Sun Fire™ E4900 Server

Sun microsystems

> **High performance, shared memory server with advanced RAS features and investment protection for mission-critical datacenter computing.**

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.

- Scales up to 12 processors with 24 threads and up to 96GB memory for heavily threaded commercial 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.

- Unique Uniboard technology common across E4900–E25K servers enables provisioning of extra resources when required.

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

- Unique Dynamic Reconfiguration capability saved customers approximately 941 hours of planned downtime, for a conservative estimate of $47M savings in one 90-day period.

- Dynamic System Domains technology— 100% fault-isolated hard partitions—and Solaris Containers can increase utilization up to 80%, making this an ideal platform for consolidation.

- Respond flexibly to changing business requirements with Capacity on Demand for "pay as you grow" computing options.

Sun continues to improve the industry's leading UNIX® server line by delivering increased performance and greater value with the new UltraSPARC® IV+ processor-based Sun Fire™ E4900 server. This 12-processor (up to 24 threads and 96 GB of memory) server offers the computational headroom, RAS, security, and manageability features needed for heavily threaded commercial workloads and applications. It delivers up to 5 times the performance of UltraSPARC III servers and nearly double the performance of UltraSPARC IV servers in the same footprint, without additional power/cooling requirements.

Running the leading Solaris™ OS, the Sun Fire E4900 server offers a balanced system architecture and industry-leading application binary compatibility, supported by a unique legal guarantee. New UltraSPARC IV+ processors added to existing systems run at full speed side by side with UltraSPARC III and IV processors. There is no simpler, faster, or more cost-effective way to increase system performance and take advantage of innovative technologies. The Sun Fire E4900–E25K servers are the only enterprise servers to allow the sharing of Uniboards across the product line, allowing you to provision extra boards to address peak demands across multiple servers when needed. You can add faster CPUs to running systems utilizing Dynamic Reconfiguration technology, reducing downtime. These capabilities allow your organization to leverage existing investments and provide exceptional value well into the future.

The Sun Fire E4900 server is designed to deliver on mission-critical Service Level Agreements (SLAs) through advanced RAS capabilities such as full hardware redundancy, Predictive Self Healing, and Solaris Security Toolkit. Costs can be further reduced by consolidating multiple servers and mission-critical applications onto a single Sun Fire E4900 server with multiple fault-isolated Dynamic System Domains and secure Solaris Containers, increasing server utilization up to 80%. It also leverages leading Solaris 10 OS capabilities such as Dynamic Tracing to dramatically optimize application performance—as high as 300% in certain customer scenarios.

Pre-installed Solaris Operating System and Java™ Enterprise System software helps your organization conveniently and quickly deploy the Sun Fire E4900 server. Furthermore, with Capacity on Demand (COD) 2.0, the Sun Fire E4900 server offers the ability to add "on demand" resources to meet changing business requirements—pay only when extra capacity is needed. Key applications include Business Processing, Database Services, IT Infrastructure, Application Serving, and compute-intensive Scientific Engineering.

Sun Fire E4900 Server Specifications

Processor

Processor	Combine up to twelve 1.5GHz UltraSPARC IV+ and/or 1.05GHz/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 Uniboard CPU/memory boards, with four processors each, and up to 32 GB per board; maximum 12 processors per system
Main memory	Up to 96 GB per domain
I/O	16 PCI slots (twelve 66 MHz and four 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, 33.6-GB/sec. aggregate bandwidth
System controller	Two per system
Boot device	Sun StorEdge™ D240 Media Tray, Sun StorEdge S1 Array, and the Sun StorEdge 3210 Array may be used as boot, data-storage, data-load, data-interchange, and data backup devices

Storage

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	Dynamic System Domains, 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 1.05/1.35GHz 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, MHS, X.25, DCE, Netware
System monitoring	Sun Management Center
System and network management	Solaris Web Start, Solstice AdminSuite™, Solstice Domain Manager™, Solstice Enterprise Manager™, Solstice DiskSuite™, Solstice Backup™, VERITAS File System, VERITAS Volume Manager, Sun Cluster, Sun HPC ClusterTools™

Environmental

AC power	200–240 VAC (47–63 Hz), 16 Amp
Power cords	Three
Operating	5° C to 35° C (41° F to 95° F) 20% to 80% relative humidity, noncondensing
Nonoperating	-20° C to 60° C (-4° F to 140° F) 5% to 93% relative humidity, noncondensing

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

Full hardware redundancy, fault-isolated Dynamic System Domains, Dynamic Reconfiguration (DR), auto diagnosis and recovery, proactive self diagnostics, online upgrades, concurrent maintenance, end-to-end data integrity including ECC, redundant network connections, redundant storage connections, kernel hot patching, hardened operating system kernel, live operating system upgrades, journaling file system, hardened I/O drivers, 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 E4900 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 processor/memory boards and I/O. For more information visit sun.com/ibb/uap/.

Dimensions and Weight

Height	76.2 cm (30.0 in.)
Width	44.6 cm (17.6 in.)
Depth	72.4 cm (28.5 in.)
Weight	131.1 kg (289.0 lb.)
Power cord	4.6 m (15.0 ft.)

Packaging

Deskside enclosure	Equipped with rollers
Rackmount	Fits into a standard 19-inch enclosure rack. Also equipped with mounting rails for the Sun Fire cabinet

Remote Services

SRS Net Connect

Services

Sun provides a worldwide services portfolio that helps enable customers to develop a Sun Fire E4900 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 E4900 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.

For More Information

Learn how the Sun Fire E4900 server combines seamless investment protection with exceptional performance and RAS features. Contact your Sun Representative at 1-800-555-9SUN, or visit sun.com/servers/midrange/sunfire_e4900/.