



PE2G2SFPi35-GXX Server Adapter Dual Port SGMII SFP Gigabit Intel® i350 Based

Product Description

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



Silicom's Dual Port SGMII SFP 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 SGMII SFP 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.

-GXX: Fiber Fast/Gigabit Ethernet:

- Support SFP transceivers with Built-in PHY supporting SGMII Interface:
- Small Form Factor Pluggable (SFP) Cage for SFP LC connectors

-GLX10S: Fiber Fast Ethernet:

- Single Mode 100Base-LX10 Fiber Fast Ethernet with Built-in PHY supporting SGMII Interface
- Small Form Factor Pluggable (SFP) Cage for SFP LC connectors

-GFLXM: Fiber Fast/Gigabit Ethernet:

- Support SFP Dual rate transceiver with Built-in PHY supporting SGMII Interface:
- Multimode 1000Base-LX Fiber Gigabit Ethernet.
- Multimode 100Base-FX Fiber Fast Ethernet.
- Small Form Factor Pluggable (SFP) Cage for SFP 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

SFP Gigabit Ethernet Technical Specifications – (SFP) Adapters:	
SFP (Small Form Factor Pluggable) supports:	SGMII interfaces supports 100Base-X and 1000Base-X in order to connect with SFP to 100Base-X / 1000Base-X SFP transceivers.
Data Transfer Rate:	2000Mbit/s in full duplex mode per port (1000Base-X) 200Mbit/s in full duplex mode per port (100Base-X)
IEEE Standard / Network topology:	Copper Gigabit Ethernet, 1000Base-T Fiber Gigabit Ethernet, 1000Base-X Fiber Fast Ethernet, 100Base-X
SFP Fast Ethernet Technical Specifications (SFP 100Base-LX10) Adapters:	
SFP (Small Form Factor Pluggable) supports:	SGMII interfaces supports 100Base-X in order to connect with SFP to 100Base-LX10 SFP transceivers.
Data Transfer Rate:	125Mbit/s per port (100Base-LX10)
IEEE Standard / Network topology:	Fiber Fast Ethernet, 100Base-LX10 (1310nM)
Cables and Operating distance:	Single mode fiber: 10Km maximum at MMF 9uM/125um
Optical Output Power:	Minimum: -8 dBm
Optical Receive Sensitivity:	Maximum: -31.5 dBm
SFP Gigabit Ethernet Technical Specifications (SFP 1000Base-LX , 100Base-FX) Adapters:	
SFP (Small Form Factor Pluggable) supports:	SGMII interfaces supports 100Base-X and 1000Base-X in order to connect with SFP to 100Base-FX and 1000Base-LX SFP transceivers.
Data Transfer Rate:	2000Mbit/s in full duplex mode per port (1000Base-LX) 200Mbit/s in full duplex mode per port (100Base-FX)
IEEE Standard / Network topology:	Fiber Gigabit Ethernet, 1000Base-LX (1310nM) Fiber Fast Ethernet, 100Base-FX (1310nM)
Cables and Operating distance:	Multimode fiber: 2000m maximum at MMF 62.5/125um and 50/125uM (100Base-FX)

	550m maximum at MMF 62.5/125um and 50/125uM (1000Base-LX)
Optical Output Power:	Minimum: -9.5 dBm
Optical Receive Sensitivity:	Maximum: -19 dBm
Operating Systems Support	
Operating system support:	Linux Windows VMware
General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 2.1 (5 GTs)
Board Size:	Low profile short add-in card: 127mm X 68.91mm (5.0"X 2.713")
PCI Express Card Type:	X4 Lane
PCI Express Voltage	+12V +- 8%
PCI Connector:	Gold Finger: X4
Controllers:	Intel i350AM2
I/O:	(2) SFP Cage
Holder:	Metal Bracket: Full Height/Low profile Height
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

	<p>EN 61000-3-2: 2006+A1(09)+A2(09) Harmonic current emissions</p> <p>EN 61000-3-3: 2008 Voltage fluctuations and flicker</p> <p>EN 55024: 2010 Immunity to electrostatic discharge (ESD)</p> <p>Radiated immunity to radio frequency electromagnetic field</p> <p>Conducted immunity to electrical fast transients / bursts (EFT/ B)</p> <p>Conducted immunity to voltage surges</p> <p>Conducted immunity to disturbances induced by radio frequency field</p> <p>Conducted immunity to voltage dips and short interruptions</p>
LEDs	
LEDs:	<p>Each Port has 2 LEDs to indicate link status and speed.</p> <p>Left LED : Physical link Speed: Yellow stay on – physical link on with 1G Speed</p> <p>Right LED: Logic Link/Activity, Green Green stay on – logic link up, no activity Green blinking – logic link up, activity Off – logic link off</p>
LEDs location:	LEDs are located on the PCB, visible via holes in the metal bracket holder
Connectors:	(2) Small Form Factor Pluggable (SFP) Cage

Order Information

P/N	Description	Notes
PE2G1FI35	Single Port Fiber (SX) Gigabit Ethernet PCI Express Server Adapter	X4, Based on Intel i350AM2, Low-Profile, RoHS compliant
PE2G1FI35-LX	Single Port Fiber (LX) Gigabit Ethernet PCI Express Server Adapter	X4, Based on Intel i350AM2, Low-Profile, RoHS compliant

Note: Model P/N /S/-LP /

-LP: Assemble Low Profile Metal Bracket

1V0