



### PE2G6I35

#### Six Port Copper Gigabit Ethernet PCI Express Server Adapter Intel® i350AM2 Based

##### Product Description

Silicom's Six Port Copper Gigabit Ethernet PCI Express Server adapter is PCI-Express X8 network interface card that contains six Gigabit Copper ports on a PCI-Express adapter.

Silicom's Six Port Copper Gigabit Ethernet Card is the ideal solution for implementing multiple network segments, mission-critical high-powered networking applications and environments within high performance servers.



Silicom's Six Port Copper Gigabit Ethernet PCI Express Server adapter is based on Intel i350AM4 Quad port Gigabit Ethernet MAC+PHY and Intel i350AM2 Dual port Gigabit Ethernet MAC+PHY of Intel Controller. The Silicom i350 support PCI-SIG Single-Root I/O virtualization and sharing specification (SR-IOV).

##### Key Features

###### Performance Features:

- 8 Transmit and 8 Receive queues per port
- Up to 32 queues of Receive Side Scaling (RSS) minimize CPU utilization across multiple processor systems
- Support PCI-SIG Single-Root I/O virtualization Rev 1.1.
- Support for up to 8 virtual function ( VFs)
- Partial replication of PCI Configuration space
- Support for 8 pools (single queue) of virtual machine Device Queues (VMDq) per port.
- Support Direct Cache Access (DCA).
- Support Intel I/O Acceleration Technology v3.0.
- TSO interleaving for reduced latency
- Minimized device I/O interrupts using MSI and MSI-X
- UDP, TCP and IP checksum offload
- UDP and TCP transmit segmentation offload (TSO). machine



- SCTP receive and transmit checksum offload.
- Packet interrupt coalescing timers (packet timers) and absolute-delay interrupt timers for both transmit and receive operation.
- EEE ( IEEE 802.3az) for reduced power consumption during low link utilization periods.

**Copper Gigabit Ethernet 1000Base-T:**

- Independently copper Gigabit Ethernet channels support six Gigabit Ethernet (1000Base-T), Fast Ethernet (100Base-Tx) and Ethernet (10Base-T).
- Triple speed 1000Mbps (1000Base-T), 100 Mbps (100Base-Tx) and 10 Mbps (100Base-T) operation
- Nway auto negotiation automatic sensing and switching between 1Gbps full duplex and 100 / 10 Mbps operations Simplex or Full Duplex
- RJ-45 female connectors

**Common Key features:**

- Support PCI Express Base Specification 2.1 (5 GTs)
- High performance, reliability, and low power use in Intel i350 Quad integrated MAC + PHY and SERDES chip Controllers
- Ultra deep, packet buffer per channel lowers CPU utilization
- Hardware acceleration that can offload tasks from the host processor. The Controllers can offload TCP/UDP/IP checksum calculations and TCP segmentation
- Server class reliability, availability and performance features:
- Link Aggregation and Load Balancing
- Priority queuing – 802.1p layer 2 priority encoding
- Virtual LANs –802.1q VLAN tagging.
- Jumbo Frame (9.5KB)
- 802.x flow control
- Multicast/ broadcast Packet replication
- Supports Vital Product Data (VPD)
- LEDs indicators for link/Activity/Speed status

**Technical Specifications**

**Copper Gigabit Ethernet Technical Specifications – (1000Base-T) Adapters:**

<p><b>IEEE Standard / Network topology:</b></p>	<p>Gigabit Ethernet, 1000Base-T Fast Ethernet, 100Base-TX Ethernet, 10Base-T</p>
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<b>Full duplex / Simplex:</b>	Support both Simplex & Full duplex operation in all operating speeds
<b>Auto negotiation:</b>	Auto-negotiation between Full duplex and simplex operations and between 10Mb/s 100Mb/s speeds and duplex 1000Mb/s
<b>Data Transfer Rate:</b>	1000 Mb/s, 100 Mb/s and 10 Mb/sec in simplex mode per port 2000Mb/s 200 and 20 Mb/s in full duplex mode per port
<b>Cables and Operating distance:</b>	10Base-T Category 3, 4, or 5 maximum 100m 100Base-Tx Category 5 maximum 100m 1000Base-T Category 5E maximum 100m
<b>Operating Systems Support</b>	
<b>Operating system support:</b>	Linux Windows FreeBSD VMware
<b>General Technical Specifications</b>	
<b>Interface Standard:</b>	PCI-Express Base Specification Revision 2.1 ( 5 GTs)
<b>Board Size:</b>	Standard height short add-in card: 167.64mm x 111.15mm (6.6"X 4.376")
<b>PCI Express Card Type:</b>	X8 Lane / Gen2 5GTps
<b>PCI Express Voltage:</b>	+12V +/- 8%
<b>PCI Connector:</b>	Gold Finger: X8
<b>Controller:</b>	Intel i350AM4 and Intel i350AM2
<b>Weight:</b>	210 gram (7.408 oz)
<b>Power Consumption:</b>	10.2W, 0.85A at 12V: Typical all ports operate at 1000Mb/s. 8.04W, 0.67A at 12V: Typical all ports operate at 100Mb/s. 6.84W, 0.57A at 12V: Typical No link at all ports
<b>Holder:</b>	Metal Bracket: Full Height
<b>Operating Humidity:</b>	0%–90%, non-condensing
<b>Operating Temperature:</b>	0°C – 45°C (32°F – 113°F)

<b>Storage:</b>	-40°C–65°C (-40°F–149°F)
<b>EMC Certifications:</b>	<p>FCC Part 15, Subpart B Class A</p> <p>Conducted Emissions</p> <p>Radiated Emissions</p> <p>CE EN 55022: 1998 Class A Amendments A1: 2000; A2: 2003</p> <p>Conducted Emissions</p> <p>Radiated Emissions</p> <p>CE EN 55024: 1998 Amendments A1: 2000; A2: 2003</p> <p>Immunity for ITE Amendment A1: 2001</p> <p>CE EN 61000-3-2 2000, Class A</p> <p>Harmonic Current Emissions</p> <p>CE EN 61000 3-3 1995, Amendment A1: 2001</p> <p>Voltage Fluctuations and Flicker</p> <p>CE IEC 6100-4-2: 1995</p> <p>ESD Air Discharge 8kV. Contact Discharge 4kV.</p> <p>CE IEC 6100-4-3:1995</p> <p>Radiated Immunity (80-1000Mhz), 3V/m 80% A.M. by 1kHz</p> <p>CE IEC 6100-4-4:1995</p> <p>EFT/B: Immunity to electrical fast transients 1kV Power Leads, 0.5Kv Signals Leads</p> <p>CE IEC 6100-4-5:1995</p> <p>Immunity to conductive surges COM Mode; 2kV, Dif. Mode 1kV</p> <p>CE IEC 6100-4-6:1996</p> <p>Conducted immunity (0.15-80 MHz) 3VRMS 80% A.M. By 1kHz</p> <p>CE IEC 6100-4-11:1994</p> <p>Voltage Dips and Short Interruptions</p> <p>V reduc &gt;95%, 30% &gt;95% Duration 0.5per, 25per, 250per</p>
<b>MTBF:</b>	<p>114 (Years)</p> <p>*According to Telcordia SR-332 Issue 1</p> <p>Environmental condition – GB (Ground, Fixed, Controlled). Ambient temperature – 25°C.</p> <p>Temperature rise of 15°C above the system ambient temperature was assumed for the cards components</p>
<b>LEDs</b>	
<b>LEDs:</b>	<p>(2) LEDs per port</p> <p>Link/Act LED :</p> <p>Turns on link (Green),</p> <p>Blinks on activity (Green)</p> <p>Link Speed LED:</p> <p>Turns on Yellow 1G Link.</p>

	Turns on Green 100M Link
<b>LEDs location:</b>	LEDs are integrated with the RJ-45 connector. Each port has 2 Leds: one in each side: left: link, right: act
<b>Connectors:</b>	(6) Shielded RJ-45

## Order Information

P/N	Description	Notes
<b>PE2G6i35-R</b>	Six Port Copper Gigabit Ethernet PCI Express Server Adapter	X8, PCI Express Gen2, Based on Intel i350, standard height, short PCI

-R: RoHS Compliant / Lead free adapter

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