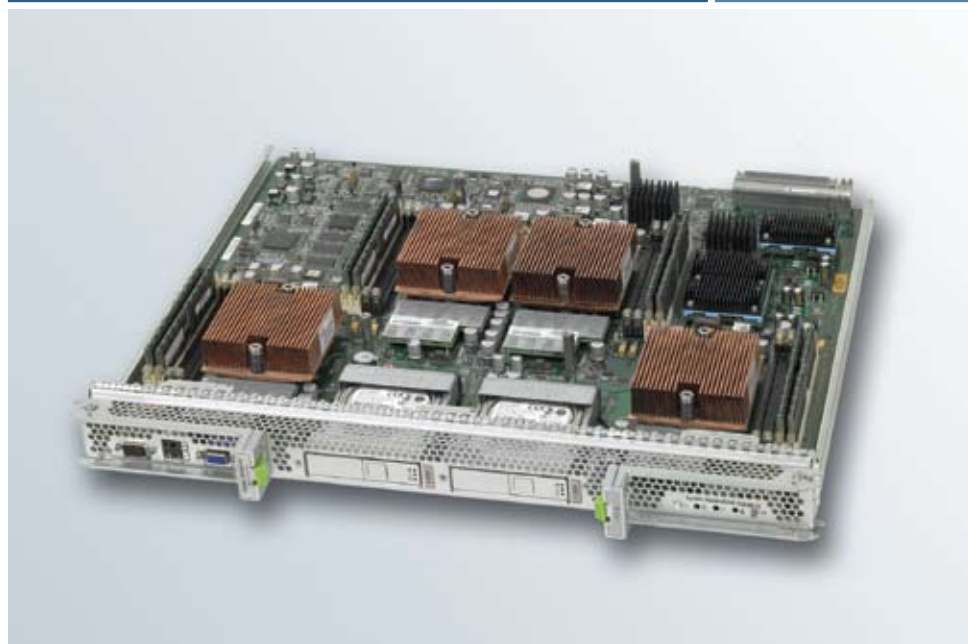




Sun Blade™ X8420 Server Module

Top floating-point performance and energy efficiency



Highlights

- Part of the Sun Blade™ 8000 modular system family, offering up to double the I/O capacity of competing blade and rackmount servers
- Operating system flexibility — runs the Solaris™ 10 Operating System, Linux, Windows, or VMware
- Sun Blade transparent management — direct management of each server module, for seamless integration into existing management infrastructures
- Versatile storage — two SAS or SATA hard disk drives — up to 292 GB of hot-swappable (RAID 0 or 1) storage
- Shared modular chassis infrastructure designed for superior availability, with no fans or power supplies on the blades



As IT services continue to expand, organizations are looking for server technology that can deliver increased performance to meet growing demands while also helping to alleviate capacity problems. The Sun Blade X8420 server module is ideal for these purposes and is well suited for high-performance computing, database and enterprise-class applications, server consolidation and virtualization, and high-end x86 clusters and grids.

The Sun Blade X8420 server module helps your datacenter meet the needs for smart growth and cost-effective management. It helps satisfy the demands for greater performance, more efficiency, increased solution longevity, and enhanced system management. Powered by four AMD Opteron™ 8000 series processors, 64 GB memory, and 160 Gbps I/O bandwidth, the Sun Blade X8420 server module offers a high-performance speed range from 2.4 to 2.8 GHz. It creates a more flexible IT environment and helps improve cost efficiency and power performance, as well as reduce TCO.

With superior RAS, the Sun Blade X8420 server module has no fans or power supply units installed — power and cooling are part of the chassis into which the server module is installed — and its Serial Attached SCSI (SAS) and Serial ATA (SATA) disks are hot-swappable, with integrated RAID 0 or 1 support providing maximum uptime. Its high memory density means a small footprint, as the server modules hold up to 64 GB per unit, with four DIMM slots per processor socket. It also enhances the flexibility of your IT infrastructure by running your choice of operating system: the Solaris™ OS, Linux, Windows, or VMware.

Sun Blade X8420 Server Module Specifications

Architecture

Processors

Four dual-core AMD Opteron 8000 series processors per server module (choice of AMD Opteron™ 8216, 8218, 8218HE, or 8220 processor). 8.0 GB/sec. HyperTransport™ link with 10.6 GB/sec. access between processor and memory

Main memory (up to 640 GB in a fully populated chassis; 10 server modules)

Four DIMM slots per CPU socket; DDR2/667 PC2-5300 ECC-registered DIMMs (128-bit plus ECC data bus); total of 16 DIMM slots; up to 16 GB per CPU; total of 64 GB of RAM per server module

Interfaces

I/O

- Six PCI Express (PCIe) links per server module, which can connect through the chassis midplane to two unique PCIe ExpressModules (EMs) and four PCIe Network Express Modules (NEMs). Specific I/O configuration support is chassis-dependent
- Storage: two hot-swappable, 2.5-in. SAS or SATA internal disks per server module, up to 20 per chassis; hardware RAID 0, 1 support

Software

Operating systems

- The Solaris™ 10 Operating System, 64-bit
- Red Hat Enterprise Linux Advanced Server 4, 32-bit/64-bit
- Red Hat Enterprise Linux Advanced Server 5, 64-bit
- SUSE Linux Enterprise Server 9, Service Pack 3 and higher, 64-bit
- SUSE Linux Enterprise Server 10, 64-bit

- Windows Server 2003, Enterprise Edition, 32-bit/64-bit
- Windows Server 2003, Standard Edition, 32-bit/64-bit
- VMware ESX Server 3.0.1
- Sun Java™ Enterprise System 4: The Solaris 10 Operating System and standard Linux distributions

Networking

ONC™, ONC+™, NFS, WebNFS™, TCP/IP, SunLink™, OSI, MHS, IPX™/SPX, SMB technologies, and XML

Management

Per-server module Integrated Lights Out Manager (ILOM) service processor providing:

- DMTF CLP-based CLI over SSH
- Web-based GUI over HTTP/HTTPS
- IPMI 2.0; SNMP V1, v2c, and v3
- Remote graphical access and remote storage over Ethernet
- Sun N1™ System Manager — advanced hardware management enabling discovery, grouping, bare-metal provisioning, hardware monitoring, and OS monitoring

I/O modules

PCIe ExpressModules

Up to 20 per Sun Blade 8000 Chassis (two per server module)

- Gigabit Ethernet dual-port PCIe ExpressModule — copper (Intel® 82571EB GbE controller-based)
- Gigabit Ethernet dual-port PCIe ExpressModule — fiber (Intel® 82571EB GbE controller-based)
- 10 GbE dual-port PCIe ExpressModule — fiber
- 4 Gbps Fibre Channel (FC) dual-port PCIe ExpressModule (QLogic ISP2432 FC controller)

Learn More

To learn more about the Sun Blade X8420 server module, go to sun.com/blades.

- 4 Gbps Fibre Channel dual-port PCIe ExpressModule (based on Emulex Zephyr IOC FC controller)

- Four InfiniBand dual-port PCIe ExpressModules (Mellanox MT2508 InfiniHost III Ex controller-based)

PCIe Network Express Modules

Up to four per Sun Blade 8000 chassis or two per Sun Blade 8000 P chassis

- Gigabit Ethernet 20-port passthru PCIe NEM (Intel® 82571EB GbE controller-based)
- 4 Gbps Fibre Channel 20-port passthru PCIe NEM (based on Emulex Zephyr IOC FC controller)
- InfiniBand 4x, DDR, 10-port passthru PCIe NEM

Dimensions and weight

Height: 42.67mm (1.68 in.)

Width: 499.36mm (19.66 in.)

Depth: 465.58mm (18.33 in.)

Weight: empty, no disks or memory —

9.71 kg (21.4 lbs.);

fully configured — 11.34 kg (25.0 lbs.)

Chassis support

10 Sun Blade X8440 server modules per Sun Blade 8000 chassis; 10 Sun Blade X8440 server modules per Sun Blade 8000 P chassis



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