

LREC9712PT

PCI Express x4 Dual Port Copper Gigabit Server Adapter (Broadcom 5709C Based)

Descriptions

LR-LINK LREC9712PT PCI Express TOE server adapters are network interface cards that contain single/multiple independent Gigabit Ethernet port/s. The PCI Express TOE server adapters provide a fully integrated up to Layer 5 solution along with a complete Gigabit Ethernet port/s.

LR-LINK LREC9712PT Gigabit Ethernet PCI Express TOE server adapter is a high performance server network application. LR-LINK LREC9712PT Gigabit Ethernet PCI Express TOE server adapters are based on Broadcom TOE controller features an industry first support for single chip TOE Gigabit Ethernet NIC with TCP / IP offload Engine, RDMA NIC (RNIC)*, iSCSI1.0*/iSER HBA*.

TCP Offload Engine

The LR-LINK LREC9712PT TOE server adapters include dedicated hardware and processors to process the frame that traverse it functionality. On the transmit path, the TOE controller Copied the data directly from the highest hierarchy of buffers available, execute the TCP/IP, adds lower level headers. On the receive, path, the TOE controller process frame up to the highest layer supported present in the frame, removes lower level headers, posts the data directly to application buffers. The transmit and the receive TOE functionality relieves the host CPI from these time consuming operations.

Convergence NIC

The LR-LINK LREC9712PT Gigabit Ethernet PCI Express TOE server adapters enable convergence of all networked communication possible in a server, such as data network (LAN), storage network, or file (CIFS / NFS), clustering for high performance commuting or inter process communication by support of RDMA* over TCP. The LR-LINK LREC9712PT TOE server adapter is a convergence networking interface card and allows one network connection to provide access to all information types. LR-LINK LREC9712PT TOE Gigabit Ethernet server adapters can simultaneously support the following



functions:

- TOE Chimney- enabled network accelerator
- RDMA Network Interface Controller (RNIC)*
- iSCSI or iSER Host Bus Adapter (HBA) *

Reliability, Availability, Serviceability

LR-LINK LREC9712PT Gigabit Ethernet PCI Express TOE server adapters enables fault-tolerant via teaming. Traffic from the failed port is routed through up to seven other members of the team.

LR-LINK LREC9712PT Gigabit Ethernet PCI Express TOE 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

TCP offload Engine

- Full fast path TCP offload for up to 1024 connection
- Zero Copy capable hardware
- iSCSI Controller*
- iSCSI initiator
- iSER (iSCSI over RDMA)
- RDMA Controller (RNIC)*
- RDMA over TCP (iWARP) – RDMAC 1.0 compliant

• Hardware-based data placement in application buffers without CPU intervention (user and kernel modes)

Performance Features:

- Full fast path TCP offload Extremely Low CPU utilization for TCP/IP applications – Host CPU is free to run application code.
- Accelerated IP based storage*
- Lower CPU utilization for file level storage protocol such as CIFS and NFS
- iSCSI functionality with low CPU utilization
- RDMA support for data placement in application buffers reduces CPU utilization and lower data transits latencies.*
- Receive Side Scaling (RSS)
- TCP, IP checksum
- TCP segmentation
- Adaptive Interrupts
- Message Signal Interrupts (MSI)
- Host Interface standard support PCI Express 1.1.
- High performance, reliability, and low power use in Broadcom TOE MAC + PHY / SERDES chip controller

- Server class reliability, availability and performance features:
- Link Aggregation and Load Balancing:
- Switch dependent: 802.3ad (LACP), Generic Trunking (GEC / FEC)
- Failover
- Ultra deep packet buffer per channel lowers CPU utilization.
- 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)
- Statistics for SNMP MIB II, Ethernet like MIB, and Ethernet MIB (802.3z, Clause 30)
- 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 Systems Support	DOS Windows XP Windows Server 2003 32-bit(64-bit) Windows 7 32-bit(64-bit) Windows 8.1 32-bit(64-bit) Windows Server 2008 32-bit(64-bit) Windows Server 2008 R2 32-bit(64-bit) Windows Server 2012 Windows Server 2012 R2 Novell Linux VMware ESX/ESXi 4.1/5.0/5.1/5.5 UnixWare / OpenUnix 8

General Technical Specifications	
Interface Standard:	PCI Express Base Specification Revision 1.0a
Board Size:	PCI Low profile Short Add in card 167.64mm X 68.91 mm 6.6" X 2.713"
PCI Express Card Type:	X4 Lane
PCI Express Voltage:	+3.3V ± 9% + 12 ± 8%
Connector:	RJ45
Controller: :	Broadcom BCM5709C
Holder:	Metal Bracket
Operating Temperature:	0°C – 50°C (32°F - 122°F)
Storage:	-20°C–65°C (-4°F–149°F)
LEDs	
LEDs	(2) LEDs per portLink Activity: Turns on any link speed, blinks on activity (green). Speed (Bi-color) Led:100Mbits/s: Turns on Yellow1000Mbit/s: Turns on Green
LEDs location	LEDs are integrated on RJ-45 connector
Connectors	RJ-45

Order Information:

M/N	Description
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PS: The above details are only for reference, if there is any change, no inform will have



ORDER CODES

LREC9712PT

COMPANION PRODUCTS

LR-LINK PCI 100FX Desktop Adapter
LR-LINK PCIe 100FX Desktop Adapter
LR-LINK PCI 1000BASE-SX/LX Desktop Adapter
LR-LINK PCIe 1000BASE-SX/LX Desktop Adapter
LR-LINK PCIe 1000BASE-SX/LX Server Adapter
LR-LINK PCIe 10GBASE-SR/LR Server Adapter
opper NIC
LR-LINK® PCI 10/100Mbps Desktop Adapter
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LR-LINK® PCI 10/100/1000Mbps Desktop Adapter
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LR-LINK® PCIe 100/1Gbps/10Gbps Server Adapter

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FOR PRODUCT INFORMATION

To know the network card basic knowledge to
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specifications which can meet demands of various applications, continuously creates
value for customers and partners as well as OEM/ODM services provided.

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