Sun Fire™ E2900 Server

Sun microsystems

> **Enterprise-class performance, RAS, utilization, and investment protection in a compact, flexible server.**

The industry's most popular 12-socket server is enhanced with new UltraSPARC® IV+ processors, delivering up to 5 times the performance of UltraSPARC III servers and nearly double the performance of UltraSPARC IV servers in the same footprint. The next-generation Sun Fire™ E2900 server adds no additional power or cooling requirements while delivering enterprise-class computing power and high reliability in a compact, rack-optimized frame. Supporting the leading Solaris™ OS, it reduces costs by protecting your IT investments and allowing seamless upgrades to faster UltraSPARC IV+ servers. Sun Fire Enterprise servers are the only enterprise servers to have a 5–7 year hardware lifecycle where the chassis does not have to be replaced, keeping costs under control. Sun's unique application binary compatibility guarantee means that you can upgrade without the need to recompile or recode your applications, minimizing business disruptions.

The compact Sun Fire E2900 server delivers breakthrough price/performance for compute-intensive applications requiring enterprise-class features—including hot swappable CPU/memory boards utilizing Sun's unique Dynamic Reconfiguration technology for online upgrades, remote monitoring, and redundant (2N) power supplies. Two Sun Fire E2900 servers fit inside a standard rack, providing a total rack density of 24 UltraSPARC IV+ processors—for a total of 48 compute threads.

Keep your business up and running with the Sun Fire E2900 server's Predictive Self-Healing technology for intelligent system monitoring, diagnosis, and recovery. Solaris Containers, available with Solaris 10 OS, can increase server utilization up to 80% with minimal overhead, making the Sun Fire E2900 server an ideal platform to run multiple applications in an isolated and secure environment. By consolidating applications, you can further increase utilization and reduce costs.

The Sun Fire E2900 server also offers the ability to add "on demand" resources to meet changing business requirements—pay only when extra capacity is needed with Capacity on Demand (COD) 2.0. Key applications include Application Serving, Business Processing, Database Services, IT Infrastructure, Application Development, Collaboration, and compute-intensive Scientific Engineering.

Key Feature Highlights

- Delivers up to 5 times the performance of UltraSPARC III servers and nearly double the performance of UltraSPARC IV servers in the same footprint.

- Industry's most popular 12-socket server scales up to 12 processors with 24 threads and up to 96GB memory for data-intensive applications.

- Unique Solaris OS application compatibility guarantee enables seamless migration to newer processor technologies.

- Mix and match UltraSPARC IV+, IV, and III processors in the same system for in-chassis upgrades to faster processors, preventing forced migrations.

- New RAS and security enhancements improve system uptime. Predictive Self Healing predicts and prevents faults automatically.

- Capacity on Demand lets you add "on-demand" resources and pay only when extra capacity is needed.

- Dynamic Tracing (dTrace) allows further application performance optimization—up to 300% gains seen by customers.

- Ideal for consolidating applications using Solaris Containers technology.

- Hot swap CPU/memory boards with Dynamic Reconfiguration, dramatically improving availability and uptime.

- Redundant (2N) power supplies and remote monitoring capability.

Sun Fire E2900 Server Specifications

Processor

Processor	Combine up to twelve 1.5GHz UltraSPARC IV+ and/or 1.05GHz/1.2/1.35GHz UltraSPARC IV processors
Architecture	Superscalar SPARC® V9, ECC protected
Cache per UltraSPARC IV+ processor	Level 1: 64 KB data and 64 KB instruction per pipeline Level 2: 2 MB on-chip Level 3: 32 MB external

System

Processor/ memory boards	Up to three CPU/memory boards*, with four processors each, and up to 32 GB per board; maximum 12 processors per server
Main memory	Up to 96 GB per system
I/O	2 integrated Gigabit Ethernet ports (66 MHz); 1 integrated Ultra3-SCSI port (66 MHz); 6 open 7 inch PCI slots (32/64 bit, one 66 MHz and five 33 MHz)
System interconnect	9.6-GB/sec. Sun Fireplane interconnect. System bus with redundant data, address and response crossbar interconnect
System bandwidth	9.6-GB/sec. sustained bandwidth, 31.2-GB/sec. aggregate bandwidth

Storage

Internal	Two 146-GB Ultra3-SCSI internal disks, DVD-ROM internal drive, Tape drive (optional)
External compatibility	Direct attach to Sun StorEdge™ tape libraries and disk arrays, including: Sun StorEdge 3000, 6000, and 9000 families, providing excellent linear scalability

Resource Management

Standard	Solaris Resource Manager, Solaris Bandwidth Manager

Software

Operating system (minimum version)	The minimum OS version for 1.5GHz UltraSPARC IV+ processors is Solaris 9 9/05 and Solaris 10 3/05 HW1 The minimum OS version for 1.05/1.2/1.35GHz UltraSPARC IV processors is Solaris 8 2/04, Solaris 9 4/04, and Solaris 10 3/05
Enterprise software	Sun Java™ Enterprise System
Languages	C, C++, Pascal, FORTRAN, Java

Networking	ONC™/NFS™, TCP/IP, SunLink™, OSI, X.25, DCE, Netware
System monitoring	Sun Management Center
System and network management	Sun Cluster, Sun OpenBoot™ firmware, Solaris Web Start, Solstice DiskSuite,™ SunScreen™ Secure Net, VERITAS File System, VERITAS Volume Manager, Solaris Resource Manager, Solaris Bandwidth Manager

Environmental

AC power	200–240V single phase AC, 47–63 Hz, with two 11/13 Amp circuits redundant with another two on a separate grid
Optimum	22° C (72° F) at 45% noncondensing humidity
Range	5° C to 35° C (41° F to 95° F) at 10% to 80% noncondensing humidity
Altitude	Up to 3048 m (10000 ft.)

Regulations (meets or exceeds the following requirements)

Safety	UL 60950, third-edition USA CAN/CSA-C22.2 No. 60950-00, Canada EN 60950, third-edition, Europe S Mark, Argentina Gost-R, Russia CB Scheme with all national deviations
Emissions	EN55022 Class A, Europe EN6100-3-2 / 3-3, Europe FCC Class A, USA ICES-003 Class A, Canada VCCI Class A, Japan CNS–13438, (BSMI-Taiwan) AS/NZ 3548 (C-tick), Australia Gost-R, Russia
Immunity	All European requirements EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, and EN300-386
Regulatory markings	CE, FCC, ICES-003, C-tick, VCCI, Gost-R, BSMI, UL/cUL/S Mark, TUV-GS, MIC

Key RAS Features

Dynamic Reconfiguration (DR) of processor/memory boards, hot CPU upgrades, redundant Sun Fireplane interconnect, redundant network connections, hot-swap disks, smart fans, 2N redundant hot-swap power supplies, Auto Diagnosis & Recovery, hardened operating system kernel, hardened I/O drivers, Systems Configuration Card, proactive self diagnostics, end-to-end data integrity including ECC, CPU off-lining, memory page retirement, after-kernel hot patching, and cluster support.

Upgrades

The Sun Upgrade Advantage Program (UAP) offers trade-in value for qualified Sun and competitive servers toward the purchase of replacement Sun Fire E2900 server(s). Whether upgrading one system or consolidating many systems to one, Sun UAP offers the flexibility to trade in and receive credit toward the new Sun system purchased. Upgrades are also available for Sun Fire server system components, including CPU/memory boards and I/O. For more information visit sun.com/ibb/uap/.

Dimensions and Weight

Height	52.7 cm (20.75 in.) — 12RU
Width	44.5 cm (17.5 in.)
Depth	55.8 cm (22.0 in.) excluding cable arm
Weight	110–132 kg (240–290 lb.)
Rackmount enclosure	All Sun racks and most third-party 24-in. (600 mm) and deeper racks, two per 4-post rack, one per 2-post rack

Remote Services

SRS Net Connect

Services

Sun provides a worldwide services portfolio that helps enable customers to develop a Sun Fire E2900 solution designed for reliability, availability, serviceability, and growth. Sun can assist you to build an architecture plan, assess your current IT infrastructure, improve staff skills and efficiencies, and properly install your Sun Fire E2900 system in your environment. Services highlights include: Sun Preventive Services, Enterprise Installation Services, Learning Services, Architecture Services, Migration/Consolidation Services, Sun Managed Services, and the Accredited Installation Provider program. For more information on Sun Services, please visit sun.com/service.

* The Sun Fire E2900 server CPU/memory board is common, and therefore interchangeable, with the Sun Fire V1280 server. However, these boards are not identical to and thus not interchangeable with the Sun Fire E4900–E25K server Uniboard technology.

For More Information

Learn how the Sun Fire E2900 server combines investment protection with enterprise-class features in a compact frame. Contact your Sun Representative at 1-800-555-9SUN, or visit sun.com/servers/midrange/sunfire_e2900/.