

PE10G1i-SR - Fiber (SR) 10 Gigabit Ethernet PCI Express Server Adapter Intel® based

Introduction

Silicom's 10 Gigabit Ethernet PCI Express server adapters are designed for Servers and high-end appliances. The Silicom 10 Gigabit Ethernet PCI Express Server adapters offer simple integration into any PCI Express X8 to 10Gigabit Networks. The performance is optimized so that system I/O is not the bottleneck in high-performance networking applications.

The Silicom 10 Gigabit Ethernet PCI Express server adapters are based on Intel 82598EB Ethernet controller with two fully integrated Gigabit Ethernet Media Access Control (MAC) and XAUI ports. In addition to managing MAC and PHY Ethernet layer functions, the controller manages PCI Express packet traffic across its transaction, link, and physical/logical layers. Using hardware acceleration, the controller 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

Fiber 10 Gigabit Ethernet 10GBASE-SR:

- 10 Gigabit Fiber Ethernet port supports 10GBASE-SR (850nm LAN PHY)
- 10Gigabit 850nm Small form Factor Pluggable (XFP)
- LC connector.

Common Key features:

- Host Interface:
 - PCI Express X8 lane
 - Support PCI Express Base Specification 2.0 (2.5 GHz)
 - Low-Profile Adapter
 - Low power

• Performance Features:

- IPV6 Supports for IP/ TCP and IP/UDP Receive Checksum offload.
- Fragmented UDP checksum offload for Packet Reassembly.
- Receive Side Scaling minimize CPU utilization across multiple processor systems.
- Support for 16 virtual machine Device Queues (VMDq) per port.
- Support Direct Cache Access (DCA).
- Advanced memory architecture reduces latency.
- Minimized device I/O interrupts using MSI and MSI-X.
- Offload of TCP / IP / UDP checksum calculation and TCP segmentation.
- Large on chip receive packet buffer (520 KB).
- Large on chip transmit packet buffer (320KB).

Lan Features:

- IEEE 802.x flow control support.
- IEEE 802.q VLAN tagging support.
- IEEE 802.1p layer 2 priority encoding.
- Jumbo Frame (up to 16KB).
- Link Aggregation and Load Balancing.
- RFC2819 RMON MIB statistics
- TCP Segmentation Offload Up to 256KB
- Ipv6 Support for IP/TCP Receive Checksum Offload
- DDP Offload
- LEDs indicator for link/Activity

Technical Specifications:

Fiber 10Gigabit Ethernet Technical Specifications - (10GBASE-SR) Adapters

IEEE Standard / Network topology:	Fiber 10Gigabit Ethernet, 10GBASE-SR (8500nM LAN PHY)
Data Transfer Rate:	10.3125GBd
Cables and Operating distance Up to:	62.5um, 160MHz/Km 26m 62.5um, (OM1)200MHz/Km 33m 50um, 400MHz/Km 66m 50um, (OM2)500 MHz/Km 82m 50um, (OM3)2000MHz/Km 300m
Output Transmit Power:	Typical: -2.25 dBm Minimum: -3 dBm
Optical Receive Sensitivity:	Typical: -14.5 dBm Maximum: -11.1 dBm
Maximum Input Power	Maximum: +0.5dBm

Operating Systems Support :

Operating system support:	Windows Linux
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PE10G1i-SR

PE10G1i-SR: General Technical Specifications

Interface Standard:	PCI-Express Base Specification Revision 1.0a
Board Size:	Low profile short add-in card: 167.65mm X 68.91mm (6.60"X 2.713")
PCI Express Card Type:	X8 Lane
PCI Express Voltage	+3.3V +-9%, +12V +- 8%
PCI Connector:	X8 Lane

Controller:	Intel 82598EB
Holder:	Metal Bracket
Operating Humidity:	0% – 90%, non-condensing
Operating Temperature:	0°C – 50°C (32°F - 122°F)
Storage:	-20°C – 65°C (-4°F – 149°F)
EMC Certifications:	FCC Part 15, Subpart B Class B Conducted Emissions Radiated Emissions
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PE10G1i-SR : LED / Connector Specifications

LEDs:	Link / ACT: Turns on link , Blinks on activity (green)
LEDs location	LEDs are located on the PCB, visible via holes in the metal bracket holder
Connectors:	LC

Order Information:

P/N	Description	Note
PE10G1i-SR	Fiber (SR) 10 Gigabit Ethernet PCI Express Server Adapter	X8, Based on Intel 82598EB, Low-profile, on board support for Fiber SR , RoHS compliant

Note: Model P/N -LP
-LP: Assemble Low Profile Metal Bracket

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