

## SUN SERVER X2-4 SYSTEM

### KEY FEATURES

- Compact 3U enterprise-class server
- Powered by up to four Intel Xeon processor E7-4800 product family CPUs
- Up to 64 DIMMs with a maximum memory of 1 TB
- Six 2.5" disk drive bays for HDDs or SSDs
- Up to four Sun Flash Accelerator F20 PCIe cards
- Hot swappable disks, cooling fans and power supply units
- Supports a wide range of enterprise-class server operating systems

### KEY BENEFITS

- Minimize real estate costs with the leading compact system design
- Boost application performance, improve business response and reduce power consumption with Oracle's Enterprise Flash technology
- Take advantage of consistent system manageability through Oracle ILOM, which is included in every system



*Oracle's Sun Server X2-4 system is the ideal virtualization platform for consolidating Web application servers and collaboration tools, enterprise performance management*

*applications, and batch processing. It is the industry's leading compact and expandable enterprise-class, four-socket, x86-based server, delivering best-in-class performance with world-record processor speed, expandability, density, and power efficiency in a 3 rack unit (U) form factor.*

### Product Overview

The Sun Server X2-4 is powered by up to four Intel Xeon processor E7-4800 product family CPUs with up to 1 TB of memory and up to 3.6 TB of internal storage. It is the best platform for enterprise consolidation and virtualization for business applications. It is the industry's leading compact and expandable enterprise-class 4-socket x86 server with a best-in-class performance, power efficiency, density, and a highly expandable design. It delivers outstanding virtualization capacity to increase server utilization and reduce the data center footprint through a 3U enclosure.

Following the previous generation server, the Sun Server X2-4 continues to offer two flash integration options for application and database acceleration: Sun Flash Acceleration F20 PCIe cards and Solid State Drives (SSDs). These flash options deliver the I/O performance of up to 400 Hard Disk Drives (HDDs) turbo charging applications while eliminating bottlenecks and reducing power consumption. When compared with the previous generation system, the Sun Server X2-4 doubles the memory to 1 TB and doubles the storage capacity to 3.6 TB, enhancing the system's virtualization capabilities. In addition, an increase of 25% in processor cores and threads produces better performance at the same maximum CPU Thermal Design Power (TDP), making this server the densest and fastest performing in its class.

System management is simplified with Oracle Integrated Lights Out Manager (Oracle ILOM), which comes standard in every Sun Server X2-4. Oracle ILOM centralizes system management locally or remotely to ease system configuration, software provisioning and updates, providing a consistent interface across the entire x86 product line.

All Oracle servers ship with full function server management tools at no additional cost. Oracle ILOM utilizes industry-standard protocols to provide secure and comprehensive local and remote management. Oracle ILOM features also include power management and monitoring, fault detection and notification. The integrated Oracle System Assistant guides system administrators through rapid server deployment, firmware updates, hardware configuration and operating system installation with Oracle certified hardware drivers.

Oracle's Premier Support customers have access to My Oracle Support and multi-server management tools in Oracle Enterprise Manager Ops Center. Oracle Enterprise Manager Ops

Center, a critical component of Oracle's application-to-disk system management tool, coordinates servers, storage, and networking for a complete cloud infrastructure as a service (IaaS). Oracle Enterprise Manager Ops Center also features an Automated Service Request capability, whereby potential issues are detected and reported to Oracle's support center without user intervention, assuring the maximum service levels and simplified support.

Sun x86 systems are the best enterprise x86 platforms for running Oracle software. They provide optimal performance and reliability based on an integrated and fully supported Oracle stack, as well as everything you need for a cloud deployment. Every Sun x86 system comes complete with virtualization, choice of operating systems, cloud provisioning, and Oracle's unique application-to-disk management environment—all at no extra charge. As a result, Sun x86 systems deliver up to 50 percent cost savings over three years when compared to similarly configured multi-vendor configurations.<sup>1</sup> Sun x86 systems also serve as a key building block for Oracle's engineered systems, such as Oracle Exadata, which have achieved a 10x performance gain through integration and optimization.

### Sun Server X2-4 System Specifications

<b>Architecture</b>
<b>Processor</b>
Two or four Intel Xeon processor E7-4800 product family CPUs
<b>Main Memory</b>
<ul style="list-style-type: none"> <li>Up to 64 DIMMs (16 DIMMs per processor)</li> <li>4GB, 8GB or 16GB DDR3 ECC Registered DIMMs</li> <li>Two memory riser cards required per processor</li> <li>Maximum memory capacity of 1 TB</li> </ul>
<b>Interfaces</b>
<b>Standard I/O</b>
<ul style="list-style-type: none"> <li>Four 10/100/1000Base-T on-board Ethernet ports</li> <li>One dedicated 10/100Base-T Ethernet management port</li> <li>One TIA/EIA-232-F asynchronous RJ-45 serial port</li> <li>Five USB 2.0 ports (two front, two rear, one internal)</li> <li>Ten PCI Express (PCIe) slots: two (2) x16-lane slots; four (4) x8-lane slots; two (2) x4-lane slots or eight (8) x8-lane slots and two (2) x4-lane slots</li> <li>Two VGA 8 MB Ports; 1024 x 768 @ 60 Hz (front and rear)</li> <li>Front-accessible DVD+/-RW Drive Slot (DVD Optional)</li> </ul>
<b>Storage</b>
<ul style="list-style-type: none"> <li>Six 2.5" SAS-2/SATA-2 front-accessible, hot-swappable disk bays</li> <li>All bays can be populated with SAS-2 HDDs or SATA-2 SSDs</li> <li>Optional RAID levels : 0, 1, 1E, 10, 5, 5EE, 6 with optional Battery Backed Write Cache (BBWC) via optional HBA PCIe card</li> <li>Up to four optional Sun Flash Accelerator F20 PCIe cards</li> </ul>
<b>Graphics</b>
<ul style="list-style-type: none"> <li>VGA 2D graphics controller embedded, which support resolutions up to 1600 x 1200 x 16bits @ 60 Hz (1024 x 678 when viewed remotely via Oracle ILOM RKVMS)</li> <li>Rear and front HD15 VGA port</li> </ul>
<b>Systems Management</b>
<b>Interfaces</b>

<sup>1</sup> Source: Edison Group, "The Optimized Stack: Reducing Total Cost of Ownership through Vertical Integration." First publication July 2011.

<ul style="list-style-type: none"> <li>• Dedicated 10/100base-T Ethernet network management port</li> <li>• In-and, out-of-band, and sideband network management access via any one of the four main ports of the server or the dedicated port</li> <li>• RJ-45 serial management port</li> </ul>
<b>Service Processor</b>
<p>Oracle Integrated Lights Out Manager (Oracle ILOM) provides:</p> <ul style="list-style-type: none"> <li>• Remote Keyboard, Video, Mouse redirection</li> <li>• Full remote management through command-line, IPMI, and browser interfaces</li> <li>• Remote media capability (USB, DVD, CD, ISO image)</li> <li>• Advanced power management and monitoring</li> <li>• Active Directory, LDAP, RADIUS support</li> </ul>
<b>Installation</b>
<p>Oracle System Assistant provides:</p> <ul style="list-style-type: none"> <li>• Task-driven hardware updating and configuration</li> <li>• OS installation</li> <li>• Simple download of latest Oracle firmware, drivers, tools and documentation</li> <li>• Cross-OS command-line tools for RAID, BIOS, and ILOM configuration</li> <li>• Cross-OS firmware updating tool</li> </ul>
<b>Monitoring</b>
<ul style="list-style-type: none"> <li>• Comprehensive fault detection and notification</li> <li>• In-band and out-of-band SNMP Monitoring V1, V2c, V3</li> <li>• Syslog and SMTP alerts, WS-MAN</li> <li>• Automatically create a service request for key hardware faults with Oracle Automated Service Request (ASR)</li> </ul>
<b>Oracle Enterprise Manager Ops Center</b>
<ul style="list-style-type: none"> <li>• Deployment and provisioning of server bare metal</li> <li>• Cloud and virtualization management</li> <li>• Inventory control and patch management</li> <li>• OS observability for performance monitoring and tuning</li> <li>• Automated Service Request generation</li> <li>• Connects to Oracle Enterprise Manager Cloud Control application management</li> <li>• Enables control of native Oracle Solaris, Oracle Linux, Red Hat Linux, SUSE Linux, and Microsoft Windows when running in virtual machines</li> </ul>
<b>Software</b>
<b>Operating Systems</b>
<ul style="list-style-type: none"> <li>• Oracle Solaris</li> <li>• Oracle Linux</li> <li>• Red Hat Enterprise Linux</li> <li>• SuSE Linux Enterprise Server</li> <li>• Microsoft Windows Server</li> <li>• For more information on software go to:  <a href="https://wikis.oracle.com/display/SystemsComm/Home#tab:x86-Systems-Options-and-Downloads">https://wikis.oracle.com/display/SystemsComm/Home#tab:x86-Systems-Options-and-Downloads</a> </li> </ul>
<b>Virtualization</b>
<ul style="list-style-type: none"> <li>• Oracle VM</li> <li>• VMware</li> </ul>

The Sun Server X2-4, powered by up to four Intel Xeon processor E7-4800 product family CPUs and with up to 1 TB of memory and up to 3.6 TB of internal storage, is the best platform for enterprise consolidation and virtualization for business applications.

#### RELATED PRODUCTS

- Sun Server x86 product portfolio

#### RELATED SERVICES

The following services are available from Oracle Support Services:

- Support, installation
- Eco-optimization services

### Environment

- Operating temperature: 5°C to 35°C (41°F to 95°F) at sea level; 5°C to 31°C (41°F to 88°F) at altitude
- Nonoperating temperature: -40°C to 68°C (-40°F to 154°F)
- Operating relative humidity: 10%-90% relative humidity, noncondensing
- Nonoperating relative humidity: 93% relative humidity, noncondensing,
- Acoustic noise: LwAd: 8.9 B (idle and operating, room temp.), 8.9 B (max. ambient); LpAm: 75 dBA (bystander position, max. ambient)

### Power

- Rated Line Voltage: 100 - 127 VAC (for two CPUs) or 200 - 240 VAC (for 2 - 4 CPUs)
- Rated Input Current: 12A at 100 VAC and 12A at 200 VAC

### Regulations

- Safety: IEC 60950, UL/CSA 60950, EN60950, CB Scheme with all country differences
- RFI/EMI: FCC CFR 47 Part 15 Class A, EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, EN 300 386
- Immunity: EN 55024, EN 300 386

### Certifications

- Safety: UL/cUL, UL DEMKO, CE, BSMI, CCC, GOST-R, S-Mark
- EMC: CE, FCC, VCCI, ICES, C-Tick, MIC, CCC, GOST-R, BSMI Class A
- Other: Complies with WEEE Directive (2002/96/EC) and RoHS Directive (2002/95/EC)

### Dimensions and Weight

- Height: 129.9 mm (5.1 in.)
- Width: 436.5 mm (17.2 in.)
- Depth: 732.0 mm (28.8 in.)
- Weight: 38.5 kg (85 lb.) max.

### Installation Kits

- Toolless rackmounting slide rail kit
- Cable management arm

### Warranty

The Sun Server X2-4 comes with a one-year warranty. For more information, visit [oracle.com/goto/sun/warranty](http://oracle.com/goto/sun/warranty) for Oracle's global warranty support.

### Support

Only Oracle offers single point of accountability and complete, integrated support for the entire Oracle stack including 24/7 hardware service, expert technical support, proactive tools, and software updates. Visit [oracle.com/sun/services](http://oracle.com/sun/services) for information on Oracle's service program offerings for Sun products

### Contact Us

For more information about Oracle's Sun Server X2-4, please visit <http://www.oracle.com/goto/x2-4> or call +1.800.786.0404 to speak to an Oracle representative.



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