Overview

Oracle’s Sun Blade X3-2B server module is a two-socket x86 blade server based on processors from the Intel Xeon processor E5-2600 family. The Sun Blade X3-2B server module leverages the highly available power, cooling and I/O infrastructure provided by the Sun Blade 6000 chassis to provide one of industry’s leading virtualized x86 platforms for building enterprise cloud infrastructures.

Best Blade for Running Virtualized and Physical Workloads

The versatile Sun Blade X3-2B server module combines unmatched memory bandwidth and large memory capacity with high performance Intel Xeon processor E5-2600 product family CPUs to enable it to run the most demanding virtualized and physical workloads. The Sun Blade X3-2B server module and the high-performance, low-latency Sun Blade 6000 Ethernet Switched Network Express Module 24p 10GbE provide customers with the required bandwidth for eliminating potential network bottlenecks that can occur when a large number of virtual machines are deployed. This switched Network Express Module (NEM) greatly reduces operational expenses by simplifying the IT infrastructure and reducing cables by as much as 4:1. The NEM also helps reduce network acquisition costs by eliminating an entire tier of data center switching.

World’s Easiest Blade System to Deploy or Upgrade

Unique to the blade server market, the Sun Blade modular system leverages industry-standard PCIe ExpressModules (EMs) to allow each individual server module to have its own unique “I/O personality.” The EMs are inserted in the rear of the Sun Blade 6000 chassis, are externally accessible, and require no add-on mezzanine or daughter cards on the server modules. This “off-blade” hot-swappable1 I/O module design simplifies initial deployments, thereby reducing time-to-revenue and virtually eliminates downtime for I/O upgrades. EM upgrades can perform up to thirteen times faster than on competing solutions2 (and with no downtime). Higher uptime percentages translate to consistently-met SLAs and reduced operating expenses. Another benefit of this “out of the box” I/O design is that customers can tailor each individual server module’s I/O to satisfy the specific workload characteristics of the applications it is running. In addition, the Sun Blade X3-2B server module can leverage “chassis-wide” NEMs which provide common I/O to every installed server module if they all require the same standard I/O technology (such as single GbE or 10GbE). Unlike the competition, when it comes to I/O and Oracle’s modular blade servers, each server module has a choice!

Industry’s Leading Memory Bandwidth with Power Savings

In addition to its flexible I/O design, the Sun Blade X3-2B server module was built from the ground up with performance and power savings in mind. The Sun Blade X3-2B server module can support two dual-rank 1.35V DDR3-1600 RDIMMs per channel operating at 1600 MT/sec. Compared to competing server blades that can only operate 1.5V RDIMMs at 1600 MT/sec, customers can experience power savings of 1,000 watts per 42U rack3 with Sun Blade X3-2B server module.

Additionally, this server module can support three dual-rank 1.35V RDDR3-1600 DIMMs per channel operating at 1067 MT/sec. When compared to competing server blades that can only operate 1.5V DDR3 RDIMMs at 1067 MT/sec, this server module gives customers power savings of 480 watts in a 42U...

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1 Component-level hot-swap functionality assumes operating system level support for this function.

2 Based on internal lab results: Sun Blade X6270 server module ExpressModule hot-swap upgrade from 4Gb/s FC to 8Gb/s FC required 30 seconds with no downtime. HP c7000 comparison required 6 minutes and 30 seconds downtime for similar I/O upgrade.
Sun Blade X3-2B server module

Frequently Asked Questions

rack with Sun Blade X3-2B server modules. When combined with its large memory capacity (24 DIMM sockets), it is easy to see why the Sun Blade X3-2B server module is the best blade server for running your enterprise cloud applications.

Customer Benefits

With support for two low-voltage DDR3-1600 RDIMMs per channel, Sun Blade X3-2B server module delivers both application performance acceleration and power savings.

- This low-voltage RDIMM support can translate to a power and cooling saving of up to 1,000 watts per 42U rack with Sun Blade X3-2B server modules.

With the flexible design of the Sun Blade X3-2B server module, customers are able to greatly reduce their time to revenue and virtually eliminate downtime for I/O upgrades, due to the following benefits:

- 13x faster deployments enable rapid revenue generation for IT organizations. With the Sun Blade X3-2B server module, customers can be up and running while the others are still installing.

- Simple, hot-swappable I/O design enables less technical staff to perform upgrades. Upgrades become non-disruptive and “business-as-usual.” Skilled IT staff members can focus on critical business needs.

Frequently Asked Questions

What is the Sun Blade X3-2B server module?
The Sun Blade X3-2B server module is the third-generation offering in the two-socket Sun Blade X3-2B product family

3 Oracle Sun x86 systems can use 1.35V 1600MT/s DIMMs (2 per channel) providing a power consumption savings of up to 25W per server (16 DIMMs per server) vs. competing servers using 1.5V DIMMs.

and introduces support for Intel Xeon processor E5-2600 product family.

How many processors are supported in the Sun Blade X3-2B server module?
The Sun Blade X3-2B server module supports two processors.

How many memory DIMMs are required?
The Sun Blade X3-2B server module can support as few as one DIMM per processor and up to a maximum of 12 DIMMs per processor. The maximum number of DIMMs supported is 24 (12 per installed processor). 8GB and 16GB DIMMs are supported.

What is the maximum memory bandwidth that can be achieved with two LV DIMMs per channel? How about three LV DIMMs per channel?
The Sun Blade X3-2B server module can support two LV DIMMs per channel operating at 1600 MT/sec. It can also support three LV DIMMs per channel operating at 1067 MT/sec.

What flash storage options are available on the Sun Blade Storage Module M2?
The Sun Blade X3-2B server module supports solid state drive (SSD) options. These flash storage options all turbo-charge the blades to run I/O intensive applications more rapidly and efficiently while consuming less power.

How many Sun Blade X3-2B server modules are supported in the Sun Blade 6000 chassis?
The Sun Blade 6000 chassis can support up to 10 Sun Blade X3-2B server modules. The chassis provides 10 slots that can be populated with various combinations of x86 server modules, SPARC server modules or storage modules.

What are the operating systems that have been certified to run on the Sun Blade X3-2B server module?
The Sun Blade X3-2B server module is certified to run Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux,
SUSE Linux Enterprise Server, VMware and Microsoft Windows Server.

What are power, cooling and RAS benefits of Sun Blade Modular Systems?
The Sun Blade server modules contain no power supplies or cooling fans. The server modules rely on the Sun Blade 6000 chassis (in which they reside) for power and cooling support. This greatly reduces the number of “moving parts” located in the server module, leading to higher reliability and better power and cooling efficiency. The power supply and cooling fan modules in the chassis are larger and more efficient than those typically found in rack-mount or standalone servers. Therefore, it takes a significantly fewer of them to power and cool the server modules.

How do I manage the Sun Blade X3-2B server module? Are there any additional costs?
The Sun Blade X3-2B server module ships with full function server management tools at no additional cost. Oracle Integrated Lights Out Manager (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 building a complete cloud infrastructure. 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, ensuring the maximum service levels and simplified support.

What high availability features are available in the Sun Blade X3-2B server module?
This enterprise-class blade server is designed to leverage all of the reliability, availability and serviceability (RAS) features afforded it by the Sun Blade 6000 chassis in which it resides. All the I/O modules are externally accessible and support redundant configurations. In addition to the chassis components, the Sun Blade X3-2B server module supports hot-swappable and redundant RAID-enabled disks. Combining the chassis-based RAS features with Oracle ILOM, the Sun Blade X3-2B server module is designed to maximize uptime, simplify system management and reduce administration costs.

What software can be pre-installed on the Sun Blade X3-2B server module?
Currently, the Oracle Solaris, Oracle Linux and Oracle VM Server for x86 can be pre-installed on the server module in the factory.

Is there a choice for system configurations?
Yes, the Sun Blade X3-2B server module can be fully customized to the configuration specified by the customer through Oracle factory’s assemble to order (ATO) process.

Where can I find more information about the Sun Blade X3-2B server module and other Sun Blade Modular 6000 modular system offerings?
Contact an Oracle sales representative directly or call 1-800-Oracle1 or contact an Oracle authorized reseller.

In addition, more information (datasheets, whitepapers) about the Sun Blade X3-2B server module and Sun Blade 6000 modular system can be found on the Web at:

Sun Blade X3-2B server module
Frequently Asked Questions

Where can I find more Sun Blade 6000 product information, including information about the option cards, downloads and firmware, operating systems and external storage options?
You will find this information on the external wiki

https://wikis.oracle.com/display/SystemsComm/Sun+Blade+S+systems+Products#tab:Operating-Systems

Can I order the Sun Blade X3-2B server module today?
Yes, Oracle is now taking orders for this product.