PE325G2SPB34

Dual Port Fiber SFP+ 25 Gigabit Ethernet PCI Express GEN3 Server Adapter Broadcom® BCM57304 Based

Product Description

Silicom's 25 Gigabit Ethernet PCI Express server adapters are designed for Servers and high-end appliances. The Silicom 25 Gigabit Ethernet PCI Express Server adapters offer simple integration into any PCI Express X8 to 25 Gigabit Networks. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.

The Silicom 25 Gigabit Ethernet PCI Express server adapters are based on Broadcom BCM57304 Ethernet controller with fully integrated Gigabit Ethernet Media Access Control (MAC) and SFI Interface. In addition to managing MAC and PHY Ethernet layer functions, the controller manages PCI Express packet traffic across its transaction, link, and physical/logical layers.

Using hardware acceleration, the controller offloads tasks from the host, such as TCP/UDP/IP checksum calculations and TCP segmentation.

Silicom's 25 Gigabit Ethernet PCI-Express Server adapters are the ideal solution for implementing multiple network segments, mission-critical high-powered networking applications and environments within high performance servers.

Key Features

SFP28 25Gigabit Ethernet
25Gigabit Ethernet Adapter with SFP cage support:
-ZS: Fiber 25 Gigabit Ethernet 25GBASE-SR:

- 25GBase-SR with 25G 850nM Small Form Factor Pluggable (SFP28)

-ZL: Fiber 25 Gigabit Ethernet 25GBASE-LR:

- 25GBase-LR with 25G 1310nM Small Form Factor Pluggable (SFP28)

-ZS: Fiber 25 Gigabit Ethernet 25GBASE-SR:

- 25 Gigabit Fiber Ethernet port supports 25GBASE-SR (850nM LAN PHY)

- 25Gigabit 850nM Small form Factor Pluggable (SFP28)

-ZL: Fiber 25 Gigabit Ethernet 25GBASE-LR:

- 25 Gigabit Fiber Ethernet port supports 25GBASE-LR (1310nM LAN PHY)

- 25Gigabit 1310nM Small form Factor Pluggable (SFP28)

Common Key features:

Host Interface:

- PCI Express X8 lane

- Support PCI Express Base Specification 3.0 (8GT/sec)

- Vendor ID = 0x14E4

- Device ID = 0x16CA

Performance Features:

- Function Level Reset (FLR) support

- Message Signal Interrupt (MSI-X)

- Support Jumbo frames, up to 9.6kB

- Single Root I/O Virtualization (SR-IOV)

- 802.1q VLAN tagging

LAN Features and Virtualization features:

- RDMA over Converged Ethernet (RoCE)

- Stateless Offloads

- Datacenter Bridging (lossless Ethernet)

- Congestion Avoidance

- TruManage™

- TruFlow™

- Network Controller Sideband Interface (NC-SI)

- IEEE 1588 PTP (Precision Timing Protocol)

- IEEE 802.1AS standard

- NetQueue

- VMQueue

- VXLAN

- NVGRE/Geneve/IP-in-IP/GRE-aware stateless offloads

- Stateless Transport Tunneling.

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- 802.3x flow control

- Link Aggregation (802.3ad)

- Configurable Flow Acceleration

- Congestion Avoidance

- Ethernet Audio/Video

- TCP/IP/L2 features:

  o Large Send Offload

  o Receive side scaling (RSS)

  o IP/TCP/UDP checksum

  o IPv4, IPv6

- Receive Segment Coalescing

- Generic Receive Offload

- Header-Payload Split

- LEDs indicator for link/Activity

Technical Specifications

SFP28 25Gigabit Ethernet Technical Specifications Adapters	
SFP28 (Small Form Factor Pluggable) supports:	SFI interfaces supports 25GBase-R PCS and 25 Gigabit PMA in order to connect with SFP28 to 25GBase-SR
25GBase-SR SFP28: IEEE Standard / Network topology:	Fiber 25Gigabit Ethernet, 25GBASE-SR (850nM LAN PHY)
25GBase-SR SFP28: Data Transfer Rate:	25.78125Gbps
25GBase-LR SFP28: IEEE Standard / Network topology:	Fiber 10Gigabit Ethernet, 10GBASE-LR (1310nM LAN PHY)
25GBase-LR SFP28:	25.78125Gbps

Data Transfer Rate:	
25GBase-LR SFP28: Cables and Operating distance Up to:	Single-Mode: 10000m at 9um

Operating Systems Support

Operating system support:	Linux

General Technical Specifications

Interface Standard:	PCI-Express Base Specification Revision 3.0(8 GTs)
Board Size:	Low profile height short add-in card: 167.64mm X 64.389mm (6.60"X 2.535")
PCI Express Card Type:	X8 Lane
PCI Express Voltage:	+3.3VAUX ±9%, +12V ± 8%
PCI Connector:	Gold Finger: X8 Lane
Controller:	Broadcom BCM57304
Holder:	Metal Bracket
Operating Humidity:	0%–90%, non-condensing
Operating Temperature:	0°C – 45°C (32°F – 113°F)

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Storage:	-40°C–65°C (-4°F–149°F)
EMC Certifications	FCC 47CFR Part 15:2013, Subpart B Class B Conducted emissions Radiated emissions EN 55022: 2010, Class B Conducted disturbance at mains terminals Conducted disturbance at telecommunication port Radiated disturbance EN 61000-3-2: 2006+A1(09)+A2(09) Harmonic current emissions EN 61000-3-3: 2008 Voltage fluctuations and flicker EN 55024: 2010 Immunity to electrostatic discharge (ESD) Radiated immunity to radio frequency electromagnetic field Conducted immunity to electrical fast transients / bursts (EFT/ B) Conducted immunity to voltage surges Conducted immunity to disturbances induced by radio frequency field Conducted immunity to voltage dips and short interruptions

LEDs

LEDs:	(2) LEDs per port Link Led: Turns on link 25G (Orange) Link/Act Led: Turns on link (Green), Blinks on activity (Green)
LEDs location:	LED is located on the PCB, visible via holes in the metal bracket holder
Connectors:	(2) SFP28 / zSFP+ Cages

Order Information

P/N	Description	Notes
PE325G2SPB34-ZX	Dual port Fiber SFP+ 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen 3, based on Broadcom BCM57304, Support Silicom SFP+ approved transceiver, RoHS Compliant
PE325G2SPB34-ZS	Dual port Fiber (SR) 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen 3, based on Broadcom BCM57304, on board support for Fiber SR, RoHS Compliant
PE325G2SPB34-ZL	Dual port Fiber (LR) 25 Gigabit Ethernet PCI Express Server Adapter	X8 Gen 3, based on Broadcom BCM57304, on board support for Fiber LR, RoHS Compliant

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