



PE310G2SPB32 Server Adapter

Dual port Fiber 10 Gigabit Ethernet PCI Express Server Adapter Broadcom® Based

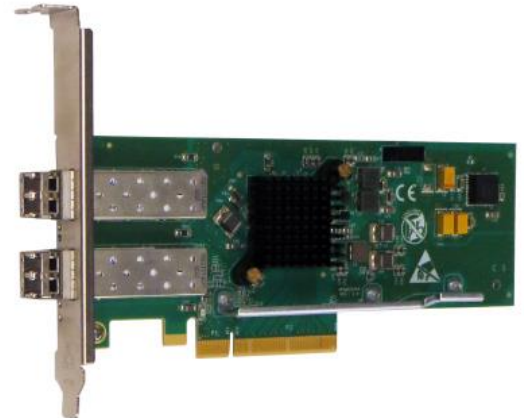
Product Description

Silicom's 10 Gigabit Ethernet PCI Express server adapters are designed for Servers and high-end appliances. The Silicom 10 Gigabit Ethernet PCI Express Server adapters offer simple integration into any PCI Express X8 to 10 Gigabit Networks. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.



The Silicom 10 Gigabit Ethernet PCI Express server adapters are based on Broadcom BCM57302 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 10 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

SFP+ 10Gigabit Ethernet:

10Gigabit Ethernet Adapter with SFP cage support:

- -SR: Fiber 10 Gigabit Ethernet 10GBASE-SR:
 - 10GBASE-SR with 10Gigabit 850nm Small form Factor Pluggable (SFP+)
- -LR: Fiber 10 Gigabit Ethernet 10GBASE-LR:
 - 10GBASE-LR with 10Gigabit 1310nm Small form Factor Pluggable (SFP+)
- -SR: Fiber 1/10 Gigabit Ethernet 10GBASE-SR:

- 10 Gigabit Fiber Ethernet port supports 10GBASE-SR (850nm LAN PHY)
- -LR: Fiber 1/10 Gigabit Ethernet 10GBASE-LR:
 - 10 Gigabit Fiber Ethernet port supports 10GBASE-LR (1310nm LAN PHY)

Common Key features:

- Host Interface:
 - PCI Express x8,
 - 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.

802.3x flow control

Link Aggregation (802.3ad)

Configurable Flow Acceleration

Congestion Avoidance

Ethernet Audio/Video

- TCP/IP/L2 features:

Large Send Offload

Receive side scaling (RSS)

IP/TCP/UDP checksum

IPv4, IPv6

Receive Segment Coalescing

Generic Receive Offload

Header-Payload Split

LEDs indicator for link/Activity

Technical Specifications

-SFP+ 10Gigabit Ethernet Technical Specifications Adapters:	
SFP+ (Small Form Factor Pluggable) supports:	SFI interfaces supports 10GBase-R PCS and 10 Gigabit PMA in order to connect with SFP+ to 10GBase-SR // 1000Base-SX / 10GBase-LR and SFP+ Direct Attach
10GBase-SR SFP+: IEEE Standard / Network topology:	Fiber 10Gigabit Ethernet, 10GBASE-SR (850nM LAN PHY).
10GBase-SR SFP+: Data Transfer Rate :	10.3125GBd
10GBase-SR SFP+: Cables and Operating distance Up to:	62.5um, 160MHz/Km 26m 62.5um, (OM1)200MHz/Km 33m 50um, 400MHz/Km 66m 50um, (OM2)500 MHz/Km 82m 50um, (OM3)2000MHz/Km 300m
10GBase-LR SFP+: IEEE Standard / Network topology:	Fiber 10Gigabit Ethernet, 10GBASE-LR (1310nM LAN PHY)
10GBase-LR SFP+: Data Transfer Rate:	10.3125GBd
10GBase-LR SFP+: Cables and Operating distance Up to:	Single-Mode: 10000m at 9um

10GSFP+Cu : IEEE Standard / Network topology:	Copper 10Gigabit Ethernet, 10GSFP+Cu (Direct Attach)
– SR: Fiber 10GBASE-SR Technical Specifications:	
Output Transmit Power (10G):	Minimum: -5 dBm
Optical Receive Sensitivity (10G):	Maximum: -11.1 dBm
Maximum Input Power (10G):	Maximum: +0.5dBm
– LR: Fiber 10GBASE-LR Technical Specifications:	
Output Transmit Power (10G):	Minimum: -8.2 dBm
Optical Receive Sensitivity (10G):	Maximum: -12.5 dBm
Maximum Input Power (10G):	Maximum: +0.5dBm
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 BCM57302
Holder:	Metal Bracket
Operating Humidity:	0%–90%, non-condensing

Operating Temperature:	0°C – 45°C (32°F – 113°F)
Storage:	-40°C–65°C (-40°F–149°F)
Regulation:	Card shall meet CE, FCC Class B, ROHS requirements.
LEDs	
LEDs:	Each Port has 2 LEDs to indicate link status and speed Link: Physical link Speed: Red stay on – physical link on with 25G Speed Off – physical link off Link/ACT: Logic Link/Activity, Green Green blinking – logic link up, activity
LEDs location:	LED is located on the PCB, visible via holes in the metal bracket holder
Connector:	(2) SFP+ Cages

Order Information

P/N	Description	Notes
PE310G2SPB32-XR	Dual port Fiber SFP+10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen 3, based on Broadcom BCM57302, Support Silicom SFP+ approved transceiver, RoHS Compliant
PE310G2SPB32-SR	Dual port Fiber (SR) 10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen 3, based on Broadcom BCM57302, on board support for Fiber SR, RoHS Compliant
PE310G2SPB32-LR	Dual port Fiber (LR) 10 Gigabit Ethernet PCI Express Server Adapter	X8 Gen 3, based on Broadcom BCM57302, on board support for Fiber LR, RoHS Compliant

1V0