M1E2G8SPi80

Eight Port SFP Gigabit Ethernet Express Module Server Adapter

Product Description

Silicom's Eight Port SFP Gigabit Ethernet ExpressModule Server adapter is PCI-Express X8 Eight SFP Gigabit Ethernet network interface card that can fit into a 3.5" HD form factor.

The Silicom Eight Port SFP ExpressModule is the front I/O module in Silicom Server to Network Appliance Converter (SETAC) architecture.

Silicom's Eight Port SFP Gigabit Ethernet ExpressModule 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 Eight Port SFP Gigabit Ethernet ExpressModule server adapters are based on Intel 82580EB Ethernet controller with quad fully integrated Gigabit Ethernet Media Access Control (MAC) and PHY.

Silicom's Eight Port SFP Gigabit Ethernet ExpressModule 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

SFP Gigabit Ethernet:

- Gigabit Ethernet Adapters with SFP cage support
- 1000Base-LX Fiber Gigabit Ethernet with 1000Base-LX SFP transceiver
- 1000Base-SX Fiber Gigabit Ethernet with 1000Base-SX SFP transceiver
- 1000Base-T (1000Mbit/s) Copper Gigabit Ethernet with 1000Base-T SFP transceiver
- Small Form Factor Pluggable (SFP) Cage for SFP LC connectors
- 2PortLink synchronization
- Optional SGMII mode (future support)

Performance Features:

- Supports Intel I/O ® Acceleration Technology v3.0.
- Stateless offloads (header split, RSS)
- Direct Cache access
- UDP, TCP, and IP Checksum offload
- UDP and TCP transmit checksum offload
- SCTP receive and transmit checksum offload

Virtualization Ready:

- 8 Transmit and Receive queues per port
- Support up to 8 VMs per port (1 queue allocated to each VM)
- Packet interrupt coalescing timers (packet timers) and absolute- delay interrupt timers for both transmit and receive operation

Common Key features:

- PCI Express ExpressModule Electromechanical Specification Revision 1.0
- PCI Express Base Specification 2.0 (5 GTs)
- High performance, reliability, and low power use in Intel 82580 Quad integrated MAC + PHY and SERDES chip Controllers
- 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
- Multicast/ broadcast Packet replication on receive
- Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (802.3z, Clause 30)
- Supports Vital Product Data (VPD)
- Supports End to End CRC (ECRC)
- Supports Latency Tolerance Reporting (LTR)
- LEDs indicators for link/Activity status
- Hot Plug not supported. Can be supported by assembly change

Technical Specifications

SFP Gigabit Ethernet Technical Specifications -(SFP) Adapters	
SFP (Small Form Factor Pluggable) supports	1 Gbit SERDES interfaces supports 1000Base-X in order to connect with SFP to 1000Base-SX / 1000Base-LX / 1000Base-T SFP transceivers
IEEE Standard / Network topology: with 1000Base-T SFP	Gigabit Ethernet (1000Mbit/s only), 1000Base-T
IEEE Standard / Network topology: with 1000Base-SX SFP	Fiber Gigabit Ethernet, 1000Base-SX (850nM)
IEEE Standard / Network topology: with 1000Base-LX SFP	Fiber Gigabit Ethernet, 1000Base-LX (1310nM)
Operating Systems Support	
Operating system support:	Windows Linux VMware
General Technical Specifications	
Interface Standard:	PCI ExpressModule Specification revision 1.0 Silicom SETAC PCI-Express Base Specification Revision 2.0 (5 GTs)
Board Size:	168.2mm x 98mm (6.62”X3.858”)
PCI Express Card Type:	X8
PCI Express Voltage:	+12V +- 8%
PCI Connector:	Gold Finger: X8
Controller:	Intel 82580EB
Holder:	Not included
I/O:	8 x SFP located on edge of the board

Weight:	270 gram (9.524 oz)
Power Consumption:	15.6 W, 1.3 A at 12V: Typical all ports operate at 1000 BASE-LX 14.52 W, 1.21 A at 12V: Typical all ports operate at 1000 BASE-SX 18.6 W, 1.55 A at 12V: Typical all ports operate at 1000 BASE-T 15.12 W, 1.26 A at 12V: No links in all ports operate with LX transceivers. 14.16 W, 1.18 A at 12V: No links in all ports operate with SX transceivers 9.84 W, 0.82 A at 12V: no transceivers
Operating Temperature:	-5°C – 40°C (23°F – 104°F)
Storage:	-20°C–65°C (-4°F–149°F)
EMC Certifications:	FCC Part 15, Subpart B Class A Conducted Emissions Radiated Emissions CE EN 55022: 1998 Class A 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

LEDs	
LEDs:	Each port has its Yellow- Green bi- color Link speed LED: Turns on Yellow for 1G Link. Blinks on Yellow for 1G activity. Turns on Green for 100M Link. Blinks on Yellow for 100M activity
LEDs location:	LEDs are located on the PCB, visible via holes in the pannel. Each port has its Yellow- Green bi- color Link speed LED.
Connectors:	(4) Dual Small Form Factor Pluggable (SFP) Cage (2X1)

Order Information

P/N	Description	Notes
M1E2G8SPI80-X-R	Eight Port SFP Gigabit Ethernet ExpressModule Server Adapter	X8, Based on Intel 82580EB, PCI-E ExpressModule, RoHS compliant
M1E2G8SPI80-SX-R	Eight Port Fiber (SX) Gigabit Ethernet ExpressModule Server Adapter	X8, Based on Intel 82580EB, PCI-E ExpressModule, RoHS compliant, SX
M1E2G8SPI80-LX-R	Eight Port Fiber (LX) Gigabit Ethernet ExpressModule Server Adapter	X8, Based on Intel 82580EB, PCI-E ExpressModule, RoHS compliant, LX

-R: RoHS Compliant / Lead free adapter

-C: with canister

Advanced features may require driver software support

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