

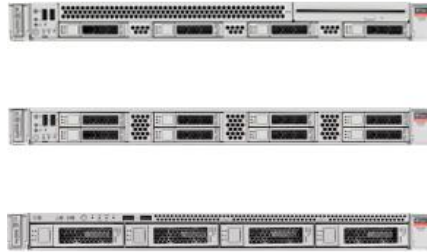
## SUN SERVER X3-2 SYSTEM

### KEY FEATURES

- Compact and energy-efficient 1U enterprise-class server for mission-critical business workloads
- Intel Xeon processor E5-2600 product family CPUs
- Sixteen dual inline memory module (DIMM) slots supporting two low-voltage DDR3 1600-MHz DIMMs per channel
- Four PCIe 3.0 slots
- Four 10GbE ports
- Hot-swappable disks, cooling fans, and power supply units
- Oracle ILOM, Oracle System Assistant, and Oracle Hardware Management Pack

### KEY BENEFITS

- Most versatile server for space- and power-constrained data center needs
- Highest application performance and power savings with low-voltage DIMMs running at true 1600 MHz
- Boost application performance with faster processor, memory, and I/O
- Largest network bandwidth with four onboard 10GbE ports
- Simplify systems and cloud-ready life-cycle management
- Run Oracle software with best performance, reliability and TCO



*Packing the optimal balance of compute power, memory capacity, and I/O capability into a compact and energy-efficient one rack unit (1U) enclosure, Oracle's Sun Server X3-2 system is the most versatile two-socket server for enterprise data centers that run a range of mission-critical business*

*applications. This server is ideal for running middleware and enterprise business application workloads, and as a platform for application development.*

### Product Overview

Oracle's Sun Server X3-2, powered by the highest performing CPUs from the Intel Xeon processor E5-2600 product family, offers unparalleled performance balanced with compute, memory, and I/O capabilities. It is the most versatile two-socket server for enterprise data centers. It is ideal for running middleware and enterprise business applications such as CRM, ERP, and SCM. It is also an excellent fit as a software development platform such as Oracle's Solaris Studio, and a great choice for running Web and IT infrastructure applications such as Oracle's WebLogic middleware, Oracle's WebCenter middleware, Oracle Beehive middleware, Oracle Enterprise Manager Ops Center, Oracle Directory Manager, and Oracle Identity Manager.

This server is available in three flexible chassis configurations and offers superior scalability with up to 12 TB of disk storage or 2.4 TB of flash storage, and 2x I/O bandwidth with four PCIe 3.0 expansion slots for demanding enterprise business workloads. The on-board 10 GbE ports provide ten times faster network throughput than the 1 GbE onboard interfaces. This reduces network delays and accelerates application performance while saving power and scarce PCIe I/O slots for additional network and storage connectivity. The Sun Server X3-2 supports up to 256 GB memory capacity at a true 1600-MHz with 16 GB low-voltage RDIMMs. It easily can meet the demands of current and future memory-intensive business workloads without compromise on performance and power. In addition, with an increase of 33 percent in processor cores and threads, the Sun Server X3-2 produces up to 87 percent performance gains compared to its previous generation, making it the densest and best performing server in its class.

The energy-smart design is more energy efficient on power compared to the previous generation. Energy-efficient components include low-voltage DIMMs and platinum-rated power supplies that offer up to 91 percent efficiency. Per-zone thermal sensors and a smart fan control algorithm are used to automate fan speeds and optimize power efficiency and system performance.

All Oracle servers ship with full function server management tools at no additional cost. Oracle Integrated Lights Out Manager (ILOM) utilizes industry-standard protocols to provide secure and comprehensive local and remote management. Oracle ILOM features also include power management and monitoring and 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 x86 platforms for running Oracle software. They provide not only optimal performance and reliability based on an integrated and fully supported Oracle stack, but also include everything you need for a cloud deployment. Every Sun x86 system comes complete with virtualization, choice of operating system, cloud provisioning, and Oracle's unique application-to-disk system 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 X3-2 System Specifications

<b>Architecture</b>
<b>Processor</b>
<ul style="list-style-type: none"> <li>One or two processors from the Intel Xeon processor E5-2600 product family (Two processors required for maximum configurations).</li> <li>Up to 8 cores per processor</li> </ul>
<b>Cache</b>
<ul style="list-style-type: none"> <li>Level 1: 32 KB instruction and 32 KB data L1 cache per core</li> <li>Level 2: 256 KB shared data and instruction L2 cache per core</li> <li>Level 3: Up to 20 MB shared inclusive L3 cache per processor</li> </ul>
<b>Main Memory</b>
<ul style="list-style-type: none"> <li>Sixteen DIMM slots provide up to 512 GB of DDR3 Registered (RDIMM) memory</li> <li>LV RDIMM options: 8 GB at 1600 MHz, 16 GB at 1600 MHz, 32 GB at 1066 MHz</li> </ul>
<b>Interfaces</b>
<b>Standard I/O</b>
<ul style="list-style-type: none"> <li>Four 100/1000/10G Base-T Ethernet ports</li> <li>USB: Six 2.0 USB ports (two front, two rear, two internal)</li> <li>Expansion bus: Four PCIe 3.0 slots: One (1) x16 and three (3) x8 (one internal) slots</li> <li>Supports storage controllers including FC, FCoE and SAS HBAs</li> </ul>
<b>Storage</b>

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

<p>Three disk chassis options:</p> <ul style="list-style-type: none"> <li>• Eight 2.5-inch front hot-swappable disk bays</li> <li>• Four 2.5-inch front hot-swappable disk bays and DVD R/W drive</li> <li>• Four 3.5-inch front hot-swappable disk bays</li> </ul> <ul style="list-style-type: none"> <li>• All 2.5-inch disk bays can be populated with either HDDs or SSDs</li> <li>• All 3.5-inch disk bays can be populated with only HDDs</li> <li>• Optional RAID levels: 0, 1, 5, 6, 10, 50 and 60 with 512 MB of DDR2 onboard memory and a Battery-Backed Write Cache (BBWC) for 72-hour backup via internal SAS HBA PCIe Card</li> </ul>
<p><b>Graphics</b></p> <ul style="list-style-type: none"> <li>• VGA 2D graphics controller embedded</li> <li>• Supports resolutions up to 1280 x 1024 x 16 bits @ 60 Hz (1024x768 when viewed remotely via Oracle ILOM, Remote Keyboard, Video, Mouse, and Storage (RKVMS))</li> <li>• Rear HD15 VGA port</li> </ul>
<p><b>Systems Management</b></p>
<p><b>Interfaces</b></p> <ul style="list-style-type: none"> <li>• Dedicated 10/100 Base-T Ethernet network management port</li> <li>• In-band, out-of-band and side-band network management access</li> <li>• RJ-45 serial management port</li> </ul>
<p><b>Service Processor</b></p> <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 (DVD, CD, ISO image, floppy)</li> <li>• Advanced power management and monitoring</li> <li>• Active Directory, LDAP, RADIUS support</li> </ul>
<p><b>Installation</b></p> <ul style="list-style-type: none"> <li>• Oracle System Assistant provides: <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> </ul> </li> <li>• Cross-OS command-line tools for RAID, BIOS, and ILOM configuration</li> <li>• Cross-OS firmware updating tool</li> </ul>
<p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>• Comprehensive fault detection and notification</li> <li>• In-band and out-of-band and side-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>
<p><b>Oracle Enterprise Manager Ops Center</b></p> <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> </ul>

The Sun Server X3-2 is the most versatile two-socket server for the enterprise data center, packing the optimal balance of compute power, memory capacity, and I/O capacity into a compact and energy-efficient 1U enclosure.

#### RELATED PRODUCTS

- Oracle Exadata Database Machine
- Oracle Exalogic Elastic Cloud
- Oracle Database Appliance
- Sun Server X3-2L system
- Sun Server X2-4 system
- Sun Server X2-8 system
- Sun Blade X3-2B server module
- Oracle Enterprise Manager Ops Center

#### RELATED SERVICES

The following services are available from Oracle Support Services:

- Support, installation
- Eco-optimization services

<ul style="list-style-type: none"> <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 (pre-installed option)</li> <li>• Oracle Linux (pre-installed option)</li> <li>• Red Hat Enterprise Linux</li> <li>• SUSE Linux Enterprise Server</li> <li>• Microsoft Windows Server</li> </ul> <p>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></p>
<b>Virtualization</b>
<ul style="list-style-type: none"> <li>• Oracle VM (pre-installed option)</li> <li>• VMware</li> </ul>
<b>Environment</b>
<ul style="list-style-type: none"> <li>• Operating temperature: 5° C to 35° C (41° F to 95° F)</li> <li>• Non-operating temperature: -40° C to 70° C (-40° F to 158° F)</li> <li>• Operating relative humidity: 10% to 90%, non-condensing</li> <li>• Non-operating relative humidity: Up to 93%, non-condensing</li> <li>• Operating altitude: Up to 9,840 feet (3,000 m*) maximum ambient temperature is derated by 1° C per 300 m above 900 m (*except in China where regulations may limit installations to a maximum altitude of 6560 feet or 2000 m)</li> <li>• Non-operating altitude: Up to 39,370 feet (12,000 m)</li> <li>• Acoustic noise: 7.91 Bels A weighted operating, 5.28 Bels A weighted idling</li> </ul>
<b>Power</b>
<ul style="list-style-type: none"> <li>• Two hot-swappable redundant power supplies</li> <li>• Maximum output power: 600 W per power supply</li> <li>• Maximum AC input current at 100 V AC and 600 W output: 7.2 A</li> <li>• Specified power supply efficiency at 600 W (100%) load: 91%</li> </ul>
<b>Regulations</b>
<ul style="list-style-type: none"> <li>• Safety: UL/CSA-60950-1, 2<sup>nd</sup> Edition, EN60950-1-2006 + A11:2009 + A1:2010 + A12:2011, IEC60950-1:2005 + A1:2009 CB scheme with all country deviations, CNSI4336-1, GB4943</li> <li>• EMI: EN55022:2006 + A1:2007/CISPR22:2008 Class A, 47 CFR 15B Class A, ICES-003 Class A, VCCI Class A, AS/NE 3548 Class A, CNS 13438 Class A, GB9254 Class A, EN61000-3-2, GB17625.1, EN61000-3-3</li> <li>• Immunity: EN 55024:2010</li> </ul>
<b>Certifications</b>
<ul style="list-style-type: none"> <li>• Safety: UL/cUL, CE, BSMI, GOST R, S-Mark, CSA.</li> <li>• EMC: CCC, CE, FCC, VCCI, ICES, C-Tick, KCC, GOST R, BSMI Class A</li> <li>• Other: Complies with WEEE Directive (2002/96/EC) and RoHS Directive (2011/65/EC)</li> </ul>
<b>Dimensions and Weight</b>
<ul style="list-style-type: none"> <li>• Height: 42.6 mm (1.7 in.)</li> <li>• Width: 436.5 mm (17.2 in.)</li> <li>• Depth: 737.0 mm (29.0 in.)</li> <li>• Weight: 18.0 kg (40.0 lbs.) fully populated</li> </ul>
<b>Included Installation Kits</b>

- Tool-less rack mounting slide rail kit
- Cable management arm

### Warranty

The Sun Server X3-2 comes with a one-year warranty. For more information, visit [oracle.com/sun/warranty](http://oracle.com/sun/warranty) for Oracle's global warranty support.

### Services

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 X3-2, visit [oracle.com](http://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

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**Hardware and Software, Engineered to Work Together**