



M1E2G6i6

Six Port Copper Gigabit Ethernet ExpressModule Server Adapter

Product Description

Silicom's Six Port Copper Gigabit Ethernet ExpressModule Server adapter is PCI-Express X8 Copper Gigabit Ethernet network interface card that contain Multiple / Single Gigabit port/s on a PCI-Express adapter.

Silicom's Six Port Copper 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 Six Port Copper Gigabit Ethernet ExpressModule Server adapter enable fault-tolerant via teaming. Traffic from the failed port is routed through other members of the team.

Silicom's Six Port Copper Gigabit Ethernet ExpressModule 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 Six Port Copper Gigabit Ethernet ExpressModule 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

Performance Features:

- 16 Transmit and Receive queues per port
- Up to 16 queues of Receive Side Scaling (RSS) minimize CPU utilization across multiple processor systems
- Support for 8 pools of virtual machine Device Queues (VMDq) per port
- Support Direct Cache Access (DCA)
- Support Intel I/O AT 2.0.
- TSO interleaving for reduced latency
- UDP TSO
- Minimized device I/O interrupts using MSI and MSI-X
- Offload of TCP / IP / UDP checksum calculation and TCP segmentation
- SCTP receive and transmit checksum offload
- Packet interrupt coalescing timers (packet timers) and absolute- delay interrupt timers for both transmit and receive operation

Copper Gigabit Ethernet 1000Base-T:

- Independently copper Gigabit Ethernet channels support Single Gigabit Ethernet (1000Base-T), Fast Ethernet (100Base-Tx) and Ethernet (10Base-T)
- Triple speed 1000Mbps (1000Base-T), 100 Mbps (100Base-Tx) and 10 Mbps (100Base-T) operation
- Nway auto negotiation automatic sensing and switching between 1Gbps full duplex and 100 / 10 Mbps operations Simplex or Full Duplex
- RJ-45 female connectors

Common Key features:

- Host Interface standard support PCI Express ExpressModule 1.0
- High performance, reliability, and low power use in Intel 82576 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
- 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 (16KB)
- 802.x flow control
- PCI-SIG SR IOV (8 VF)
- Multicast/ broadcast Packet replication
- Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (802.3z, Clause 30)
- Supports Vital Product Data (VPD)
- Integrated LinkSec security engines
- Supports IEEE 1588
- LEDs indicators for link/Activity status

Technical Specifications

Copper Gigabit Ethernet Technical Specifications – (1000Base-T) Adapters

IEEE Standard / Network topology	Gigabit Ethernet, 1000Base-T Fast Ethernet, 100Base-TX Ethernet, 10Base-T
Full duplex / Simplex	Support both Simplex & Full duplex operation in all operating speeds
Auto negotiation	Auto-negotiation between Full duplex and simplex operations and between 10Mb/s 100Mb/s speeds and duplex 1000Mb/s
Data Transfer Rate	1000 Mbit/s, 100 Mbit/s and 10 Mbits/sec in simplex mode per port. 2000Mbit/s 200 and 20 Mbit/s in full duplex mode per port
Cables and Operating distance	10Base-T Category 3, 4, or 5 maximum 100m 100Base-Tx Category 5 maximum 100m 1000Base-T Category 5E maximum 100m
Operating Systems Support	
Operating system support:	Windows Linux FreeBSD VMware
General Technical Specifications	
Interface Standard:	PCI Express ExpressModule Specification Revision 1.0
Board Size:	168.2mm x 98mm (6.62"X3.858")
PCI Express Card Type:	X8 Lane
PCI Express Voltage:	+12V +- 8%
PCI Connector:	Gold Finger: X8
Controller:	Intel 82576EB
Weight:	150gr (5.291oz)
Power Consumption:	12.84W, 1.07A at 12V: Typical all ports operate at 1000Mbit/s. 8.52W, 0.71A at 12V: Typical all ports operate at 100Mbit/s. 12.72W, 1.06A at 12V: Typical all ports Link 1000Mbit/s.

	7.44W, 0.62A at 12V: Typical No link at all ports
Holder	Not Included
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:	<p>FCC Part 15, Subpart B Class B</p> <p>Conducted Emissions</p> <p>Radiated Emissions</p> <p>CE EN 55022: 1998 Class B 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> <p>Voltage Dips and Short Interruptions</p> <p>V reduc >95%, 30% >95% Duration 0.5per, 25per, 250per</p>
LEDs	
LEDs:	<p>(2) LEDs per port</p> <p>Left LED: Link / Act: (Green)</p> <p>Turn on any Link (1000, 100 or 10), Blinks on Activity (green)</p> <p>Right LED: Link</p>

	Turn on Any Speed
LEDs location:	LEDs are integrated with the RJ-45 connector. Each port has 2 Leds: one in each side: left: link, right: act
Connectors:	(6) Shielded RJ-45

Order Information

P/N	Description	Notes
M1E2G6I6-R	Six Port Copper Gigabit Ethernet ExpressModule Server Adapter	X8, Based on Intel 82576, PCI-E ExpressModule

Order information: Model P/N -RoHS

-R: RoHS Compliant / Lead free adapter

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