

SUN STORAGE 10GbE FCoE PCIe CONVERGED NETWORK ADAPTER

KEY FEATURES

The Sun Storage 10GbE FCoE PCIe CNA ENABLES EASIER LOCAL AREA NETWORK (LAN) AND STORAGE AREA NETWORK (SAN) MANAGEMENT

High Performance

- 10Gb/sec per port maximum throughput for high bandwidth storage and networking traffic
- Full hardware offload for FCoE protocol processing based on QLogic architecture
- 250,000 IOPS per port deliver high I/O transfer rates for storage applications
- Full support for TCP/IP and Ethernet performance enhancements such as priority-based flow control (802.1Qbb), jumbo frames, checksum offloads, and segmentation offloads

Lower Total Cost of Ownership (TCO)

- Reduced hardware, cabling, power, cooling, and management costs through convergence of data and storage networking
- Preservation of familiar data and storage concepts resulting in lower training and administrative costs

Investment Protection

- Works seamlessly with existing Fibre Channel (FC) storage
- Communicates via Ethernet, the most common networking technology in the world
- Compatible with existing FC drivers and management applications that have been deployed in millions of existing systems

Oracle's Fibre Channel over Ethernet (FCoE) technology provides an opportunity to reduce data center costs by converging data and storage networking. Standard TCP/IP and Fibre Channel traffic can both run on the same high speed 10Gb/sec Ethernet wire, resulting in cost savings through reduced adapter, switch, cabling, power, cooling, and management requirements. The Sun Storage 10GbE FCoE PCIe Converged Network Adapter (CNA) from Oracle delivers high performance, reduces data center total cost of ownership (TCO), and protects current data center investment.



The Sun Storage 10GbE FCoE PCIe Converged Network Adapter provides network consolidation in your data center.

High Performance

Boost your system performance with 10Gb/sec speed and full hardware offload for FCoE protocol processing. Your next-generation data center requires the high-performance capabilities of the Sun Storage 10GbE FCoE PCIe Converged Network Adapter. Cutting edge 10Gb/sec bandwidth eliminates performance bottlenecks in the I/O path with a 10X data rate improvement versus existing 1Gbps Ethernet solutions. The Sun Storage 10GbE FCoE PCIe CNA delivers up to 250,000 IOPS per port for truly superior performance. And full hardware offload for FCoE protocol processing reduces system CPU utilization for I/O operations, which leads to faster application performance and higher levels of consolidation in virtualized systems.

Lower TCO

Reduce your data center costs through convergence with the Sun Storage 10GbE FCoE PCIe CNA. Now, one converged network adapter can do the work of a discrete FC host bus adapter and Ethernet NIC. This convergence also means fewer cables, fewer switches, less power consumption, reduced cooling, and easier LAN and SAN management. The Sun Storage 10GbE FCoE PCIe CNA supports iSCSI storage protocol using iSCSI software initiators, which are available with all major operating systems.

Investment Protection

Preserve your existing investment in Fibre Channel storage and core Ethernet switches and routers for data networking with the new Sun Storage 10GbE FCoE PCIe CNA. It leverages the same identical software driver stacks that have been deployed and battle-hardened in millions of previous installations, and preserves familiar FC concepts such as WWNs, FC-IDs, LUN masking, and zoning.

The Oracle Converged Network Adapter Advantage

The Sun Storage 10GbE FCoE PCIe CNAs have been designed specifically for use in Oracle's Sun servers. They exceed the business requirements of the enterprise data center with higher performance, investment protection, and increased power and cooling efficiency. Oracle solves enterprise-wide business challenges with a comprehensive offering of hardware, software, and services, providing customers with a total end-to-end solution. This end-to-end solution provides world class interoperability testing, service and support, and support for Sun and third-party storage arrays. And Sun Storage 10GbE FCoE PCIe CNA architecture simplifies LAN and SAN management to improve resource use and reduce your TCO.

Sun Storage 10GbE FCoE PCIe Converged Network Adapter Specifications

Host Bus Interface
Bus Interface
<ul style="list-style-type: none"> • PCI Express Gen1 x8 • PCI Express Gen2 x4
Compliance
PCI Express Base Specification rev. 2.0, PCI Express Card Electromechanical Specification rev. 2.0, PCI Bus Power Management Interface Specifications, rev. 1.2
Ethernet Specifications
Throughput
10Gb/sec full duplex line rate
Compliance
IEEE: 802.3ae (10Gb Ethernet), 802.1q (VLAN), 802.3ad (Link Aggregation), 802.1p (Priority Encoding), 802.3x (Flow Control), 802.3ap (KX/KX4), 802.3ak (CX4), IEEE 1149.1 (JTAG), IPv4 Specification (RFC 791), IPv6 Specification (RFC 2460), TCP/UDP Specification (RFC 793/768), ARP Specification (RFC 826)
Topology



Any 10 GbE Ethernet Network	
FCoE Specifications	
Performance	
250,000 IOPS per port	
Compliance	
SCSI-3 Fibre Channel Protocol (SCSI-FCP), Fibre Channel Tape (FC-TAPE) profile, SCSI Fibre Channel Protocol-2 (FCP-2), Second Generation FC Generic Services (FC-GS-2), Third Generation FC Generic	
Class of Service	
Class 3	
Logins and Exchanges	
Support for 2048 concurrent logins and 2048 active exchanges	
Physical	
Ports	
Dual 10Gb/sec Ethernet (SFP+)	
Form Factor	
Low-profile PCIe card: (6.6 in. x 2.54 in.)	
Supported Operating Systems	
<ul style="list-style-type: none"> • Oracle Solaris 10 SPARC • Oracle Solaris 10 x86/64 • Oracle Enterprise Linux 5.4 • Oracle VM 2.2 • Red Hat Enterprise Linux 5.4 • Red Hat Enterprise Linux 6 	<ul style="list-style-type: none"> • SuSE Linux Enterprise Server 10 SP2 • SuSE Linux Enterprise Server 11 • VMware ESX /ESXi 4.0U1 • Windows Server 2003 SP2 • Windows Server 2008 SP2 • Windows Server 2008R2
Supported Server Platforms	
Please refer to the oracle.com server web pages for updated list of supported servers.	
<ul style="list-style-type: none"> • Sun Fire X2250 • Sun Fire X2270 • Sun Fire X4140 • Sun Fire X4150 • Sun Fire X4170 • Sun Fire X4270 • Sun Fire X4275 • Sun Fire X4240 • Sun Fire X4250 • Sun Fire X4640 	<ul style="list-style-type: none"> • Sun Fire X4440 • Sun Netra X4450 • Sun Fire X2200 M2 • Sun Fire X4170M2 • Sun Fire X4270M2 • Sun SPARC Enterprise T5120 • Sun SPARC Enterprise M3000 • Sun SPARC Enterprise M4000 • Sun SPARC Enterprise M5000 • Sun SPARC Enterprise M8000 • Sun SPARC Enterprise M9000
Environment and Equipment	
Temperature	
<ul style="list-style-type: none"> • Operating: 0°C/32°F to 55°C/131°F • Storage: – 20°C/– 4°F to 70°C/158°F 	
Humidity	
<ul style="list-style-type: none"> • Relative (non-condensing): 10% to 90% 	

• Storage: 5% to 95%	
Distance	
• SR: up to 300 meters • Twin-ax: 7 m	
Power Dissipation	
9.7 W (typical)	
Agency Approvals – Product Safety (Preliminary)	
U.S., Canada	Europe
UL, cUL • UL60950-1 • CSA C22.2 No.60950-1	73/23/ECC Low Voltage Directive • EN60950-1:2006+A11 • EN60825-1:1994+A1+A2 • EN60825-2:2004
Agency Approvals – EMI and EMC (Preliminary)	
U.S.	Canada
FCC CFR Title 47, Part 15, Subpart B: 2007 Class A	Industry Canada ICES-003:2004, Class A
Europe	
89/336/EEC EMC Directive CE Mark • EN55022:2006 Class A • EN55024:1998 • EN61000-3-2:2006 • EN61000-3-3:1995+A1 +A2	
Japan	Taiwan
VCCI:2208-04 Class A	BSMI CNS 13438:2006 Class A
New Zealand/Australia	Korea
AS/NZS CISPR 22:2006 Class A	KCC-RRL.KN22 KN24 Class A
Order Information – Part Number	
• SG-XPCIEFCOE2-Q-SR (short range) • SG-XPCIEFCOE2-Q-TA (copper) • SG-PCIEFCOE2-Q-SR (short range), factory configure • SG-PCIEFCOE2-Q-TA (copper), factory configure	

Warranty

Visit oracle.com/sun/warranty for Oracle's global warranty support information on Sun products.

Services

Visit oracle.com/sun/services for information on Oracle's service program offerings for Sun products.

Contact Us

For more information about Oracle's Sun Storage FCoE PCIe Converged Network Adapters, please visit oracle.com/storage or call +1.800.786.0404 to speak to an Oracle representative.





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