PXG2

Dual Port Copper Gigabit Ethernet PCI-X Server Adapter Broadcom® Based

Product Description

The Silicom PX-Series Server Gigabit adapters are 64-bit/133MHz PCI-X network interface cards that contain multiple / single independent Gigabit port/s on one PCI-X adapter.

Silicom's PX-Series Server adapters are based on forth generation of Broadcom BCM57XX PCI-X Gigabit Ethernet controllers that features an industry leading performance for PCI-X server Adapters.

Industry-leading performance

Silcom's PX-Series Server adapters solution 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.

Reliability, Availability, Serviceability

PX-Series Server adapters enables fault-tolerant via teaming. Traffic from the failed port is routed through up to seven other members of the team. PX-Series Server adapters come with software that offers the industry's best performance and features. VLAN (802.1q) allow traffic segregation and data privacy. Support of 802.1p traffic prioritization gives administrations ability to offer Quality of Service (QOS) on the network.

Silicom's PX-Series Server adapters have 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 PX-Series Server Gigabit Ethernet adapters are the ideal solution for implementing multiple network segments, mission-critical high-powered networking applications and environments within high performance servers.

Key Features

Copper Gigabit Ethernet 1000Baes-T :

- Independently copper Gigabit Ethernet channels support six, four, two and one 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

- Host Interface standard support:

- PCI v2.2 32/64 bit, 33/66Mhz

- PCI-X v1.0 32/64-bit, 66/100/133MHz

- High performance, reliability, and low power use in Broadcom 5704 dual integrated MAC + PHY / SERDES chip controller

- Ultra deep, 64 KB packet buffer per channel lowers CPU utilization, avoids PCI-X congestion

- Dual high speed RISC processor per channel for advanced packet classification

- 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:

  o Switch dependent: 802.3ad (LACP), Generic Trunking (GEC / FEC)

  o Switch and NIC Independent

  o Failover

- Priority queuing – 802.1p layer 2 priority encoding

- Virtual LANs –802.1q VLAN tagging

- Jumbo Frame (9KB)

- 802.x flow control.

- Boot ROM embedded or optional can be used for Boot ROM applications.

- PCI Power Management Interface (v1.1)

- PCI Hot Plug. (IBM, Compaq, Dell, and Microsoft)

- Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (802.3z, Clause 30)

- LEDs indicators for link/Activity/Speed status

Technical Specifications

Copper Gigabit Ethernet Technical Specifications – (1000Baes-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

Silicom Ltd. Connectivity Solutions

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.NET
	Windows 2000
	Windows NT
	Windows98 / WindowsXP
	Netware
	Linux
	FreeBSD
	Unix:
	SCO Open Server
	UnixWare / OpenUnix 8
	Solaris

General Technical Specifications

Interface Standard:	PCI v2.2 32/64 bit, 33/66Mhz
	PCI-X v1.0 32/64-bit, 66/100/133MHz
Board Size:	PCI Short add in Card 168mm x 64mm
	(6.6"x2.5") detailed information: Appendix A.3
PCI Card Type:	Universal 64 bit Card
PCI Voltage:	+5V (Min 4.75V, Max, 5.25V)
PCI Connector:	Universal 64 bit
Holder:	Metal Bracket
Weight:	80 gram (2.82 oz)
Power Consumption:	1.5A at 5V: Typical all ports operate at 1000Mbit/s
	0.7A at 5V: Typical all ports operate at 100Mbit/s
	0.65A at 5V: Typical all ports operate at 10Mbit/s
	0.63A at 5V: Typical No link at all ports
Operating Temperature:	0°C – 50°C (32°F – 122°F)
Storage:	-20°C–65°C (-4°F–149°F)

Silicom Ltd. Connectivity Solutions

EMC Certifications:	FCC Part 15, Subpart B Class B Conducted Emissions Radiated Emissions CE EN 55022: 1998 Class B Conducted Emissions Radiated Emissions CE EN 55024: 1998 Immunity for ITE Amendment A1: 2001 CE EN 61000-3-2 2000 Harmonic Current Emissions CE EN 61000 3-3 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 CISPR 22; 1997 Amendment A1: 2000 Amendment A2: 2002 VCCI: 2004, Class B
MTBF*:	198 (Years) *According to Telcordia SR-332 Issue 1 Environmental condition – GB (Ground, Fixed, Controlled). Ambient temperature – 25?°C. Temperature rise of 10°C above the system ambient temperature was assumed for the cards components

LEDs

LEDs:	(3) LEDs per port Link Activity: Turns on any link speed, blinks on activity (green) 100Mbits/s: Turns on 100 Mbit/s link (green) 1000Mbit/s: Turns on 1000 Mbit/s link (green)

LEDs location:	LEDs are located on the PCB, visible via holes in the metal bracket holder
Connectors:	(2) Shielded RJ-45

Order Information

P/N	Description	Notes
PXG2RB-RoHS	Dual Port Copper Gigabit Ethernet PCI-X Server Adapter	RoHS compliant

Note:Specifications are based on PXG2RB-RoHS

S: Solaris

-RoHS: RoHS Compliant / Lead free adapter. Not all models are available in a RoHS or non RoHS version.

-LP: Low Profile Metal Bracket. Available only with Dual and Single ports adapters.

4V4