SUN FIRE X4640 SERVER

KEY BENEFITS

TOTAL SOLUTION FOR ENTERPRISE DATABASES, HPC, CONSOLIDATION, AND VIRTUALIZATION

BENEFITS

- Most compact, easy-to-manage server for database management or data warehousing and transaction processing with world record performance.
- Scalability on multiple operating systems, permitting the choice of virtually any operating system.
- Optimized management of application and technology changes with 24- to 48-core scalability without disruption of datacenter operations.
- Outstanding virtualization platform, using the market's simplest configuration to manage so much.
- Efficient cooling and power design, optimizing power consumption and costs.
- Lower total cost of ownership (TCO) through server longevity with modular design and upgradability to future computing and memory technologies.
- Automated management using Integrated Lights Out Manager (ILOM).

For customers who need higher performance, lower costs, and reduced complexity in their IT infrastructures, Oracle offers the compact, 4-to-8-socket Sun Fire X4640 server. It is ideal for enterprise database, high-performance computing (HPC), server consolidation, or virtualization needs.

The Sun Fire X4640 server is the most compact 24-to-48-core x64 rack-optimized server.

Powerful Business Data Management

The Sun Fire X4640 server provides a scalable platform that is cost-effective and power-efficient. It runs transaction processing and data warehousing analysis that support a variety of database applications on almost any operating system. With its large half terabyte maximum memory and high-performance processors, the Sun Fire X4640 server also powers complex electronic design automation, mechanical computer aided design automation, and other HPC applications. The server's virtualization options enable your datacenter to scale to several times its capacity. This unparalleled scalability in processing, memory, and I/O, combined with powerful remote management, will allow you to consolidate and virtualize datacenters better, support more business transactions, and process more data while you maximize your return on investment (ROI).

Enterprise Database Scalability

The Sun Fire X4640 server, with its six-core AMD Opteron processor, is the most compact 24-to-48-core x64 rack-optimized server. The Sun Fire X4640 server supports up to 512 GB of memory to accelerate data access and analysis. With up to 64 memory slots, it lowers cost by half for smaller memory deployment.

Versatile Virtualization and Consolidation

Its scalability, combined with high I/O bandwidths, makes the Sun Fire X4640 server ideal for database, virtualization, server consolidation, and HPC applications. The Sun Fire X4640 server supports all industry-standard operating systems,

including Oracle Solaris operating system, Linux, Microsoft Windows, and VMware ESX server operating environments. It also supports high-availability clustering, as well as virtualization technologies such as XEN, VMware, Oracle Solaris Containers, and Microsoft Virtualization. It can easily and effectively host and manage many virtual machines within the server, quickly allocating compute resources to maximize utilization.

Simple System Management

Designed from the ground up to facilitate system management, the Sun Fire X4640 server simplifies scaling of your computing resources with its state-of-the-art remote management capabilities. Sun Integrated Lights Out Manager (ILOM) Service Processor technology is integrated as standard, at no additional cost, providing such management features as powerful configuration and monitoring capabilities, fault identification, remote firmware update, remote power on/off, and remote keyboard/mouse/video/storage—all of which increase availability by reducing errors and repair time.

Powerful Database Engine

The modularity of the Sun Fire X4640 server makes it a powerful database engine that lets you reduce cost and complexity while you also accelerate the return on your investment.

Sun Fire X4640 Server Specifications

Architecture
Processor
Up to eight AMD Opteron Processor 8000 Series: • Six-Core Processor 8435 (2.6 GHz/75W)/ 8DIMM • Six-Core Processor 8431 (2.4 GHz/75W)/8DIMM CPU interconnect: Coherent Hyper 3 • Speed: 2.2 GHz, 17.6 GB/sec • Cache: 3 MB L2 and 6 MB L3 • Main Memory: 8 DIMM slots per CPU socket, DDR2/667 ECC registered DIMMs (128 bit plus ECC databus); maximum of 64 possible DIMM slots; choice of 4 GB and 8 GB DIMMs
Standard Integrated Interfaces
• Network: Four 10/100/1000 Base-T Ethernet ports, RJ45 connectors (Intel network controller) • Network management: One dedicated 10/100 Base-T Ethernet port, RJ45 connector • Serial management: RS-232 serial interface, RJ45 connector • SAS: Four-channel SAS interface • USB: Two USB 2.0 ports, front; two USB 2.0 ports, rear; one USB 2.0 port, internal • Expansion bus: 8 low-profile PCI expansion slots: six PCIe slots (4 x8-lane PCIe slots, 2 x4-lane PCIe slots) and two 64-bit/100 MHz PCI-X slots

Software	
Operating Systems	
• Oracle Solaris • Red Hat Enterprise Linux • SUSE Linux	• Microsoft Windows • VMware
Management	
• CLI (in-band and out-of-band), IPMI 2.0 (in-band and out-of-band), SNMP (out-of-band only) • ILOM with dedicated 10/100 Base-T Ethernet port • Remote management features: remote keyboard, video, mouse (KVM); remote media functionality; remote power control; remote access to BIOS; remote FRU status, monitoring, logging, and role-based access control	
Sun Installation Assistant	
• Guided, easy installation of Linux and Windows operating systems with correct drivers	
Mass Storage and Media	
• Hard disk: Up to four hot-swappable, 2.5 inch SAS internal disks • Internal DVD-ROM: One EIDE DVD-ROM • 146 GB and 300 GB 2.5" SAS 10,000 rpm/ 73 GB 15,000 rpm SAS drives supported	
Environment	
Operating temperature/humidity	• 5°C to 32°C (37°F to 91°F), 10% to 90% relative humidity, non-condensing, 27°C maximum wet bulb
Non-operating temperature/humidity (single non-rack system)	• 40ºF to 1490 F (-40ºC to +65ºC), up to 93% relative humidity, non-condensing, 38ºC maximum wet bulb
Operating altitude (single non-rack system)	• 32ºC up to 900 meters and a derating of 1ºC for every 300 meters in altitude up to 3048 meters maximum
Non-operating altitude	• Up to 12,000 meters
Airflow	• 400 (CFM per Sun Fire X4640 server)
Acoustic noise:	Declared noise emissions in accordance with ISO 9296, A-weighted, operating and idling: • LwAd (1B = 10 dB): at or below 25°C: 8.1B, at maximum ambient: 8.9B • LpAm bystander: at or below 25°C: 66 dB, at maximum ambient: 74 dB
Power	
Power supply output rating	• 1,133W
AC power	• 100 to 240 VAC (47 to 63 Hz)
Power source	• 100 to 240 VAC, 50 to 60 Hz input
UL maximum (DC output)	• 1133W PSU Typical power consumption: check power calculator

Regulations	
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
Immunity	• EN55024, EN300-386: v1.3.2
Certifications	
Safety	cULus Mark, CE Mark, CCC, GOST R, S-Mark, CE Mark (93/68/EEC) Emissions and Immunity Class A Emissions Levels: FCC, VCCI, C-Tick, MIC, CCC, GOST R, BSMI
Other	Labeled per Waste Electrical and Electronic Equipment (WEEE) Directive; RoHS 5 compliant
Dimensions and Weight	
Height	176 mm (6.9 inches)
Width	445 mm (17.5 inches)
Depth	629 mm (24.8 inches)
Weight	Maximum, standalone server: 40 Kg (88 lbs.); maximum with orderable rackmount kit and cable management arm: 48 Kg (106 lbs.)

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 Fire X4640 server, please visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Oracle is committed to developing practices and products that help protect the environment