Silicom

Connectivity Solutions

PE310G4i50L-T Server Adapter

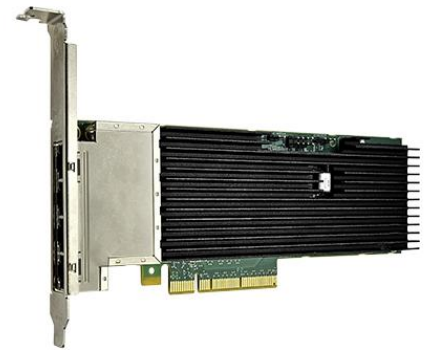# Quad Port Copper 10 Gigabit Intel® X550 Based

Product Description

Silicom's 10 Gigabit Ethernet PCI Express server adapters designed for Servers and high-end network appliances. The Silicom 10 Gigabit Ethernet PCI Express Server adapter offers simple integration into PCI Express Bifurcation x8 (2×4) to UTP 10GBase-T Gigabit Networks.

The Silicom's 10 Gigabit Ethernet PCI Express server adapters based on Intel X550. The Intel X550 10 Gigabit Ethernet controller includes two fully integrated Ethernet Media Access Control (MAC) and two fully integrated 10GBASE-T copper PHYs.

The Intel X550 10 Gigabit Ethernet controllers include hardware acceleration that can offload 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

Copper 10 Gigabit Ethernet 10GBASE-T:

- Integrated 10 Gigabit Copper PHY supports 10GBASE-T, 1000BASE- 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 15.5KB
- Flow control support
- Statistics management and RMON
- 802.1q VLAN support
- TCP segmentation offload: up to 256KB.
- IPV6 Supports for IP/ TCP and IP/UDP Receive Checksum offload
- Fragmented UDP checksum offload for Packet Reassembly
- Message Signal interrupts (MSI)
- Message Signal interrupts (MSI-X)
- Interrupt throttling control to limit maximum interrupt rate and improve CPU usage

- Flow Director (16 x 8 and 32 x 4)

- 128 Transmit queues

- Support for 64 virtual machines per port (64 VMs x 2 queues)

- Support Direct Cache Access (DCA)

- Large on chip receive packet buffer (384 KB)

- Large on chip transmit packet buffer (160KB)

Host Interface:

- Bifurcation mode of PCIe x4x4 lanes from/to host via gold fingers of edge card

- Support PCI Express Base Specification 3.0, 8GT/s, 5GT/s or 2.5GT/s

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 Support	
Operating system support:	Windows Linux
General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 3.0 (8GT/s)
Board Size:	Low profile half-length add-in card 167.65mm X 68.91mm (6.6"X 2.713")
PCI Express Card Type:	X8 Lane (PCIe bifurcation 2×4)
PCI Express Voltage:	+12V +- 8%
PCI Connector:	Gold Finger: X8 Lane, PCIe bifurcation 2×4
Controller:	(2) Intel x550

Holder:	Metal Bracket
I/O:	RJ45
Operating Humidity:	0%–90%, non-condensing
Operating Temperature:	0°C – 40°C (32°F – 104°F)
Storage:	-40°C–65°C (-40°F–149°F)
EMC Certifications:	Card shall meet CE, FCC Class B, ROHS requirements
LEDs	

LEDs:	Each Port has 2 LEDs to indicate link status and speed.
	Link:
	  Green stay on – physical link on with 10G Speed
	  Yellow stay on – physical link on with 1G Speed
	  Off – physical link on with 100M Speed
	Link /ACT: Logic Link/Activity, Green
	  Green stay on – logic link up, no activity
	  Green blinking – logic link up, activity
	  Off – logic link off

LEDs location:	LEDs are located in the RJ45 connector port
Connectors:	(4) Shielded RJ-45

Order Information

P/N	Description	Notes
PE310G4i50L-T	Quad Port Copper 10 Gigabit Ethernet PCI Express Server Adapter	2X4 PCIe Gen 3.0 Bifurcation, Based on Intel X550-AT2, RoHS compliant

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