

Sun Blade™ 8000 Modular System

The Fastest Way to Get Ahead



Highlights

- Run 20 eight-way Sun Blade™ X8400 Server Modules in a single rack—twice the processing power of rackmount options
- Up to 50 percent more space-efficient and 40 percent more power-efficient than today's rackmount servers
- Power and cooling cost savings of up to 62 percent compared to other blade and rackmount servers
- Smaller footprint, with increased density and cable aggregation plus reduced power and cooling demands
- First blade server in the world to run large-scale Oracle and SAP applications
- Simple, low-cost integration into existing IT environments without proprietary components
- Runs the Solaris OS, Linux, and Windows side by side



The Sun Blade 8000 Modular System is a breakthrough modular architecture offering the performance, price and flexibility of a top of the line rackmount system with the serviceability and efficiency of a blade platform. With support for the highest-grade AMD Opteron™ processors and up to four times the memory and up to 20 times the I/O capacity of competing blade servers, the Sun Blade 8000 Modular System is the first blade server designed specifically for performance intensive business and technical applications.

Get ahead and stay ahead of your business needs

Traditional blade servers lack the power, cooling, and I/O headroom to support cutting-edge processor, connectivity, and memory technology. The Sun Blade 8000 Modular System has bridged that gap with room to spare. The system provides open industry-standard I/O designed to support 9.6 TB/sec. throughput, high-performance SAS and SATA hard drives, and extremely fast memory. The system makes it possible to run high-performance, I/O-intensive applications on a blade server.

The system is built on modular base components, designed to help users' data centers to always match changing business needs—supporting future performance and capacity increases in processor, memory, and I/O technologies. Users simply upgrade modules independently, based on their lifecycle. The

chassis accommodates up to 10 server modules with four-socket, dual-core AMD Opteron processors, and will support the fastest processors for years to come.

The system is easy to service, with redundant, hot-pluggable, hot-swappable components. Its native PCI Express midplane and innovative PCI Express Network ExpressModule design allows different server modules to be configured with different I/O modules in the same chassis.

The system's management model eases integration into existing environments. Each server module contains an Integrated Lights Out Manager (iLOM) service processor, enabling each server module to be managed directly in the same manner as a rackmount server. And Sun's N1™ System Manager infrastructure lifecycle management software is bundled with the system with a free-to-use license.

Sun Blade 8000 Modular System

Architecture

Processor

Four dual-core AMD Opteron 800 series processors (models 870 (2.0GHz), 875 (2.2GHz), and 885 (2.6GHz))

Main memory

Four DIMM slots per CPU socket, DDR1/400 ECC registered DIMMs (128-bit plus ECC data-bus), total 16 DIMM slots, up to 16 GB per CPU. Total of 64 GB of RAM

System architecture

8.0 GB/sec. HyperTransport link with 6.0 GB/sec. access between processor and memory

I/O interfaces

Two PCI-Express ExpressModules (EMs) per blade and access to four Network ExpressModules (NEMs) per blade for aggregated I/O, optional internal hard drives—total of four x8 and two x4 PCI-Express interfaces per blade, for 160 Gbit/sec. of aggregate bandwidth per blade

Software

Operating systems

- Solaris 10 Operating System, 64-bit
- Red Hat Enterprise Linux 3.0, 32-bit/64-bit
- Red Hat Enterprise Linux 4.0, 64-bit
- SUSE LINUX Enterprise Server 9, 64-bit
- Windows Server 2003, Enterprise Edition, 32-bit/64-bit
- Windows Server 2003, Standard Edition, 32-bit/64-bit

Sun Java Enterprise System 3

- Solaris 10 Operating System
- Standard Linux distributions

Languages

- C/C++, FORTRAN (Solaris OS on x64)
- Java programming language
- All other standard Sun-supported languages

Networking

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

Management

Per server module ILOM service processor providing: DMTF CLP-based CLI over SSH, Web-based GUI over HTTPS/HTTP, IPMI 2.0, SNMP V1, v2c and v3, remote graphical access over Ethernet and remote storage over Ethernet

- Sun N1 System Manager—discovering, grouping, bare metal provisioning, hardware monitoring, OS monitoring

Mass storage and media

Hot-swappable, 2.5-inch SAS or SATA internal disks, RAID 0, 1 onboard

Environment

Acoustic noise emissions

Noise levels within two feet of the rear measured at 107 dB. Within two feet of the front of the system measured at 90 dB

AC power

200–264 V AC (50–60 Hz)

Operating temperature (single, nonrack system)

- 5° C to 35° C (41° F to 95° F)
- 10 to 90 percent relative humidity
- Noncondensing, 27° C max. wet bulb

Nonoperating temperature (single, nonrack system)

- -40° C to 65° C (-40° F to 149° F)
- Up to 93 percent relative humidity
- Noncondensing, 38° C max. wet bulb

Operating altitude (single, nonrack system)

Up to 2,286m, maximum ambient temperature is derated by 1° C per 300m above 900m

Nonoperating altitude (single, nonrack system)

Up to 10,000 ft. (3,048m)

Power

N+N (3+3) high-efficiency, hot-swappable power supplies, with plugs/cords independent of power supplies. N+N PSU rating: 3,000 W each/9,000 W (headroom for future technology)

Maximum rating: 750 W per blade (RR blade consumes approximately 660 W maximum). Maximum server module rating: 657 W

Regulations (meets or exceeds the following requirements)

- Safety: IEC60950, UL/CSA60950, EN60950, CB scheme with all country differences
- RFI/EMI: FCC Class A, Part 15 47 CFR, EN55022, CISPR 22, EN300-386: v1.31, ICES-003
- Immunity: EN55024, EN300-386: v1.3.2

Certifications

- Safety: cULus Mark, TUV GS Mark, CE Mark, CCC, GOST R, S-Mark
- EMC: CE Mark (93/68/EEC), Emissions and Immunity Class A Emissions Levels: FCC, VCCI, C-Tick, MIC, CCC¹, GOST R¹, BSMI¹
- Other: Labeled per WEEE (Waste Electrical and Electronic Equipment) Directive

1. =Applicable of GA

Chassis dimensions and weight

- Height: 33.01 in (838.49mm) 19 RU
- Width: 17.5 in (444.5mm)
- Depth: 28.43 in (722mm)
- Weight (fully configured): 536 lb. (243.13 kg)
- Empty chassis with midplane: 120 lb. (54.43 kg)

Mounting option

19-inch rackmount kit