

# Sun Fire™ E6900 Server



**Enterprise powerhouse with mission-critical reliability plus exceptional investment protection and partitioning technologies.**

## 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 24 processors with 48 threads and up to 192GB 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 it an ideal platform for consolidation.
- Capacity on Demand lets you add “on-demand” resources and pay only when extra capacity is needed.

The industry’s leading 24-socket server, the Sun Fire™ E6900, gets a boost with the new UltraSPARC® IV+ processor, 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 Sun Fire E6900 server is optimized to deliver maximum scalability and productivity to address ever-demanding workloads in the data center while continuing to protect existing hardware and software investments.

Running the leading Solaris™ OS, the Sun Fire E6900 server offers a balanced system architecture with robust throughput capabilities and the Solaris application compatibility guarantee that is unique in the industry. 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. This may be done online using Dynamic Reconfiguration. You can maintain current hardware investments by running mixed generations of UltraSPARC IV+, IV, and III processors seamlessly in the same server, preventing costly migrations. Investment-protection features in the Sun Fire E6900 server have delivered as much as 33% lower total cost of ownership (TCO) for customers over competitive offerings in a 5-year lifecycle.

The Sun Fire E6900 server is designed to deliver on mission-critical Service Level Agreements (SLAs) through full hardware redundancy, Predictive Self-Healing, and Solaris Security Toolkit. With both multiple fault-isolated Dynamic System Domains and secure Solaris Containers, the Sun Fire E6900 server can increase server utilization up to

80%, delivering unprecedented consolidation capabilities. 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.

With Capacity on Demand (COD) 2.0, the Sun Fire E6900 server offers the ability to add “on demand” resources to meet changing business requirements—pay only when extra capacity is needed. Pre-installed Solaris Operating System and Java™ Enterprise System software helps your organization conveniently and quickly deploy the Sun Fire E6900 server. Key applications include Business Processing, Databases, Data Warehouses, IT Infrastructure, Application Serving, and compute-intensive Scientific Engineering.



## Sun Fire E6900 Server Specifications

### Processor

Processor	Combine up to twenty-four 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 six Uniboard CPU/memory boards, with four processors each, and up to 32 GB per board; maximum 24 processors per system
Main memory	Up to 192 GB per domain
I/O	32 PCI slots (twenty-four 66 MHz and eight 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, 67.2-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
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### Resource Management

Standard	Dynamic System Domains, Solaris Resource Manager, Solaris Bandwidth Manager
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### 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
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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), 34 Amp
Power cords	Four
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 E6900 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/](http://sun.com/ibb/uap/).

### Dimensions and Weight

Height	190.5 cm (75.0 in.)
Width	61.0 cm (24.0 in.)
Depth	134.6 cm (53.0 in.)
Weight	544.3 kg (1200.0 lb.)
Power cord	4.6 m (15.0 ft.)

### Remote Services

SRS Net Connect

### Services

Sun provides a worldwide services portfolio that helps enable customers to develop a Sun Fire E6900 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 E6900 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](http://sun.com/service).

### For More Information

Learn how the Sun Fire E6900 server combines mission-critical reliability with exceptional investment protection and partitioning technologies. Contact your Sun Representative at 1-800-555-9SUN, or visit [sun.com/servers/midrange/sunfire\\_e6900/](http://sun.com/servers/midrange/sunfire_e6900/).