gen5 capable x8 slot – x8 EDSFF E1.S 5.9mm. Supports x4 as well



PCI5 GEN5 X8 SLOT TO E3 EDSFF VERTICAL ADAPTER

Part #: PCI5-AD-x8EDSFF-E3V-01/E1B

Description: PCIe Gen5 capable x8 slot – x8 EDSFF E1.S 8.01mm and 9.5mm. Supports x4 as well

1.4 PCIe GEN5 OTHER ADAPTERS



PCI5 GEN5 X16 LANE REASSIGNMENT ADAPTER KIT

Part #: PCI5-AD-x16LS-KIT

Description: PCIe Gen5 x16 Lane Reassignment Adapter Kit



PCI5 GEN5 X16 LANE REVERSAL ADAPTER

Part #: PCI5-AD-x16LR

Description: PCIe Gen5 x16 Lane Reversal Adapter (Lane 15 – 0)



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PCI5 GEN5 X4 TO X16 LANE REDUCER

Part #: PCI5-AD-x4-x16

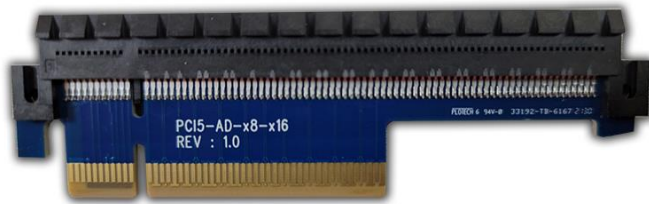
Description: PCIe Gen5 x4 to x16 Lane Reducer



PCI5 GEN5 X8 LANE REASSIGNMENT ADAPTER

Part #: PCI5-AD-x8LS

Description: PCIe Gen5 x8 Lane Reassignment Adapter



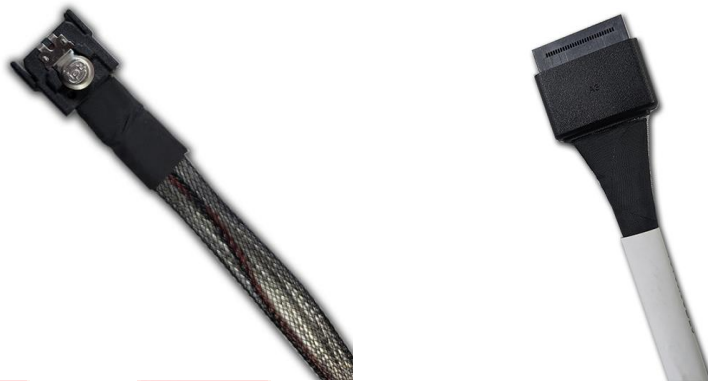
PCI5 GEN5 X8 TO X16 LANE REDUCER

Part #: PCI5-AD-x8-x16

Description: PCIe Gen5 x8 to x16 Lane Reducer

2.GEN5 CABLES

2.1 GEN5 MCIO CABLES



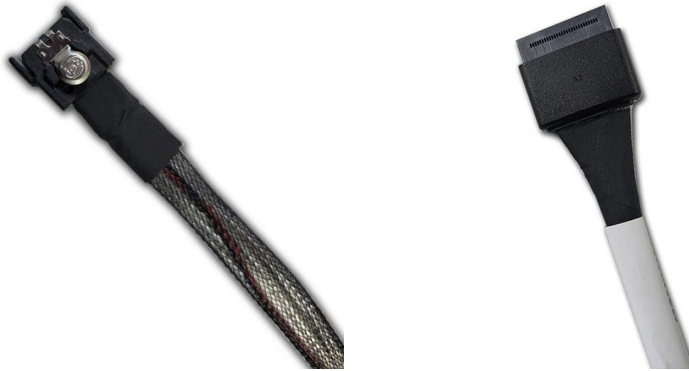
PCIE GEN5 MCIO 4X (SFF-TA-1016) 38P TO GENZ EDSFF 1C (SFF-TA-1009) 56P RECEPTACLE WITH 15P POWER

Part #: MCIO5-4XSC-EDSFF-1X4-0.5M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P to GenZ EDSFF 1C (SFF-TA-1009) 56P Receptacle with 15P power, for 1X4 Testing with Serial Cables Gen5 Switch card, 0.5m

Part #: MCIO5-4XSC-EDSFF-1X4-1M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P to GenZ EDSFF 1C (SFF-TA-1009) 56P Receptacle with 15P power, for 1X4 Testing with Serial Cables Gen5 Switch card , 1m



PCIE GEN5 MCI0 4X (SFF-TA-1016) 38P TO GENZ EDSFF 1C (SFF-TA-1009) 56P RECEPTACLE WITH 15P POWER

Part #: MCI05-4XSC-EDSFF-2X2-0.5M

Description: Gen5 MCI0 4x (SFF-TA-1016) 38P to GenZ EDSFF 1C (SFF-TA-1009) 56P Receptacle with 15P power, for 2X2 Testing with Serial Cables Gen5 Switch card, 0.5M

Part #: MCI05-4XSC-EDSFF-2X2-1M

Description: Gen5 MCI0 4x (SFF-TA-1016) 38P to GenZ EDSFF 1C (SFF-TA-1009) 56P Receptacle with 15P power, for 2X2 Testing with Serial Cables Gen5 Switch card, 1M



PCIE GEN5 MCI0 4X (SFF-TA-1016) 38P TO MULTILINK GEN5 PCIE U.2 DRIVE RECEPTACLE (SFF-8639)

68P 1x4 CABLE

Part #: MCI05-4X-39U2-1X4-0.5M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe Drive Receptacle (SFF-8639) 68P, 30AWG, 0.5 meter For connecting Gen5 Serial Cables Host/Switch to U.2 device 1x4

Part #: MCI05-4X-39U2-1X4-1M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe Drive Receptacle (SFF-8639) 68P, 30AWG, 1 meter For connecting Gen5 Serial Cables Host/Switch to U.2 device 1x4



PCIe GEN5 MCIO 4X (SFF-TA-1016) 38P TO MULTILINK GEN5 PCIe U.2 DRIVE RECEPTACLE (SFF-8639)
68P 2x2 CABLE

Part #: MCI05-4X-39U2-2X2-0.5M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe Drive Receptacle (SFF-8639) 68P, 30AWG, 0.5 meter For connecting Gen5 Serial Cables Host/Switch to U.2 device 2x2

Part #: MCI05-4X-39U2-2X2-1M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe Drive Receptacle (SFF-8639) 68P, 30AWG, 1 meter For connecting Gen5 Serial Cables Host/Switch to U.2 device 2x2



PCIe GEN5 MCIO 4X (SFF-TA-1016) 38P TO MULTILINK GEN5 PCIe U.3 DRIVE RECEPTACLE (SFF-8639) 68P 1x4 CABLE

Part #: MCIO5-4X-39U3-1X4-0.5M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe U.3 Drive Receptacle (SFF-8639) 68P, 30AWG, 0.5 meter For connecting Gen5 Serial Cables Host/Switch to U.2 device 1x4

Part #: MCIO5-4X-39U3-1X4-1M

Description: Gen5 MCIO 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe U.3 Drive Receptacle (SFF-8639) 68P, 30AWG, 1 meter For connecting Gen5 Serial Cables Host/Switch to U.3 device 1x4



PCIe GEN5 MCI0 4X (SFF-TA-1016) 38P TO MULTILINK GEN5 PCIe U.3 DRIVE RECEPTACLE (SFF-8639) 68P 2x2 CABLE

Part #: MCI05-4X-39U3-2X2-0.5M

Description: Gen5 MCI0 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe U.3 Drive Receptacle (SFF-8639) 68P, 30AWG, 0.5 meter For connecting Gen5 Serial Cables Host/Switch to U.3 device 2x2

Part #: MCI05-4X-39U3-2X2-1M

Description: Gen5 MCI0 4x (SFF-TA-1016) 38P TO Multilink Gen5 PCIe U.3 Drive Receptacle (SFF-8639) 68P, 30AWG, 1 meter For connecting Gen5 Serial Cables Host/Switch to U.3 device 2x2



PCIe GEN5 MCI0 X8 (SFF-TA-1016) 74P TO *2 MCI0 X4 (SFF-TA-1016) 38P, Y-CABLE

Part #: MCI05-8X-4X2-0.5M

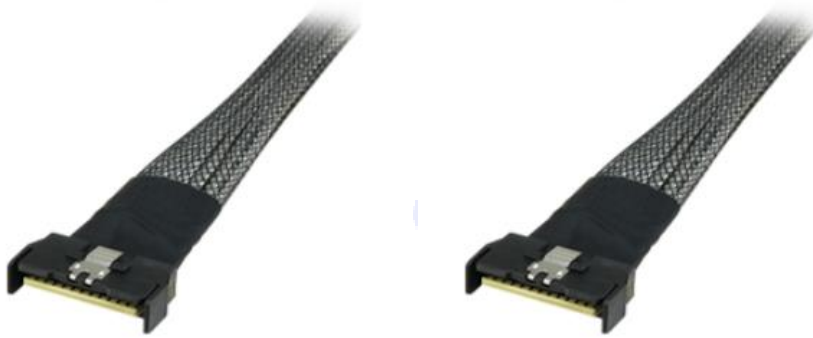
Description: Gen5 MCI0 x8 (SFF-TA-1016) 74P to *2 MCI0 x4 (SFF-TA-1016) 38P, Y-Cable, 0.5M



PCIE GEN5 MCI0 X8 (SFF-TA-1016) 74P TO *2 MULTILINK PCIE DRIVE RECEPTACLE (SFF-8639) 68P W/15P POWER

Part #: MCI05-8X-39X2U2-1X4-0.5M

Description: Gen5 MCI0 x8 (SFF-TA-1016) 74P to *2 Multilink PCIe drive receptacle (SFF-8639) 68P w/15P power, for 1x4 testing, 0.5M



PCIE GEN5 MCI0 X8 (SFF-TA-1016) 74P TO MCI0 X8 (SFF-TA-1016) 74P

Part #: MCI05-8X-8X-0.5M

Description: Gen5 MCI0 x8 (SFF-TA-1016) 74P to MCI0 x8 (SFF-TA-1016) 74P, 0.5M

Part #: MCI05-8X-8X-1M

Description: Gen5 MCI0 x8 (SFF-TA-1016) 74P to MCI0 x8 (SFF-TA-1016) 74P, 1M

2.2 GEN5 EDSFF CABLES



GEN5 *2 CEM X2 64P TO EDSFF (SFF-TA-1009) 56P 1C RECEPTACLE FOR 2×2 TESTING

Part #: PCI5-CEMX2-EDSFF-0.5M

Description: Gen5 *2 CEM x2 64P to EDSFF (SFF-TA-1009) 56P 1C receptacle for 2X2 testing, 0.5 meter



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GEN5 CEM X4 64P TO EDSFF (SFF-TA-1009) 56P 1C RECEPTACLE FOR 1X4 TESTING

Part #: PCI5-CEM-EDSFF-1X4-1M

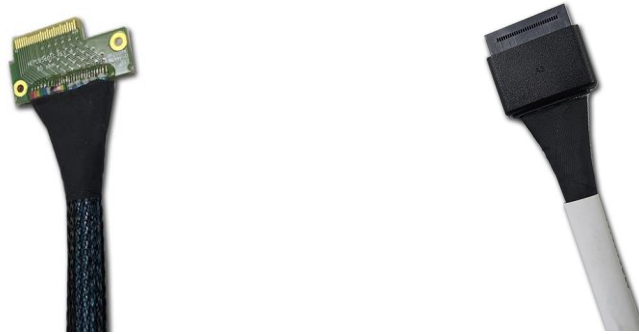
Description: Gen5 CEM x4 64P to EDSFF (SFF-TA-1009) 56P 1C receptacle for 1X4 testing, 1 meter



GEN5 EDSFF 1C (SFF-TA-1009) 56P TO MULTILINK DRIVE PLUG (SFF-8639) U.2 68P CABLE

Part #: PCI5-39MU2x4-EDSFF-0.5M

Description: Gen5 EDSFF 1C (SFF-TA-1009) 56P to Multilink Drive Plug (SFF-8639) U.2 68P, 30AWG, Extension cable, 0.5M



PCI5 EDSFF (SFF-TA-1009) MALE/PLUG 56P TO EDSFF (SFF-TA-1009) FEMALE RECEPTACLE 56P, 0.5M

Part #: PCI5-EDSFFMF-0.5M

Description: Gen5 EDSFF (SFF-TA-1009) Male/Plug 56P to EDSFF (SFF-TA-1009) Female Receptacle 56P, 0.5M

Part #: PCI5-EDSFFMF-1M

Description: Gen5 EDSFF (SFF-TA-1009) Male/Plug 56P to EDSFF (SFF-TA-1009) Female Receptacle 56P, 1M

PCI5-39FU2-EDSFFM-0.35M

Description: Gen5 EDSFF to U.2 Extension cable, GenZ/EDSFF Drive Plug 1C 56P (SFF-TA-1009) to Multilink U.2 Drive Receptacle 68P (SFF-8639), 30AWG, 0.35M

2.3 GEN5 U.2 CABLES



GEN5 *2 CEM X2 64P TO U.2 (SFF-8639) RECEPTACLE FOR 2x2 TESTING

Part #: PCI5-CEM**X2-39U2-0.5M**

Description: Gen5 *2 CEM x2 64P to U.2 (SFF-8639) receptacle for 2x2 testing, 0.5 meter



GEN5 AIC/CEM X4 PLUG TO GEN5 MULTILINK PCIE (SFF-8639) 68P RECEPTACLE, W/15P POWER, FOR 1x4 TESTING, 0.5M LENGTH

Part #: PCI5-CEM-39U2-**1X4-0.5M**

Description: Gen5 AIC/CEM x4 Plug to Gen5 Multilink PCIe (SFF-8639) 68P Receptacle, w/15P power, for 1x4 testing, 0.5M length

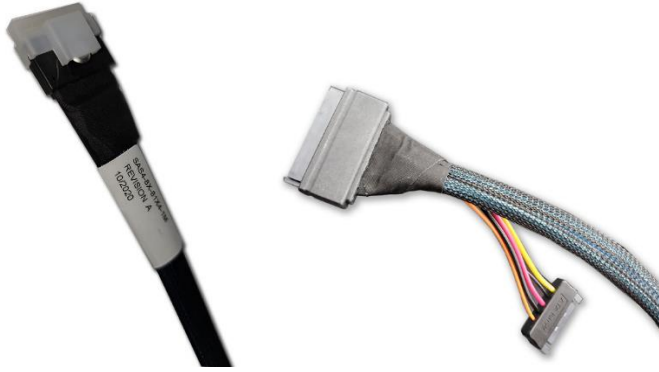
2.4 GEN5 SlimSAS CABLES



PCIE GEN5 *2 SLIMSAS 8i (SFF-8654) STR. 74P TO *1 DUAL PORT EDSFF 1C DRIVE RECEPTACLE (SFF-TA-1002) 56P FOR 2X2

Part #: SLS5-8X-1002-**2X2-0.5M**

Description: PCIe Gen5 *2 SlimSAS 8i (SFF-8654) str. 74P to *1 Dual Port EDSFF 1C drive receptacle (SFF-TA-1002) 56P for 2X2 connections, 0.5M length. Lanes 4-7 are NC



PCIE GEN5 *2 SLIMSAS 8I (SFF-8654) STR. TO *1 MULTILINK GEN5 PCIE DRIVE RECEPTACLE (SFF-8639) 68P, 2x2

Part #: SLS5-8X-39X2U2-2X2-0.5M

Description: PCIe Gen5 *2 SlimSAS 8i (SFF-8654) Str. to *1 Multilink Gen5 PCIe drive Receptacle (SFF-8639) 68P, 2x2 connectivity, 0.5M. For use with BRCM Gen5 Host boards with SlimSAS

Part #: SLS5-8X-39X2U2-2X2-1M

Description: PCIe Gen5 *2 SlimSAS 8i (SFF-8654) Str. to *1 Multilink Gen5 PCIe drive Receptacle (SFF-8639) 68P, 2x2 connectivity, 1M. For use with BRCM Gen5 Host boards with SlimSAS



PCIE GEN5 SLIMSAS 8I (SFF-8654) STR. 74P TO *2 EDSFF 1C DRIVE RECEPTACLE (SFF-TA-1002) 56P FOR 1X4

Part #: SLS5-8X-1002X2-1X4-0.5M

SI Parameters: RAR

Description: PCIe Gen5 SlimSAS 8i (SFF-8654) str. 74P to *2 EDSFF 1C drive receptacle (SFF-TA-1002) 56P for 1X4 connections, 0.5M length



PCIe GEN5 SLIMSAS 8i (SFF-8654) STR. TO *2 MULTILINK GEN5 PCIe DRIVE RECEPTACLES (SFF-8639) 68P, 1×4

Part #: SLS5-8X-39X2U2-1X4-0.5M

Description: PCIe Gen5 SlimSAS 8i (SFF-8654) Str. to *2 Multilink Gen5 PCIe drive Receptacles (SFF-8639) 68P, 1×4 connectivity, 0.5M. For use with BCM Gen5 Host boards with SlimSAS

Part #: SLS5-8X-39X2U2-1X4-1M

Description: PCIe Gen5 SlimSAS 8i (SFF-8654) Str. to *2 Multilink Gen5 PCIe drive Receptacles (SFF-8639) 68P, 1×4 connectivity, 1M. For use with BCM Gen5 Host boards with SlimSAS

2.5 GEN5 PCIe CEM CABLES



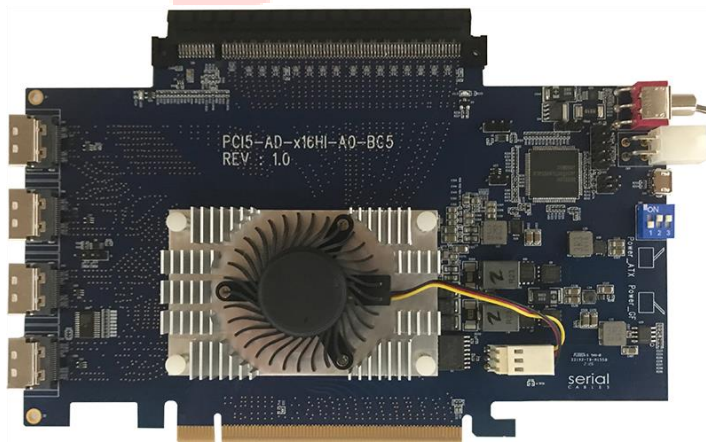
Product Status	Active
Cable Connectors	PCIe x16
Number of Positions	164
Connector Type	Receptacle to Plug
Gender	Female to Male
Fastening Type	Push-Pull
Features	32Gbps PCIe Gen5 Riser Cable
Cable Type	Flat, Twin Axial
Usage	Internal
Length	1.31' (400.0mm)
Color	Black
Shielding	Shielded
Wire Gauge	-
Frequency - Max	25GHz
Operating Temperature	-
Base Product Number	PC-PCIe-16X

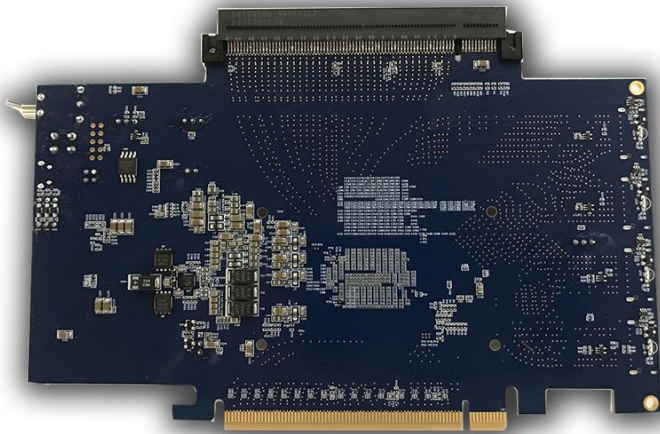
规格

- 400mm
- 500mm
- 700mm
- 1000mm

3. GEN5 BROADCOM HOST CARDS

PCIe GEN5 X16 MCIO HOST CARD WITH BROADCOM ATLAS2 A0 PCIe SWITCH





Part #: PCI5-AD-x16HI-A0-BG5

Description: PCIe Gen5 capable x16 host card. Based on Broadcom's new **PEX89000 PCIe switch chip this x16 host card has 4, x4 MCIO connectors (special PCI bracket to expose internal MCIO connectors outside the enclosure) and 1, x16 Gen5 receptacle. This host card supports bifurcation down to 8x2's per/station and is user configurable through onboard CLI commands. Auxiliary power connector available for powering the DUT(s) vs slot supplied power.

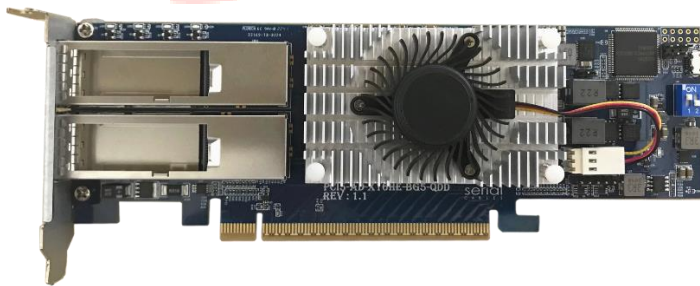
***Supports Broadcom's PEA (PCIe Embedded Analyzer) technology through SerialTek's iTAP software.

** A0 version of PEX89000 PCIe switch chip is not a production chip and could have some errata.

***iTAP software not included and functions on station 0 only

****Station 0 at MCIO

PCI5 GEN5 X16 QSFP-DD HOST CARD WITH BROADCOM ATLAS2 B0 PCIE SWITCH



Part #: PCI5-AD-x16HE-BG5-QDD

Description: PCIe Gen5 capable x16 host card. Based on Broadcom's new **PEX89000 PCIe switch chip this x16 host card has 2, x8 WDD connectors.

***Supports Broadcom's PEA (PCIe Embedded Analyzer) technology through SerialTek's iTAP Panda Hardware.

***iTAP Panda Hardware not included

4. GEN5 RETIMER CARD



The PCI Express® 5.0 add-in-card are intended for in-system evaluation of the Aries PCIe 5.0 x16 Smart Retimer. The low-profile active add-in card has a x16 PCIe CEM-compliant edge finger to be plugged into a Gen-5 system, and features a x16 CEM connector on top to install an endpoint add-in card. It is configured for plug-and-play operation, meaning no retimer configuration is required and the Root Complex (e.g. CPU) and Endpoint (e.g. NIC) will automatically form a Link through the Aries Smart Retimer on power-up and de-assertion of PERST#.