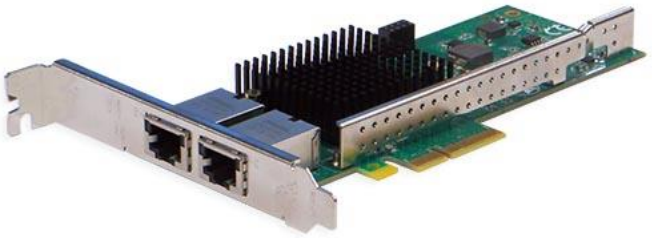
Silicom Connectivity Solutions

PE310G2I50-T

Dual Port Copper 10 Gigabit Ethernet PCI Express Server Adapter Intel® X550-AT2 Based

Product Description



Silicom's 10 Gigabit Ethernet PCI Express server adapters are designed for Servers and high-end network appliances. The Silicom 10 Gigabit Ethernet PCI Express Server adapter offers simple integration into any PCI Express X4 to UTP 10GBase-T Gigabit Networks.

The Silicom's 10 Gigabit Ethernet PCI Express server adapters are 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 includes hardware acceleration that can 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

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 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
- Multiple Receive Queues (RSs) 8×8 & 16×4
- 128 Transmit queues
- Support for 64 Virtual Device Queues (VMDq) per port
- Support Direct Cache Access (DCA)
- Large on chip receive packet buffer (384 KB)
- Large on chip transmit packet buffer (160KB)

Host Interface:

- PCI Express X4 lanes
- Support PCI Express Base Specification 3.0 (8GT/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:	10GBase-T Category 7 Full reach maximum 100m 10GBase-T Category 6A Full reach maximum 100m 10GBase-T Category 6A Short reach maximum 30m 10GBase-T Category 6 maximum 55m

	10GBase-T Category 5e maximum 1m 1000Base-T Category 5E Full reach maximum 100m 100Base-Tx Category 5E Full reach 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 add-in card: 152.4 mm X 68.91mm (6.0”X 2.713”)
PCI Express Card Type:	X4 Lane
PCI Express Voltage:	+12V +- 8%
PCI Connector:	Gold Finger: X4 Lane
Controller:	Intel X550-AT2
Holder:	Metal Bracket
I/O:	RJ45
Weight:	110gr (3.880 oz)
Power Consumption:	8.16 W, 0.68 A at 12V: Typical all ports operate at 10Gb/s 5.4 W, 0.45 A at 12V: Typical all ports operate at 1Gb/s 3.72 W, 0.31 A at 12V: Typical all ports operate at 100Mb/s 4.62 W, 0.385 A at 12V: Typical No link at all ports
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 15:2016, Subpart B Class B Conducted emissions Radiated emissions VCCI-CISPR 32: 2016, Class B Conducted emissions Radiated emissions

	EN 55032: 2012+ AC(13), Class B Conducted emissions Radiated emissions EN 61000-3-2: 2014 Harmonic current emissions EN 61000-3-3: 2013 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
MTBF:	239 (Years) *According to Telcordia SR-332 Issue 1 Environmental condition – GB (Ground, Fixed, Controlled). Ambient temperature – 25°C. Temperature rise of 15°C above the system ambient temperature was assumed for the cards components
LEDs	
LEDs:	(2) LED per port Speed LED (Left): Link 100Mb/s: Turn off 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
Connectors:	(2) Shielded RJ-45

Order Information

P/N	Description	Notes
PE310G2I50-T	Dual Port Copper 10 Gigabit Ethernet PCI Express Server Adapter	X4 Gen 3.0, Based on Intel X550-AT2, RoHS compliant