



PE310G4I71-T Server Adapter

Quad Port Copper 10 Gigabit Ethernet PCI Express Server Adapter Intel® XL710 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 10GBase-T 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 Intel® XL710BM1 Ethernet controller with fully integrated Gigabit Ethernet Media Access Control (MAC) and Intel® X557-AT4 10 GbE PHY. 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.



Key Features

Copper 10 Gigabit Ethernet 10GBASE-T:

- Integrated 10 Gigabit Copper PHY supports 10GBASE-T, 1000 BASE-T and 100BASE-TX.
- Triple speed 10Gbps (10GBase-T), 1000Mbps (1000Base-T) and 100 Mbps (100Base-Tx).
- RJ-45 connector supports CAT 6A cable.

Performance Features:

- Support for jumbo frame up to 9.5KB
- Flow control support
- Priority Flow Control (draft IEEE 802.1Qbb)
- Enhanced Transmission Selection (draft IEEE802.1az)
- Statistics management and RMON
- 802.1q VLAN support
- DCB/DCB-X support
- Message Signal interrupts (MSI-X)
- Storage – Enabling competitive performance with native OS intelligent offload solutions, including NAS, iSCSI and FCoE

Host Interface:

- PCI Express X8 lanes
- Support PCI Express Base Specification 3.0 (8GT/sec)

LAN and Virtualization Features:

- Network Virtualization offloads for VXLAN and NVGRE
- Unified Networking Providing a single wire for LAN and storage: NAS (SMB, NFS) and SAN (iSCSI, FCoE)
- Virtual Bridging Support – VEPA/802.1Qbg, BPE/802.1Qbh
- Physical Functions – Up to 8 per port, up to 16 per device
- Support for 128 Virtual Device Queues (VMDq) per port
- Hardware Queue Pairs – Up to 1.5K (non-RDMA); up to 256K (RDMA)
- Virtualization – Alleviating hypervisor I/O bottlenecks by providing flow separation for Virtual Machines (VMs)
- TCP/IP/L2 features:
 - Receive Side Scaling (RSS)
 - Large Send Offload (LSO)
 - TCP/UDP/IP/SCTP Checksum Offload
- IPV4, IPV6

Technical Specifications

10GBASE-T Copper Ethernet Adapters Technical Specifications:	
IEEE Standard / Network topology:	Copper 10Gigabit Ethernet, 10GBASE-T, IEEE 802.3an Gigabit Ethernet, 1000Base-T 100 Mb Ethernet : 100BASE-TX
Data Transfer Rate:	20 Gb/s, 2000Mb/s and 200 Mb/s in full duplex mode per port
Cables and Operating distance:	100Base-Tx Category 5 maximum 100m 1000Base-T Category 5E maximum 100m 10GBase-T Category 6A maximum 100m
-Operating Systems:	
Operating system support:	Windows Linux
-PE310G4I71-T: General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 3.0 (8 GT/sec)
Board Size:	167.6mm X 106.6mm(6.600" X 4.200") PCB thickness is 0.062 inch

PCI Express Card Type:	X8 Lane
PCI Express Voltage:	+12V +- 8%
PCI Connector:	X8 Lane
Controller:	Intel® XL710BM1 Intel® X557-AT4
Holder:	Metal Bracket
Weight:	160gr (5.64 oz)
Power Consumption:	18.36W (1.53A at 12v) – Full 10GBase-T traffic 12.60W (1.05A at 12v) – Full 1000Base-T traffic 12.84W (1.07A at 12v) – Full 100Base-T traffic 10.32W (0.86A at 12V) – No Link
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)
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/ Connectors Specifications:

LEDs:	(2) LED per port Speed LED(Left): Link of 1Gb/s: Turns on link (yellow) Link of 10Gb/s: Turns on link (green) Link /ACT LED(Right) : Turns on link , blinks on activity (green)
LEDs location:	LEDs are located in the RJ45 connector port.
Connector:	(4) Shielded RJ-45

Order Information

P/N	Description	Notes
PE310G4I71-T	Quad Port Copper 10GBE PCI-E G3 Server Adapter	X8 Gen3, Based on Intel® XL710BM1 + X557-T4, RoHS compliant

Order information: Model P/N

1V2