



### PE2G2FI35

#### Dual Port Fiber Gigabit Ethernet PCI Express Server Adapter Intel® i350AM2 Based

#### Product Description

Silicom's Dual Port Fiber Gigabit Ethernet PCI Express Server adapter is PCI-Express X4 Fiber Gigabit Ethernet network interface card that is based on a single chip, non-Bridged Dual port GBE controller.



Silicom's Dual Port Fiber Gigabit Ethernet PCI Express Server adapter is the ideal solution for implementing multiple network segments, mission-critical high-powered networking applications and environments within high performance servers.

Silicom's Dual Port Fiber Gigabit Ethernet Server adapter is based on Intel i350 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 8 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.

**Fiber Gigabit Ethernet 1000Base-SX:**

- Independently Fiber Gigabit Ethernet channel/s support Gigabit Ethernet 1000Base-SX.
- Small Form Factor (SFF) LC Connectors.

**Fiber Gigabit Ethernet 1000Base-LX:**

- Independently Fiber Gigabit Ethernet channel/s support Gigabit Ethernet 1000Base-LX.
- Small Form Factor (SFF) LC Connectors.

**Common Key features:**

- Support PCI Express Base Specification 2.1 (5 GTs)
- High performance, reliability, and low power use in Intel i350 Dual 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**

**Fiber Gigabit Ethernet Technical Specifications – (1000Base-SX) Adapters:**

<b>IEEE Standard / Network topology:</b>	Fiber Gigabit Ethernet, 1000Base-SX (850nM)
<b>Data Transfer Rate:</b>	2000Mbit/s in full duplex mode per port

<b>Cables and Operating distance:</b>	Multimode fiber: 550m maximum at 62.5 um
<b>Optical Output Power:</b>	Typical: -5.96 dBm Minimum: -9 dBm
<b>Optical Receive Sensitivity:</b>	Typical: -25.09 dBm Maximum: -20 dBm
<b>Fiber Gigabit Ethernet Technical Specifications – (1000Base-LX) Adapters:</b>	
<b>IEEE Standard / Network topology:</b>	Fiber Gigabit Ethernet, 1000Base-LX (1310nm)
<b>Data Transfer Rate:</b>	2000Mb/s in full duplex mode per port
<b>Cables and Operating distance:</b>	Single-Mode fiber: 9um 10km maximum at 9um **
<b>Optical Output Power:</b>	Typical: -6.46 dBm Minimum: -9.5 dBm
<b>Optical Receive Sensitivity:</b>	Typical: -29.88 dBm Maximum: -20 dBm
<b>Operating Systems Support</b>	
<b>Operating system support:</b>	Linux Windows VMware
<b>General Technical Specifications</b>	
<b>Interface Standard:</b>	PCI-Express Base Specification Revision 2.1 (5 GTs)
<b>Board Size:</b>	Low profile short add-in card: 127mm X 68.91mm (5.0"X 2.713")
<b>PCI Express Card Type:</b>	X4 Lane
<b>PCI Express Voltage:</b>	+12V +- 8%
<b>PCI Connector:</b>	Gold Finger: X4
<b>Controller:</b>	Intel i350AM2

<b>I/O:</b>	SFF Transceivers located on internal bracket
<b>Weight:</b>	60gr (2.117oz)
<b>Power Consumption (-SX):</b>	3.24W, 0.27A at 12V: Typical all ports operate at 1000Mb/s. 3.12W, 0.26A at 12V: Typical No link at all ports
<b>Power Consumption (-LX):</b>	3.84W, 0.32A at 12V: Typical all ports operate at 1000Mb/s. 3.6W, 0.3A at 12V: Typical No link at all ports
<b>Holder:</b>	Metal Bracket: Full Height/Low profile Height,
<b>Operating Humidity:</b>	0%–90%, non-condensing
<b>Operating Temperature:</b>	0°C – 55°C (32°F – 131°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 Clas 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>

	Voltage Dips and Short Interruptions V reduc >95%, 30% >95% Duration 0.5per, 25per, 250per
<b>MTBF:</b>	151 Years *According to Telcordia SR-332 Issue 2. Environmental condition – GB (Ground, Fixed, and Controlled). Ambient temperature 40°C.
<b>LEDs</b>	
<b>LEDs:</b>	(1) LED per port Link / Act: Turn on Link (Green), Blinks on Activity (Green)
<b>LEDs location:</b>	LEDs are located on the PCB, visible via holes in the metal bracket holder

### Order Information

P/N	Description	Notes
<b>PE2G2FI35</b>	Dual Port Fiber (SX) Gigabit Ethernet PCI Express Server Adapter	X4, Based on Intel i350AM2, Low-Profile, RoHS compliant
<b>PE2G2FI35-LX</b>	Dual Port Fiber (LX) Gigabit Ethernet PCI Express Server Adapter	X4, Based on Intel i350AM2, Low-Profile, RoHS compliant

Model P/N -LP

-LP: Assemble Low Profile Metal Bracket

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