

Overview and Frequently Asked Questions

Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards

February 28, 2012

Overview

Oracle's Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards represent the next step in the GbE networking evolution for the enterprise and data center by introducing new levels of performance through industry-leading enhancements for both virtualized and iSCSI Networking environments. This new family of adapters reduces power consumption by 50% over previous generation cards by inclusion of- new power management technologies such as Energy Efficient Ethernet and DMA Coalescing.

Data Center Virtualization with Uncompromised Performance

Optimized for virtualization performance, the Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking cards include the Intel Virtualization Technology for Connectivity (Intel VT-c) to improve overall system performance in virtualized server environments. Intel VT-c includes hardware optimizations that help reduce I/O bottlenecks, boost throughput and reduce latency. By using Virtual Machine Device Queues (VMDq), servers will improve data processing by offloading the sorting and queuing functionality to the I/O controller from the VMM.

Another virtualization technology incorporated into the networking cards is PCI-SIG SR-IOV. This capability, when supported by the host operating system, enables direct access for 32 Virtual Machines (VMs) per quad port or 16 VMs per dual port networking card. Direct access to hardware from virtual machines environments increases performance and reduces the number of required adapters, cables and switch ports.

Customer Benefits

With its robust feature set, the Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards allows customers to simplify their network while reducing the costs:

- Higher application performance and lower CPU utilization
- High virtualization performance and elimination of I/O bottlenecks between virtual machines
- Industry standard compliant cost effective connectivity to both LANs and iSCSI SANs
- 50% lower power consumption than previous generation

Frequently Asked Questions

What are Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards?

- They are the third generation high density multi-port copper and fiber networking cards with choice of form factors: Low profile card and ExpressModule for Sun SPARC and x86 servers

What are the major functionalities?

The Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards have four main functions:

- Industry standard PCIe 2.0 doubles the bus speed to 5 GT/sec
- Hardware-based virtualization performance: SR-IOV, Intel VT-c and Oracle VM Server for SPARC and x86
- Unified networking: LAN and iSCSI acceleration and scalable performance for storage connectivity
- Support of Energy Efficient Ethernet (802.1az) and DMA Coalescing for power reduction

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What are the operating systems that have been certified to run on these networking cards?

The Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards are certified to run Oracle Solaris, Oracle Enterprise Linux, Red Hat Enterprise Linux, SuSE Linux Enterprise Server, VMware and Windows. The current list of the supported Operating Systems are based on the host servers that support these networking cards and can be found at:

<https://wikis.oracle.com/display/SystemsComm/Home#tab:SPARC-Platform-I-O-Support>

Which Sun Servers are supported to work with these cards?

Current and new Sun servers are expected to be supported with these cards. Please refer to the I/O document of the target host server for updated information.

Sun Quad Port GbE PCIe 2.0 Low Profile Adapter, UTP

Sun Dual Port GbE PCIe 2.0 Low Profile Adapter, MMF

- SPARC T4-1 Server
- SPARC T4-2 Server
- Netra SPARC T4-1 Server
- Netra SPARC T4-2 Server

Sun Quad Port GbE PCIe 2.0 ExpressModule, UTP

Sun Quad Port GbE PCIe 2.0 ExpressModule, MMF

- SPARC T4-4 Server
- SPARC T4-1B Server Module

Sun Quad Port GbE PCIe 2.0 ExpressModule, MMF

- Netra SPARC T4-1B Server

- Sun Netra 6270 M2 Server
Note: Netra servers supported on N6000 Gen 2 Chassis (P/N 7100417 and 7100418)

What are the key technologies involved?

The product HW is based on Intel® i350 Controller complimented by innovative technologies in networking and virtualization incorporated in Oracle Solaris and Oracle VM Server for SPARC and x86 for optimizing database and application performance with Sun servers

Where can I find more information about the Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards?

You can contact your Oracle sales representative directly or call 1-800-Oracle1.

In addition, more information about the Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards

<http://www.oracle.com/goto/networking>

Can I order the Sun Quad Port PCIe 2.0 Gigabit Ethernet Networking Cards today?

Yes, we are now taking orders for this product.



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