

Sun Fire™ X4600 Servers

Compact, Modular 4- to 16-Way x64 Servers



Highlights

- Now with Next-Generation AMD Opteron processors
- Unique compact modular processors enable flexibility and four-to-16-way scalability without disruption to datacenter operations
- Twice the performance and built-in energy efficiencies
- Efficient cooling design optimizes power consumption and costs
- Server longevity with modular design lowers total cost of ownership, with upgradeability to future computing and memory technologies
- Automated management with ILOM and N1 System Manager
- Scales multiple OS for optimization of the IT data center with choice of virtually any OS
- Virtualization options result in lower cost and higher server utilization

➤ The innovative Sun Fire X4600 and Sun Fire X4600 M2 servers power the data center with two times the performance of rival systems, optimized energy efficiencies, and flexibility to support current and future enterprise and high-performance applications at twice the scalability of Xeon-based servers. With the Sun Fire X4600 server family's unparalleled scalability and vast virtualization options, datacenters can be scaled up numerous times their existing capacity—while energy maintenance costs are contained, providing higher ROI.

Get ahead and stay ahead of your business needs

Powered by industry-standard single- or dual-core AMD Opteron™ processors, the four- to 16-way Sun Fire X4600 server family delivers double the competitors' processing. The servers' superior architecture also offers cost-efficiency and higher performance. Their compact, rack-optimized four-U form factor enables them to easily be scaled out to meet larger computing demands. They can also be upgraded to next-generation processors—or up to eight processors in a single chassis—with minimum infrastructure impact, maximum effectiveness, and unprecedented scalability in a smaller footprint. The servers run most vital mission-critical applications, and system management is streamlined with the highly flexible N1 Systems Manager and ILOM. The systems' high availability and multiple OS support also enable them to consolidate many applications, and Sun

offers comprehensive services designed to help users architect, implement, manage, and support their systems.

The right building block for high-performance computing

The Sun Fire X4600 server family is also the right building block for large compute clusters. Multiple servers can be clustered with high-bandwidth connectivity to create a multi-tera-flop system, to solve complex problems such as product design or real world simulations.

Versatile enterprise virtualization platform

The Sun Fire X4600 server family supports virtualization technologies such as XEN, VMware, Solaris™ Containers, and Microsoft Virtualization, easily and effectively hosting and managing many virtual machines within the server. Allocating compute resources into these virtual machines can quickly and easily maximize utilization.

Sun Fire X4600

Processor	Four or eight AMD Opteron processors 800 Series (single- and dual-core)
CPU interconnect	HyperTransport speed: One GHz, eight GB/second
Cache	One MB Level 2 per core
DIMMs	Four DIMM slots per CPU socket, choice of one GB, two GB DDR1/400 ECC registered DIMMs
Standard configurations	Eight GB and up to max. 64 GB
Onboard Gigabit Ethernet	Four 10/100/1000Base-T Ethernet ports, RJ-45 connectors, with support for teaming and failover
Network management	Additional dedicated 10/100Base-T Ethernet port, RJ-45 connector
Serial	RS-232 serial interface, RJ-45 connector
SAS	Four-channel SAS interface
USB	Two USB 2.0 ports (front), two USB 2.0 ports (rear)
Expansion bus	Eight low-profile PCI expansion slots: Six PCI-E slots (four eight-lane PCI-Express slots, two four-lane PCI-Express slots), two 64-bit/100 MHz PCI-X slots
Hard disk	Up to four hot-swappable, 2.5-inch SAS internal disks
Internal DVD-ROM	Standard DVD-ROM in every server
External disk	sun.com/servers/x64/x4600/storage.jsp
Service processor	ILOM built-in — managed the same way as other Sun Fire x64 servers
In-band management	IPMI v2.0 via KCS driver, SNMP OS-resident agent
Out-of-band management	IPMI v2.0, DMTF CLI, SNMP- v1, v2c, v3, Web GUI, SSH
Remote management features	Remote keyboard, video, mouse (KVM), remote media functionality, remote power control remote access to BIOS, remote FRU status, monitoring, logging, role-based access control
System management paths	Dedicated 10/100BaseT Ethernet port, RJ-45 serial port
Operating environment	Solaris OS, Red Hat Enterprise Linux, Microsoft Windows, and VMware sun.com/servers/x64/x4600/os.jsp
Sun Java Enterprise System 2005Q4 (4) Management	sun.com/software/javaenterprisesystem/index.xml CLI (in-band and out-of-band), IPMI 2.0 (in-band and out-of-band), SNMP (out-of-band only)
Power supplies	Four hot-swappable power supplies, redundant 850 W each, 83 percent efficiency
Power source	100-240 V AC — 50/60 Hz input
UL maximum (DC output)	850 W/PSU (max. output)
AC power	90-264 V AC (47-63 Hz)
Operating temperature/humidity (single, nonrack system)	Five degrees C to 35 degrees C (41 degrees F to 95 degrees F), 10-90 percent relative humidity, noncondensing, 27 degrees C max. wet bulb
Storage temperature (single nonrack system)	-20 to 60 degrees C (-4 to 140 degrees F)
Humidity	20-90 percent noncondensing
Operating altitude (single nonrack system)	Maximum 10,000 ft. (3,048m)
Notes	Declared noise emissions in accordance with ISO 9296, A-weighted, operating and idling
LwAd (1B = 10dB)	At or below 25 degrees C: 8.1 B, at max. ambient: 8.9 B
LpAm bystander	At or below 25 degrees C: 66 dB, at max. ambient: 74 dB
Notes	Meets or exceeds the following requirements
Safety	IEC60950, UL/CSA60950-1, EN60950, CB Scheme with all country differences
RFI/EMI	FCC Class A, Part 15 47 CFR, EN55022, CISPR 22, EN300-386:v1.3.2, ICES-003 EN55024, EN300-386:v1.3.2
Immunity	Safety: cULus 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, 'CCC, 'GOST R, 'BSMI
Certifications	RoHS 5 and 6 compliant
RoHS	Labeled per Waste Electrical and Electronic Equipment (WEEE) Directive
Other	176mm (6.92 in.)
Height	432mm (17.0 in.)
Width	609mm (24 in.)
Depth	45 kg (100 lbs.) maximum with rack kit
Weight	

Sun Fire X4600 M2 Server

Processor	Four to eight Next-Generation AMD Opteron processors 8000 Series (dual-core)
CPU interconnect	HyperTransport speed: One GHz, eight GB/second
Cache	One MB Level 2 per core
DIMMs	Four DIMM slots per CPU socket, choice of one GB, two GB, and four GB DDR2/667 ECC registered DIMMs
Standard configurations	Eight GB and up to max. 128 GB
Onboard Gigabit Ethernet	Four 10/100/1000Base-T Ethernet ports, RJ-45 connectors, with support for teaming and failover
Network management	Additional dedicated 10/100Base-T Ethernet port, RJ-45 connector
Serial	RS-232 serial interface, RJ-45 connector
SAS	Four channel SAS interface
USB	Two USB 2.0 ports (front), two USB 2.0 ports (rear)
Expansion bus	Eight low-profile PCI expansion slots: Six PCI-E slots (four eight-lane PCI-Express slots, two four-lane PCI-Express slots), two 64-bit/100 MHz PCI-X slots
Hard disk	Up to four hot-swappable, 2.5-inch SAS internal disks
Internal DVD-ROM	Standard DVD-ROM in every server
External disk	sun.com/servers/x64/x4600/storage.jsp
Service processor	ILOM built-in — managed the same way as other Sun Fire x64 servers
In-band management	IPMI v2.0 via KCS driver, SNMP OS-resident agent
Out-of-band management	IPMI v2.0, DMTF CLI, SNMP- v1, v2c, v3, Web GUI, SSH
Remote management features	Remote keyboard, video, mouse (KVM), remote media functionality, remote power control remote access to BIOS, remote FRU status, monitoring, logging, role-based access control
System management paths	Dedicated 10/100BaseT Ethernet port, an RJ-45 serial port
Operating environment	Solaris OS, Red Hat Enterprise Linux, Microsoft Windows, and VMware sun.com/servers/x64/x4600/os.jsp
Sun Java Enterprise System 2005Q4 (4) Management	sun.com/software/javaenterprisesystem/index.xml CLI (in-band and out-of-band), IPMI 2.0 (in-band and out-of-band), SNMP (out-of-band only)
Power supplies	Four hot-swappable power supplies, redundant in 2+2 configuration, 850 W each, 83 percent efficiency
Power source	100-240 V AC — 50/60 Hz input
UL maximum (DC output)	850 W/PSU (max. output)
AC power	90-264 V AC (47-63 Hz)
Operating temperature/humidity (single, nonrack system)	Five degrees C to 35 degrees C (41 degrees F to 95 degrees F), 10-90 percent relative humidity, noncondensing, 27 degrees C max. wet bulb
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