PEG1Fi
Single Port Fiber Gigabit Ethernet PCI-Express Server Adapter Intel® based

Description

Silicom's Fiber Gigabit Ethernet PCI Express server adapter is a PCI Express X4 Fiber Gigabit Ethernet network interface card.

Silicom's Fiber Gigabit Ethernet PCI Express server adapter is designed for Servers and high-end appliances. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.

Silicom's Fiber Gigabit Ethernet PCI Express server adapter enables fault-tolerant via teaming. Traffic from the failed port is routed through other members of the team.

Silicom's Gigabit Ethernet PCI-Express Server adapter has an integrated hardware acceleration that performs TCP/UDP/IP checksum offload and TCP segmentation. The host processing offloads accelerators frees CPU for application processing.

Silicom's 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.

Key Features

Fiber Gigabit Ethernet 1000Base-SX:

- Independent Fiber Gigabit Ethernet channels support Gigabit Ethernet 1000Base-SX
- Small Form Factor (SFF) LC Connectors
- 2PortLink synchronization

Fiber Gigabit Ethernet 1000Base-LX:

- Independent Fiber Gigabit Ethernet channels support Gigabit Ethernet 1000Base-LX
- Small Form Factor (SFF) LC Connectors
- 2PortLink synchronization

Common Key features:

- Host Interface:
- Host Interface standard support:
- PCI-Express Base Specification Revision 1.0a
- High performance, reliability, and low power use in advanced Intel integrated MAC + PHY / SERDES chip Controllers
- Ultra deep, packet buffer per channel lowers CPU utilization, avoids PCI-Express congestion
- 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

- Switch dependent: 802.3ad (LACP), Generic Trunking (GEC / FEC)
- Switch and NIC Independent
- Failover

- Priority queuing – 802.1p layer 2 priority encoding
- Virtual LANs –802.1q VLAN tagging
- Jumbo Frame (9.5KB)
- 802.x flow control
- Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (802.3z, Clause 30)
- LEDs indicators for link/Activity/Speed status

Technical Specifications

Fiber Gigabit Ethernet Technical Specifications - (1000Base-SX) Adapters:	
IEEE Standard / Network topology:	Fiber Gigabit Ethernet, 1000Base-SX (850nM)
Data Transfer Rate:	2000Mb/s in full duplex mode per port
Cables and Operating distance:	Multimode fiber: 220m at 62.5 um 550m at 50 um
Optical Output Power:	Typical: -6 dBm Minimum: -9.5 dBm
Optical Receive Sensitivity:	Typical: -21 dBm Maximum: -17 dBm
Fiber Gigabit Ethernet Technical Specifications - (1000Base-LX) Adapters:	
IEEE Standard / Network topology:	Fiber Gigabit Ethernet, 1000Base-LX (1310nM)
Data Transfer Rate:	2000Mb/s in full duplex mode per port
Cables and Operating distance:	Single-Mode: 5000m at 9um Multimode fiber: 550m at 50 um 550m at 62.5 um
Optical Output Power:	Typical: -6 dBm Minimum: -10 dB dBm
Optical Receive Sensitivity:	Typical: -25 dBm Maximum: -20 dBm
Operating Systems Support	
Operating system support:	Windows Linux FreeBSD VMware
General Technical Specifications	
Interface Standard:	PCI-Express Base Specification Revision 1.0a

Board Size:	Low profile short add-in card: 167.64mm X 68.91mm (6.60”X 2.713”)
PCI Express Card Type:	X4 Lane
PCI Express Voltage:	+3.3V +-9%
PCI Connector:	X4 Lane
Controller: :	Intel 82571EB
Holder:	Metal Bracket
Weight:	90 gram (3.17 Oz)
Power Consumption:	PEG1FI –LX 2.18W: 0.66A at 3.3V, Typical port operate at 1000Mb/s 2.18W: 0.66A at 3.3V, Typical No link
Operating Humidity:	0%–90%, non-condensing
Operating Temperature:	0℃ – 50℃ (32℉ - 122℉)
Storage:	-20℃–65℃ (-4℉–149℉)
EMC Certifications:	FCC Part 15, Subpart B Class B Conducted Emissions Radiated Emissions CE EN 55022: 1998 Class B Amendments A1: 2000; A2: 2003 Conducted Emissions Radiated Emissions CE EN 55024: 1998 Amendments A1: 2000; A2: 2003 Immunity for ITE Amendment A1: 2001 CE EN 61000-3-2 2000, Class A Harmonic Current Emissions CE EN 61000 3-3 1995, Amendment A1: 2001 Voltage Fluctuations and Flicker CE IEC 6100-4-2: 1995 ESD Air Discharge 8kV. Contact Discharge 4kV. CE IEC 6100-4-3:1995 Radiated Immunity (80-1000Mhz), 3V/m 80% A.M. by 1kHz CE IEC 6100-4-4:1995 EFT/B: Immunity to electrical fast transients 1kV Power Leads, 0.5Kv Signals Leads CE IEC 6100-4-5:1995 Immunity to conductive surges COM Mode; 2kV, Dif. Mode 1kV CE IEC 6100-4-6:1996 Conducted immunity (0.15-80 MHz) 3VRMS 80% A.M. By 1kHz CE IEC 6100-4-11:1994 Voltage Dips and Short Interruptions V reduc >95%, 30% >95% Duration 0.5per, 25per, 250per
MTBF*:	196 (Years) *According to Telcordia SR-332 Issue 1Environmental condition – GB (Ground, Fixed, Controlled). Ambient temperature - 25℃. Temperature rise of 15℃ above the system ambient temperature was assumed for the cards components.
LEDs	
LEDs:	(2) LEDs Link: Turns on Fiber link (green)

	Act: Blinks on activity (green)
LEDs location:	LEDs are located on the PCB, visible via holes in the metal bracket holder
Connectors:	LC Connector

Order Information

P/N	Description	Notes
PEG1Fi-RoHS	Dual port Fiber (SX) Gigabit Ethernet PCI Express Server Adapter	X4, Based on 82571
PEG1Fi-LX-RoHS	Dual port Fiber (LX) Gigabit Ethernet PCI Express Server Adapter	X4, Based on 82571

Model P/N -LP / -RoHS
-RoHS: RoHS Compliant / Lead free adapter.
-LP: Assemble Low Profile Metal Bracket, available in dual or single port only
*Advanced features may required driver development. Specifications details the chips capabilities

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