

## Hardware and Software Engineered to Work Together

# ORACLE'S FULL LINE OF INTEGRATED SUN SERVERS AND STORAGE SYSTEMS

### HIGHLIGHTS

- Oracle offers a complete portfolio of Sun products that combines servers, storage, software, and networking to deliver the most-innovative, performance-optimized solutions for the datacenter.
- Sun SPARC Enterprise servers offer the highest reliability, availability, and serviceability (RAS), seamless scalability, world-record performance, and unmatched investment protection.
- Sun x86 servers run on Intel's processors and offer the flexibility of supporting Oracle Solaris, Windows, Linux, Oracle Linux, Oracle VM and VMware OSs.
- Sun Blade modular systems integrate robust x86 and SPARC-based servers, storage, and advanced networking capabilities to support a complex and dynamic mix of IT workloads.
- Ethernet, InfiniBand and Storage Networking products allow the integration of Sun's servers and storage into complete, high-performance infrastructure solutions.
- A full portfolio of Netra carrier-grade SPARC, and x86-based blade and rack servers designed for telco's mission critical workloads.
- Sun Unified Storage Systems help enterprises realize up to a 75 percent cost savings over traditional storage solutions.
- StorageTek tape libraries, tape virtualization, tape drives, tape media, and tape device software are world-class solutions that scale to over 150 petabytes.

### See Beyond the Limits

Many enterprises are managing demanding applications and accessing increasing amounts of data. You need computing power that matches your needs and budget, where and when it matters most. Oracle's Sun solutions can support your business needs from end to end, throughout the lifecycle of your datacenter.

More than 40 years of systems and storage expertise and innovative thinking have gone into creating the Sun servers and storage. These innovations offer some of the most reliable, scalable, and energy-efficient systems in the industry, which are the core building blocks for the mission-critical enterprise computing, enterprise application environments, virtualization and cloud deployments. Oracle's complete portfolio of Sun products includes servers, storage, software, networking products, and integrated systems that deliver the most-innovative, performance-optimized solutions for the datacenter. These systems help datacenter managers reduce costs, conserve energy, and operate more efficiently. Such breakaway IT economics allow our customers to run their applications with speed, simplicity, and savings.

Oracle's solutions are built on open standards to work with your existing infrastructure and can help your company grow. An open approach to storage offers enterprise reliability and scalability at one-tenth the cost of other solutions. The Oracle Solaris Zettabyte File System (ZFS) and award-winning Sun storage hardware solutions provide incredible data integrity and can significantly reduce downtime. Innovative Sun hardware delivers up to four times the performance of competitive servers for as little as one-fifth the cost. Sun networking solutions eliminate the bottleneck and ensure cross-functional bandwidth for optimal performance. And with Oracle's solutions, you can accomplish more in less space, using less power, while spending less.

### The Right Solutions for Your Needs

The deployment of IT resources is vital to enterprises. You want to plan your IT projects carefully so that you can select the right servers, storage products, and infrastructure to make your network as efficient as possible. An open and scalable design approach lets you mix and match Sun compute, storage, and network components so that all resources in the datacenter work as a powerful and integrated system, driving better efficiency across the IT infrastructure and supporting your business needs from end to end.

### Enterprise Solutions

Consolidating storage farms and single-application servers onto fewer, high-performance systems can be the key to positioning your business for the future. Oracle offers industry-leading, eco-efficient solutions based on enterprise applications

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and/or consolidation and virtualization needs. These solutions are designed to address IT issues and business needs related to cost reductions, increased efficiencies, and eco-sustainability.

#### Virtualization Solutions

Your company can save money, energy, and space by taking advantage of Oracle's complete desktop-to-datacenter virtualization portfolio. Our virtualization solutions can help you make more of your IT resources than ever before. Sun server and storage platforms have the power and throughput to make virtualization and consolidation real advantages for your business.

#### Web Infrastructure Solutions

In today's Web 2.0 world, you need network applications and services that help you connect, develop, and grow your communities. To fully exploit the Web's potential, you need time-tested solutions that provide the speed, flexibility, and performance to enable implementation in a matter of weeks. For enterprises focused on increasingly important Web-based services, Sun systems and storage provide all you need to build, optimize, and protect your Web-tier infrastructure throughout your entire datacenter lifecycle.

#### Sun Eco Innovation Solutions

If your company is ready to minimize energy costs and reduce its environmental impact, talk to us about innovative Sun solutions that you can deploy today. We can help you transform your technology infrastructure into a more eco-friendly datacenter with our simple, three-step approach: assess, optimize, and virtualize. Plus, with our award-winning, ecologically sound Sun servers, going green is easy.

#### Warranty Programs

Visit [oracle.com/sun/warranty](http://oracle.com/sun/warranty) for information on Oracle's global warranty support for Sun products.

#### How to Use This Guide

This guide features all Sun's servers and storage systems, with each section listing the full line of products and their specifications.

#### Sun Server Products

Designed with your business in mind, Sun servers provide the performance, scalability, energy efficiency, and cost-effectiveness that help you meet your business needs in mission-critical enterprise computing, enterprise application environments, virtualization and cloud deployments. With Oracle's complete family of Sun servers—Sun x86 clustered systems including the blade and rackmount servers, SPARC Enterprise servers, and Netra servers—a truly flexible IT ecosystem is a reality.


#### Sun Storage Products




Sun storage solutions from Oracle are built on open standards to work with your existing infrastructure. Sun's innovative use of industry-standard hardware delivers two to three times the density, using 50 percent less in power and cooling than competing closed storage. With Sun's open storage solutions, you can accomplish more in less space, while consuming less power.





#### Sun Networking Products




Oracle offers a complete portfolio of Sun networking products for servers and storage. Ethernet, InfiniBand and Storage networking products allow the integration of Sun's servers and storage into complete, high-performance infrastructure solutions.

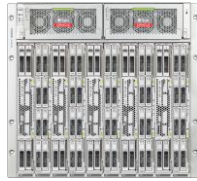

## Sun Servers Product Guide

SPARC ENTERPRISE ENTRY-LEVEL				
				
Name	SPARC T3-1 Server	SPARC T3-2 Server	Sun SPARC Enterprise T5120 Server	Sun SPARC Enterprise T5220 Server
Processor/CPU	16-core 1.65 SPARC T3 processors; one processor per system, max. 128 threads	16-core 1.65 SPARC T3 processors; two processors per system, max. 256 threads	4-core 1.2 GHz, 8-core 1.2 GHz, 8-core 1.4 GHz, or 8-core 1.6 GHz UltraSPARC T2 processors; one processor per system, max. 64 threads	4-core 1.2 GHz, 8-core 1.2 GHz, 8-core 1.4 GHz, or 8-core 1.6 GHz UltraSPARC T2 processors; one processor per system, max. 64 threads
Memory	Up to 128 GB	Up to 256 GB	Up to 128 GB	Up to 128 GB
<b>Mass storage</b>				
Internal disk	Up to eight or sixteen 300 GB 2.5 in. SAS drives, depending on selected backplane	Up to six 300 GB 2.5 in. SAS drives. Internal DVD: one slim SATA DVD+/-RW.	Up to eight 146 GB or 300 GB 2.5 in. SAS drives, depending on selected backplane or up to four 32 GB 2.5 in. SATA SSDs	Up to sixteen 146 GB or 300 GB 2.5 in. SAS drives, depending on selected backplane or up to eight 32 GB 2.5 in. SATA SSDs
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage	oracle.com/storage
Network	Four 10/100/1,000 Mb/sec Ethernet ports; up to 2x optional 10 GbE XAUI connections and six PCIe module slots	Four 10/100/1,000 Mb/sec Ethernet ports; up to 4x optional 10 GbE XAUI connections and 10 PCIe module slots	Four 10/100/1,000 Mb/sec Ethernet ports; up to 2x optional 10 GbE XAUI connections	Four 10/100/1,000 Mb/sec Ethernet ports; up to 2x optional 10 GbE XAUI connections
<b>Power/cooling</b>				
Power	Two hot-swappable AC 1200 W redundant (N+1) power supplies	Two hot-swappable AC 2000 W redundant (N+1) power supplies	Two hot-swappable AC 720 W "Climate Saver" power supply units, providing N+1 redundancy, come standard. Also available is a DC 660 W power supply unit.	Two hot-swappable AC 750 W or 1,100 W power supply units, providing N+1 redundancy. DC 1,200 W power supply units are also available.
Operating temperature	Sea level to 3,000 ft. (900 m): 41°F to 95°F (5°C to 35°C)	Sea level to 3,000 ft. (900 m): 41°F to 95°F (5°C to 35°C)	Sea level to 2,953 ft. (900 m): 41°F to 95°F (5°C to 35°C)	Sea level to 2,953 ft. (900 m): 41°F to 95°F (5°C to 35°C)
Nonoperating temperature	-40°F to 149°F (-40°C to 65°C); IEC 60068-2-1 Test Ab and 60068-2-2 Test Bb	-40°F to 149°F (-40°C to 65°C); IEC 60068-2-1 Test Ab and 60068-2-2 Test Bb	-40°F to 149°F (-40°C to 65°C); IEC 60068-2-1 Test Ab and 60068-2-2 Test Bb	-40°F to 149°F (-40°C to 65°C); IEC 60068-2-1 Test Ab and 60068-2-2 Test Bb
Rack units	2U	3U	1U	2U
<b>Physical specifications</b>				
Height	3.49 in. (88.65 mm)	5.11 in. (129.85 mm)	1.746 in. (44 mm)	3.49 in. (88 mm)
Width	17.6 in. (447 mm)	17.185 in. (436.5 mm)	16.75 in. (425 mm)	16.75 in. (425 mm)
Depth	26.5 in. (673.1 mm)	28.81 in. (732 mm)	28.125 in. (714 mm)	28.125 in. (714 mm)
Weight	Approximately 60 lb. (27.2 kg)	Approximately 80 lb. (36.28 kg)	Approximately 40 lb. (18 kg)	Approximately 55 lb. (25 kg)
Operating system	Oracle Solaris 10 9/10 Support for Solaris 10 10/09 (U8) + MU9 (Maintenance Update 9)	Oracle Solaris 10 9/10 Support for Solaris 10 10/09 (U8) + MU9 (Maintenance Update 9)	Oracle Solaris 10 8/07, Oracle Solaris 10 5/08, Oracle Solaris 10 10/08, Oracle Solaris 10 5/09, Oracle Solaris 10 10/09	Oracle Solaris 10 8/07, Oracle Solaris 10 5/08, Oracle Solaris 10 10/08, Oracle Solaris 10 5/09, Oracle Solaris 10 10/09
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




SPARC ENTERPRISE ENTRY-LEVEL			
			
<b>Name</b>	<b>Sun SPARC Enterprise M3000 Server</b>	<b>Sun SPARC Enterprise T5140 Server</b>	<b>Sun SPARC Enterprise T5240 Server</b>
<b>Processor/CPU</b> s	Quad-core or dual-core 2.75 GHz SPARC64 VII processor; one processor per system; two simultaneous threads per core	4-, 6-, and 8-core 1.2-GHz or 8-core 1.4-GHz UltraSPARC T2 Plus processors; two processors per system, max. 128 threads	4-, 6-, and 8-core 1.2 GHz, 8-core 1.4 GHz, 8-core 1.6 GHz UltraSPARC T2 Plus processors; two processors per system, max. 128 threads
<b>Memory</b>	Up to 64 GB	Up to 128 GB	Up to 256 GB
<b>Mass storage</b>			
Internal disk	Up to four 300 GB SAS disks	Up to eight 146 GB or 300 GB 2.5 in. SAS drives, depending on selected backplane or up to four 32 GB 2.5 in. SATA SSDs	Up to sixteen 146 GB or 300 GB 2.5 in. SAS drives, depending on selected backplane or up to eight 32 GB 2.5 in. SATA SSDs
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage
<b>Network</b>	Four GbE ports	Four 10/100/1,000 Mb/sec Ethernet ports; up to 2x optional 10 GbE XAUI connections	Four 10/100/1,000 Mb/sec Ethernet ports; up to 2x optional 10 GbE XAUI connections
<b>Power/cooling</b>			
Power	Up to two hot-swappable power supply units	Two hot-swappable AC 760 W or DC 660 W power supply units, providing N+1 redundancy	Two hot-swappable AC 1,100 W power supply units, providing N+1 redundancy. Also available are DC 1,200 W power supply units.
Operating temperature	At sea level: 41°F to 95°F (5°C to 35°C)	Sea level to 3,000 ft. (900 m): 41°F to 95°F (5°C to 35°C)	Sea level to 3,000 ft. (900 m): 41°F to 95°F (5°C to 35°C)
Nonoperating temperature	-4°F to 140°F (-20°C to 60°C), 93% relative humidity, noncondensing	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)
<b>Rack units</b>	2U	1U	2U
<b>Physical specifications</b>			
Height	3.43 in. (87 mm)	1.746 in. (44 mm)	3.49 in. (88 mm)
Width	16.77 in. (426 mm)	16.75 in. (425 mm)	16.75 in. (425 mm)
Depth	25.91 in. (658 mm)	28.125 in. (714 mm)	28.125 in. (714 mm)
Weight	Max. 55.12 lb. (25 kg)	37 lb. (16.78 kg)	52.5 lb. (23.81 kg)
<b>Operating system</b>	Minimum OS support: Solaris 10 10/08 (Update 6 or higher) Note: Solaris 10 10/08 (Updates 6, 7, 8) requires no patches for 2.75GHz support	Oracle Solaris 10 8/07, Oracle Solaris 10 5/08, Oracle Solaris 10 10/08, Oracle Solaris 10 5/09, Oracle Solaris 10 10/09	Oracle Solaris 10 8/07, Oracle Solaris 10 5/08, Oracle Solaris 10 10/08, Oracle Solaris 10 5/09, Oracle Solaris 10 10/09
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty

SPARC ENTERPRISE MID-RANGE				
				
Name	SPARC T3-4 Server	Sun SPARC Enterprise T5440 Server	Sun SPARC Enterprise M4000 Server	Sun SPARC Enterprise M5000 Server
Processor/CPUs	Two or four SPARC T3 processors at 1.65 GHz, 16 cores per processor.	One to four UltraSPARC T2 Plus processors per system. Max. 256 threads; 8-core 1.2 GHz, 1.4 GHz, or 1.6 GHz	Mix and match up to four SPARC64 VI dual-core or SPARC64 VII quad-core processors; SPARC64 VI: 2.15 GHz; SPARC64 VII: 2.53 GHz	Mix and match up to eight SPARC64 VI dual-core or SPARC64 VII quad-core processors; SPARC64 VI: 2.15 GHz; SPARC64 VII: 2.53 GHz
Memory	Up to 512 GB	Up to 512 GB	Up to 256 GB	Up to 512 GB
<b>Mass storage</b>				
Internal disk	Up to eight 300 GB 2.5 in. SAS drives	Up to four 146 GB or 300 GB 2.5 in. SAS drives or up to four 32 GB 2.5 in. SATA SSDs	Up to two 2.5 in. SAS boot disks	Up to four internal 2.5 in. SAS boot disks
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage	oracle.com/storage
Network	Two optional QSFP ports (10G XAU network), four 1G network ports (two Kawela NICs) and 16 PCIe module slots	Four 10/100/1,000 Mb/sec Ethernet ports; up to 2x optional 10 GbE XAU connections, four 8-lane PCIe, two 8-lane PCIe slots with 16-lane connectors and two additional 8-lane PCIe or 10 Gb/sec Ethernet expansion slots	Two GbE; up to four PCIe slots, one PCI-X slot; up to 25 PCIe or PCI-X slots with external I/O expansion unit	Two GbE; up to eight PCIe slots, two PCI-X slots; up to 50 PCIe or PCI-X slots with external I/O expansion unit
<b>Power/cooling</b>				
Power	Four hot-swappable AC 2,060 W redundant (2 + 2) power supplies	Four hot-swappable AC 1,120 W redundant (2 + 2) power supply units	100–240 V AC; two power cords	100–240 V AC; four power cords
Operating temperature	<b>Sea level to 3,000 ft. (900 m): 41°F to 95°F (5°C to 35°C)</b>	41°F to 95°F (5°C to 35°C)	41°F to 95°F (5°C to 35°C)	41°F to 95°F (5°C to 35°C)
Nonoperating temperature	-40°F to 149°F (-40°C to 65°C), maximum altitude 40,000 ft.	-40°F to 149°F (-40°C to 65°C)	-4°F to 140°F (-20°C to 60°C)	-4°F to 140°F (-20°C to 60°C)
Rack units	5U	4U	6U	10U
<b>Physical specifications</b>				
Height	8.62 in. (219 mm)	6.92 in. (176 mm)	10.34 in. (26.3 cm)	17.33 in. (44.02 cm)
Width	17.5 in. (445 mm)	17.5 in. (445 mm)	17.48 in. (44.4 cm)	17.33 in. (44 cm)
Depth	27.6 in. (700 mm)	24.9 in. (633 mm)	31.9 in. (81 cm)	31.9 in. (81 cm)
Weight	Max. 175 lb. (79 kg)	Approximately 88 lb. (40 kg)	185 lb. (84 kg)	275 lb. (125 kg)
Operating system	Oracle Solaris 10 9/10 Support for Solaris 10 10/09 (U8) + MU9 (Maintenance Update 9)	Oracle Solaris 10 OS 8/07 plus patches or later	SPARC64 VII (2.53GHz): Solaris 10 8/07) or later; SPARC64 VI (2.15GHz): Solaris 10 (11/06) or later	SPARC64 VII (2.53GHz): Solaris 10 (8/07) or later; SPARC64 VI (2.15GHz): Solaris 10 (11/06) or later
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




SPARC ENTERPRISE HIGH-END			
			
<b>Name</b>	<b>Sun SPARC Enterprise M8000 Server</b>	<b>Sun SPARC Enterprise M9000 Server—32 CPU</b>	<b>Sun SPARC Enterprise M9000 Server—64 CPU</b>
<b>Processor/CPUs</b>	Mix and match up to 16 SPARC64 VI dual-core or SPARC64 VII quad-core processors; SPARC64 VI: 2.28 GHz to 2.4 GHz; SPARC64 VII: 2.88 GHz	Mix and match up to 32 SPARC64 VI dual-core or SPARC64 VII quad-core processors; SPARC64 VI: 2.28 GHz to 2.4 GHz; SPARC64 VII: 2.88 GHz	Mix and match up to 64 SPARC64 VI dual-core or SPARC64 VII quad-core processors; SPARC64 VI: 2.28 GHz to 2.4 GHz; SPARC64 VII: 2.88 GHz
<b>Memory</b>	Up to 1 TB	Up to 2 TB	Up to 4 TB
<b>Mass storage</b>			
Internal disk	Up to 16 internal 2.5 in. SAS boot disks, four per IOU	Up to 32 internal 2.5 in. SAS boot disks, four per IOU	Up to 64 internal 2.5 in. SAS boot disks, four per IOU
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage
Optical drive	N/A	N/A	N/A
<b>Network</b>	Up to 32 PCIe slots per system; up to 112 PCIe or PCI-X slots with the optional external I/O expansion unit	Up to 64 PCIe slots per system; up to 224 PCIe or PCI-X slots with the optional external I/O expansion unit	Up to 128 PCIe slots per system; up to 288 PCIe or PCI-X slots with the optional external I/O expansion unit
<b>Power/cooling</b>			
Power	200–240 V AC single-phase, three 30 A power cords; 208 V AC 3-phase DELTA, two 50 A direct-wired power connections; 415 V AC 3-phase, two 30 A direct-wired power connections, double power cords for dual power grid support	200–240 V AC single-phase, five 30 A power cords; 208 V AC 3-phase DELTA, two 50 A direct-wired power connections; 415 V AC 3-phase, two 30 A direct-wired power connections, double power cords for dual power grid support	200–240 V AC single-phase, five 30 A power cords; 208 V AC 3-phase DELTA, two 50 A direct-wired power connections; 415 V AC 3-phase, two 30 A direct-wired power connections, double power cords for dual power grid support
Operating temperature	41°F to 89.6°F (5°C to 32°C)	41°F to 89.6°F (5°C to 32°C)	41°F to 89.6°F (5°C to 32°C)
Nonoperating temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
<b>Rack units</b>	N/A	N/A	N/A
<b>Physical specifications</b>			
Height	70.9 in. (180 cm)	70.9 in. (180 cm)	70.9 in. (180 cm)
Width	29.5 in. (75 cm)	33.5 in. (85 cm)	65.9 in. (167.4 cm)
Depth	49.6 in. (126 cm)	49.6 in. (126 cm)	49.6 in. (126 cm)
Weight	1,543 lb. (700 kg)	2,072 lb. (940 kg)	4,145 lb. (1,880 kg)
<b>Operating system</b>	SPARC64 VI (2.28 GHz, 2.4 GHz): Oracle Solaris 10 11/06 or later; SPARC64 VII (2.88 GHz): Oracle Solaris 10 10/08 or Oracle Solaris 10 8/07 with the Oracle Solaris 10 10/09 Patch Bundle and the Sun Alert Patch Cluster	SPARC64 VI (2.28 GHz, 2.4 GHz): Oracle Solaris 10 11/06 or later; SPARC64 VII (2.88 GHz): Oracle Solaris 10 10/08 or Oracle Solaris 10 8/07 with the Oracle Solaris 10 10/09 Patch Bundle and the Sun Alert Patch Cluster	SPARC64 VI (2.28 GHz, 2.4 GHz): Oracle Solaris 10 11/06 or later; SPARC64 VII (2.88 GHz): Oracle Solaris 10 10/08 or Oracle Solaris 10 8/07 with the Oracle Solaris 10 10/09 Patch Bundle and the Sun Alert Patch Cluster
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty



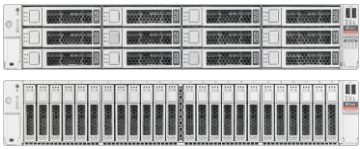
BLADE MODULAR SYSTEMS*		
		
<b>Name</b>	<b>Sun Blade 6000 Chassis</b>	<b>Sun Blade 6048 Chassis</b>
<b>Processor/CPU</b> s	UltraSPARC, Intel Xeon	UltraSPARC, Intel Xeon
<b>Memory</b>	Up to 256 GB on a single blade/up to 2.56 TB per chassis	Up to 256 GB on a single blade/more than 12 TB per chassis
<b>Mass storage</b>		
Internal disk	Sun Blade Storage Module M2	N/A
External disk and tape	<a href="http://oracle.com/storage">oracle.com/storage</a>	<a href="http://oracle.com/storage">oracle.com/storage</a>
<b>Network</b>	Each server module has a direct connection to two PCIe Express Modules for discrete I/O connectivity and two Network Express Modules for aggregate I/O connectivity	Each server module has a direct connection to two PCIe Express Modules for discrete I/O connectivity and two Network Express Modules for aggregate I/O connectivity
<b>Power/cooling</b>		
Power	Power (n+n) high-efficiency, hot-swappable, load-sharing, load-balancing power supplies	Power (n+n) high-efficiency, hot-swappable, load-sharing, load-balancing power supplies
Operating temperature	41° F to 90° F (5° C to 32° C)	41°F to 90°F (5°C to 32°C)
Nonoperating temperature	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)
<b>Rack units</b>	10U	Unibody rack design, four shelves in 42U space
<b>Physical specifications</b>		
Height	17.25 in. (438.15 mm)	81.61 in. (2,073 mm )
Width	17.50 in. (444.50 mm)	23.88 in. (606.5 mm)
Depth	27.25 in. (692.15 mm)	40.34 in. (1,024.58 mm)
Weight	350 lb. (159 kg) fully configured	2,300 lb. (1,043 kg) fully configured
<b>Operating system</b>	Function of the Server Modules	Function of the Server Modules
<b>Warranty/service</b>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>



\*Sun's Blade Modular Systems are offered with a range of high performance, low latency networking products including Network Express Modules, 10GbE and InfiniBand Switches and ExpressModules.


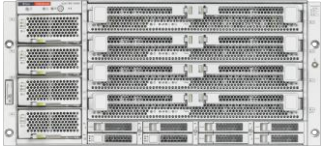
SPARC SERVER MODULES			
			
Name	SPARC T3-1B Server	Sun Blade T6320 Server Module	Sun Blade T6340 Server Module
Processor/ CPUs	One eight-core 64 thread, or one sixteen-core 128 thread 1.6GHz SPARC T3 processor	UltraSPARC T2 (1.2 GHz, 1.4 GHz, or 1.6 GHz)/ up to 1 CPU, up to 8 cores, security cypher per core, max. 64 threads	UltraSPARC T2 Plus (1.2 GHz or 1.4 GHz)/up to 2 CPUs, up to 16 cores, security cypher per core, max. 128 threads
Memory	Up to 128 GB	Up to 128 GB	Up to 256 GB
<b>Mass storage</b>			
Internal disk	Eight SAS2.0 interfaces using LSI SAS2008 Controller	<ul style="list-style-type: none"> <li>Eight 3 Gb/sec SAS/SATA interfaces using the LSI SAS1068E controller</li> <li>Four SAS interfaces to each of the small form factor (SFF) SAS/SATA drive bays with RAID 0,1 support</li> <li>Four SAS interfaces to the midplane</li> <li>Support drive with 32GB Solid State Disks, 146GB 10,000 rpm SAS, 300GB 10,000 rpm SAS, 500GB 7,200 rpm SATA</li> </ul>	<ul style="list-style-type: none"> <li>Six 3 Gb/sec SAS/SATA interfaces using the LSI SAS1068E Controller</li> <li>One SAS interface to each of the small form factor (SFF) SAS/SATA drive bays with RAID 0, 1 support</li> <li>Four SAS interfaces to the midplane</li> <li>Support drive with 32GB Solid State Disks, 146GB 10,000 rpm SAS, 300GB 10,000 rpm SAS, 500GB 7,200 rpm SATA</li> </ul>
External disk and tape	<ul style="list-style-type: none"> <li>Sun Blade Storage Module M2</li> <li>oracle.com/storage</li> </ul>	<ul style="list-style-type: none"> <li>Sun Blade Storage Module M2</li> <li>oracle.com/storage</li> </ul>	<ul style="list-style-type: none"> <li>Sun Blade Storage Module M2</li> <li>oracle.com/storage</li> </ul>
Network	Two 10/100/1000 Base-T Ethernet ports using the Intel 82571ED GbE transceiver	<ul style="list-style-type: none"> <li>Two 10/100/1,000Base-T Ethernet ports using the Intel 82571EB GbE transceiver</li> <li>One dedicated 10/100Base-T Ethernet port for the management network</li> <li>Two optional 10 GB XAUI Ethernet ports through the addition of a dual channel pass through fabric expansion modules</li> </ul>	<ul style="list-style-type: none"> <li>Two 10/100/1,000Base-T Ethernet ports using the Intel 82571EB GbE transceiver</li> <li>One dedicated 10/100Base-T Ethernet port for the management network</li> <li>Two optional 10 GB Ethernet ports through the addition of a dual-channel 10 GbE fabric expansion module</li> </ul>
<b>Power/cooling</b>			
Power	N/A; function of chassis	N/A; function of chassis	N/A; function of chassis
Operating temperature	Sea level to 3,000 ft. (900 m): 41°F to 95°F (5°C to 35°C)	41°F to 90°F (5°C to 32°C)	41°F to 90°F (5°C to 32°C)
Non-operating temperature	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)
Rack units	N/A	N/A	N/A
<b>Physical specifications</b>			
Height	1.75 in. (44.45 mm)	1.75 in. (44.45 mm)	1.75 in. (44.45 mm)
Width	12.88 in. (327.15 mm)	12.88 in. (327.15 mm)	12.88 in. (327.15 mm)
Depth	19.56 in. (496.82 mm)	19.56 in. (496.82 mm)	19.56 in. (496.82 mm)
Weight	Max 18 lb. (8.3 kg)	17.3 lb. (7.86 kg)	20 lb. (9.1 kg)
Operating system	Oracle Solaris 10 9/10 Support for Solaris 10 10/09 (U8) + MU9 (Maintenance Update 9)	Oracle Solaris	Oracle Solaris
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty









X86 BLADE SERVER MODULES			
			
Name	Sun Blade X6270 M2 Server Module	Sun Blade X6275 Server Module	Sun Blade Storage Module M2
Processor/CPUs	Intel Xeon (up to 3.33 GHz)/up to two CPUs, up to 12 cores	Intel Xeon (2.93 GHz)/up to 4 CPUs per blade with 2 per node, up to 16 cores per blade with 8 per node. . Each blade holds two physically-separate servers (compute nodes) with 2 CPUs per server	N/A Each module provides up to 2.4 TB of storage, up to 21.6 TB of storage per Sun Blade 6000 chassis
Memory	Up to 144 GB	Up to 192 GB	N/A
Internal disk	<ul style="list-style-type: none"> <li>Four SAS interfaces to the midplane, two to each NEM</li> <li>Four hot-swappable SFF 2.5" drive bays</li> <li>One USB 2.0 Media Port</li> <li>Flash Solid State Disks</li> </ul>	One 3 Gb/sec SATA interface to a Sun Flash Module (per compute node)	<ul style="list-style-type: none"> <li>Up to eight small form factor 2.5" hard disk drives per storage module with SAS-2 interface</li> </ul>
External disk and tape	<a href="http://oracle.com/storage">oracle.com/storage</a>	<a href="http://oracle.com/storage">oracle.com/storage</a>	<a href="http://oracle.com/storage">oracle.com/storage</a>
Network	<ul style="list-style-type: none"> <li>Two 10/100/1,000Base-T Ethernet ports</li> <li>One dedicated 10/100Base-T Ethernet port for the management network</li> </ul>	<ul style="list-style-type: none"> <li>One 4x QDR IB port to the NEM slot (per compute node) — Sun Blade X6275 IB Model</li> <li>One 10/100/1,000Base-T Ethernet port (per compute node) using the Intel 82567 GbE Controller</li> <li>One (shared) 10/100Base-T Ethernet port for the management network</li> <li>One (x8) PCIe 2.0 link (per compute node) to a PCIe Express Module slot</li> </ul>	N/A
Power	N/A; function of chassis	N/A; function of chassis	N/A; function of chassis
Operating temperature	41°F to 90°F (5°C to 32°C)	41°F to 90°F (5°C to 32°C)	5° to 45° C
Nonoperating temperature	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)
Rack units	N/A	N/A	N/A
Height	12.87 in. (327 mm)	12.87 in. (327 mm)	1.7 in. (44 mm)
Width	1.7 in. (44 mm)	1.7 in. (44 mm)	12.87 in. (327 mm)
Depth	20.16 in. (512 mm)	20.16 in. (512 mm)	20.16 in. (512 mm)
Weight	17.4 lb. (7.9 kg)	20.61 lb. (9.4 kg) max.	Empty: 14.5 lb. (6.59 kg) Loaded: 16.3 lb. (7.41 kg)
Operating system	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware, Microsoft Windows Server	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows Server	Oracle Solaris, Oracle Linux, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows Server
Warranty	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>

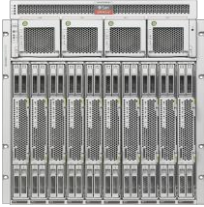


	<b>X86 ENTRY LEVEL</b>	<b>X86 ENTERPRISE LEVEL</b>	
			
<b>Name</b>	<b>Sun Fire X2270 M2 Server</b>	<b>Sun Fire X4170 M2 Server</b>	<b>Sun Fire X4270 M2 Server</b>
<b>Processor/CPUs</b>	One or two Intel Xeon Processors 5600 Series	One or two Intel Xeon Processors 5600 Series	One or two Intel Xeon Processors 5600 Series
<b>Memory</b>	12 DDR3 DIMM slots (6 DIMM slots per CPU socket); supports from 4 GB (1 x 4 GB) to 96 GB (12 x 8 GB) of memory	18 DDR3 DIMM slots (9 DIMM slots per CPU socket); supports from 4 GB (1 x 4 GB) to 144 GB (18 x 8 GB) of memory	18 DDR3 DIMM slots (9 DIMM slots per CPU socket); supports from 4 GB (1 x 4 GB) to 144 GB (18 x 8 GB) of memory
<b>Mass storage</b>			
<b>Internal disk</b>	<ul style="list-style-type: none"> <li>Up to four hot-swappable 3.5 in. SATA disk drives</li> <li>Up to four hot-swappable 3.5 in. SSDs,</li> </ul>	<ul style="list-style-type: none"> <li>Up to eight 2.5 in. SAS -2 HDDs</li> <li>Up to eight 2.5 in. SATA-2 SSDs,</li> </ul>	<ul style="list-style-type: none"> <li>Up to twelve 3.5 in. SAS-2/SATA-2 HDDs or SSDs</li> <li>Up to twenty-four 2.5 in. SAS-2/SATA-2 HDDs or SSDs</li> </ul>
<b>External disk and tape</b>	oracle.com/storage	oracle.com/storage	oracle.com/storage
<b>Graphics</b>	VGA 8MB – 1600x1200 @ 60Hz	VGA 2D graphics controller embedded	VGA 2D graphics controller embedded
<b>Network</b>	One 10/100/1,000Base-T Ethernet ports, one serial RJ-45 port, one PCIe 2.0 slot	Four 10/100/1,000Base-T Ethernet ports, one serial RJ-45 port, three PCIe 2.0 slot	Four 10/100/1,000Base-T Ethernet ports, one serial RJ-45 port, six PCIe 2.0 slot
<b>Power/cooling</b>			
<b>Power</b>	Single nonredundant power supply: 100–240 V AC	Dual redundant, hot-swappable power supply: 100 V AC	Dual redundant, hot-swappable power supply: 100 V AC
<b>Operating temperature</b>	41°F to 95°F (5°C to 35°C)	41°F to 95°F (5°C to 35°C), 10% to 90% relative humidity, noncondensing	41°F to 95°F (5°C to 35°C), 10% to 90% relative humidity, noncondensing
<b>Nonoperating temperature</b>	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C), up to 93% relative humidity, noncondensing	-40°F to 158°F (-40°C to 70°C), up to 93% relative humidity, noncondensing
<b>Rack units</b>	1U	1U	2U
<b>Physical specifications</b>			
<b>Height</b>	1.71 in. (43.43 mm)	1.71 in. (43.43 mm)	3.43 in. (87.12 mm)
<b>Width</b>	17.2 in. (436 mm)	16.75 in. (425.45 mm)	16.75 in. (425.45 mm)
<b>Depth</b>	25.6 in. (650 mm)	30.0 in. (685.8 mm)	30.0 in. (762 mm)
<b>Weight</b>	Max Weight: 30.61 lb. (13.9 kg)	Max Weight: 36 lb. (16.36 kg)	Max Weight: 65 lb. (29.54 kg)
<b>Operating system</b>	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows Operating System	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows Operating System	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows Operating System
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




	<b>X86 ENTERPRISE LEVEL</b>	
		
<b>Name</b>	<b>Sun Fire X4470 Server</b>	<b>Sun Fire X4540 Server</b>
<b>Processor/CPUs</b>	Two or four Intel Xeon Processors 7500 Series	Two Six-Core AMD Opteron processors
<b>Memory</b>	64 DDR3 DIMM slots (16 DIMM slots per CPU socket); supports from 16 GB (8 x 2 GB) to 512 GB (64 x 8 GB) of memory	16 DDR2 DIMM slots (8 DIMM slots per CPU socket); support from 32 GB (16 x 2 GB) to 64 GB (16 x 4 GB) of memory
<b>Internal disk</b>	<ul style="list-style-type: none"> <li>Up to six 2.5 in. SAS-2 HDDs</li> <li>Up to six 2.5 in. SATA-2 SSDs</li> </ul>	Up to forty-eight 3.5 in. SATA II disk drives, 250 GB, 500 GB, 1,000 GB 7,200 rpm
<b>External disk and tape</b>	Oracle.com/storage	Oracle.com/storage
<b>Graphics</b>	VGA 2D graphics controller embedded	N/A
<b>Network</b>	Four integrated 10/100/1,000Base-T Ethernet ports, one serial RJ-45 port, ten PCIe 2.0 slot	Four 10/100/1,000Base-T Ethernet ports, one RJ-45 connector, three PCIe slots
<b>Power</b>	Dual-redundant, hot-swappable power supplies; 100-240 V AC	Dual redundant, hot-swappable power supply: 200–220 V AC at 10 A, 100–110 V with three PSUs
<b>Operating temperature</b>	41°F to 95°F (5°C to 35°C)	37°F to 90°F (5°C to 32°C)
<b>Nonoperating temperature</b>	-40°F to 154°F (-40°C to 68°C)	-40°F to 149°F (-40°C to 65°C)
<b>Rack units</b>	3U	4U
<b>Height</b>	5.1 in (129.85 mm)	6.75 in. (175 mm)
<b>Width</b>	17.2 in. (436.5 mm)	17 in. (445 mm)
<b>Depth</b>	28.8 in. (732 mm)	29 in. (736 mm)
<b>Weight</b>	Max Weight: 85 lb. (38.5 kg)	Max Weight: 170 lb. (88 kg)
<b>Operating system</b>	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware, Microsoft Windows Operating System	Oracle Solaris, Oracle Linux, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, Microsoft Windows Operating System
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty

X86 ENTERPRISE LEVEL		
		
<b>Name</b>	<b>Sun Fire X4640 Server</b>	<b>Sun Fire X4800 Server</b>
<b>Processor/CPU</b>	Four or eight Six-Core AMD Opteron processors	Two or Four CMODS. Each CMOD contains two Intel Xeon Processors 7500 Series
<b>Memory</b>	64 DDR2 DIMM slots (8 DIMM slots per CPU socket); supports from 4 GB (2 x 2 x 1 GB) to 512 GB (8 x 8 x 8 GB) of memory	128 DDR3 DIMM slots (32 DIMM slots per CMOD socket); supports from 128 GB (64 x 2 GB) to 1 TB (128 x 8 GB) of memory
<b>Internal disk</b>	<ul style="list-style-type: none"> <li>Up to four 2.5 in. SAS HDDs, 146 GB, 300 GB 10,000 rpm, 73 GB 15,000 rpm</li> </ul>	<ul style="list-style-type: none"> <li>Up to eight 2.5 in. SAS-2 HDDs,</li> </ul>
<b>External disk and tape</b>	<a href="http://oracle.com/storage">oracle.com/storage</a>	<a href="http://oracle.com/storage">oracle.com/storage</a>
<b>Graphics</b>	Standard DVD+/-ROM in every server	VGA 2D graphics controller embedded
<b>Network</b>	Four 10/100/1,000Base-T Ethernet ports, RJ-45 connectors, with support for teaming and failover	Two hot-swappable Network Express Modules each provides: <ul style="list-style-type: none"> <li>Four 10GbE network ports via SFP+ connectors</li> <li>Four 1GbE network ports via RJ-45 connector</li> <li>Two x4 mini SAS-2 ports</li> </ul>
<b>Power</b>	2+2 redundant, hot-swappable power supplies: 4x 100–240 V AC	2+2 redundant, hot-swappable power supplies: 200–240 V AC
<b>Operating temperature</b>	41°F to 90°F (5°C to 32°C)	4°F to 95°F (5°C to 35°C)
<b>Nonoperating temperature</b>	-4°F to 140°F (-20°C to 60°C)	-40°F to 158°F (-40°C to 70°C)
<b>Rack units</b>	4U	5U
<b>Height</b>	6.9 in. (176 mm)	8.61 in. (218.75 mm)
<b>Width</b>	17.5 in. (445 mm)	17.5 in. (445 mm)
<b>Depth</b>	24.75 in. (629 mm)	27.56 in. (700 mm)
<b>Weight</b>	Max Weight: 88 lb. (40 kg)	Max Weight: 180 lb. (81.65 kg)
<b>Operating system</b>	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware, Microsoft Windows Operating System	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows Operating System
<b>Warranty/service</b>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>





NETRA CARRIER-GRADE ULTRASPARC RACKMOUNT			
			
<b>Name</b>	<b>Sun Netra T2000 Server</b>	<b>Sun Netra T5220 Server</b>	<b>Sun Netra T5440 Server</b>
<b>Processor/CPUs</b>	UltraSPARC T1 (1.0 or 1.2 GHz)/ 1 CPU, up to 8 cores	UltraSPARC T2 (1.2 GHz)/1 CPU, up to 8 cores	UltraSPARC T2 Plus (1.2 and 1.4 GHz)/2 CPUs, up to 16 cores
<b>Memory</b>	Up to 64 GB	Up to 64 GB	Up to 256 GB
<b>Mass storage</b>			
Internal disk	Up to four SAS disks with no DVD-R/W, or up to two SAS disks with DVD-R/W	Up to four SAS disks with no DVD-R/W, or up to two SAS disks with DVD-R/W	Up to twelve 2.5 in. SAS HDDs
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage
Optical drive	One DVD+/-RW drive	One DVD+/-RW drive	One DVD+/-RW drive
<b>Network</b>	Four 10/100/1,000Base-T Ethernet ports	Four 10/100/1,000 Mb/sec Ethernet ports, up to 2x optional 10 GbE XAUI connections	Four 10/100/1,000 Mb/sec Ethernet ports, up to 2x optional 10 GbE XAUI connections
<b>PCI slots</b>	3 PCI-X (FH/FL and 1x HL) and 1 PCIe (low profile)	3 PCIe (1x FH/FL) and 2 PCI-X (FH, 1x FL, 1x HL)	2 PCI-X (FH/FL) and 8 PCIe (2x FH/FL) slots
<b>Power/cooling</b>			
Power	DC: -48 V DC or -60 V AC: 100–240 V AC, 50–60 Hz	DC: -48 V DC or -60 V AC: 100–240 V AC, 50–60 Hz	DC: -48 V DC or -60 V AC: 100–240 V AC, 50–60 Hz
Operating temperature	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)
Nonoperating temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
<b>Rack units</b>	2U	2U	4U
<b>Physical specifications</b>			
Height	3.5 in. (89 mm)	3.43 in. (87.1 mm)	6.86 in. (174.2 mm)
Width	16.7 in. (424 mm)	17.52 in. (445 mm)	17.52 in. (445 mm)
Depth	20 in. (508 mm)	20.71 in. (526 mm)	20.87 in. (530 mm)
Weight	35 lb. (16 kg)	38.5 lb. (17.5 kg)	72.6 lb. (33 kg)
<b>Operating system</b>	Oracle Solaris	Oracle Solaris	Oracle Solaris
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty

NETRA CARRIER-GRADE X86 RACKMOUNT			
			
<b>Name</b>	<b>Sun Netra X4200 M2 Server</b>	<b>Sun Netra X4250 Server</b>	<b>Sun Netra X4270 Server</b>
<b>Processor/CPUs</b>	AMD Opteron (2.2 GHz dual-core or 1.8 GHz quad-core)/up to 2 CPUs, up to 8 cores	Intel Xeon (2.3 GHz)/up to 2 CPUs, up to 8 cores	Intel Xeon (2.13 GHz)/up to 2 CPUs, up to 8 cores
<b>Memory</b>	Up to 32 GB	Up to 64 GB	Up to 144 GB
<b>Mass storage</b>			
Internal disk	Up to four SAS disks with no DVD-RW, or up to two SAS disks with DVD-RW	Up to four SAS disks with no DVD-RW, or up to two SAS disks with DVD-RW	Up to four SAS disks with no DVD-RW, or up to two SAS disks with DVD-RW
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage
Optical drive	One DVD+/-RW drive	One DVD+/-RW drive	One DVD+/-RW drive
<b>Network</b>	Four 10/100/1,000 Mb/sec Ethernet ports	Four 10/100/1,000 Mb/sec Ethernet ports	Four 10/100/1000 Mbps Ethernet
<b>PCI slots</b>	3 PCI-X (FH/FL and 1x HL) and 1 PCIe (low profile)	3 PCIe (1x FH/FL) and 2 PCI-X (FH, 1x FL, 1x HL)	<ul style="list-style-type: none"> <li>Two PCIe slots for full-height, full-length cards</li> <li>Four PCIe slots for MD2 low-profile cards</li> </ul>
<b>Power/cooling</b>			
Power	DC: -48 V DC or -60 V DC AC: 100–240 V AC, 50–60 Hz	DC: -48 V DC or -60 V AC: 100–240 V AC, 50–60 Hz	DC: -48 V DC or -60 V AC: 100–240 V AC, 50–60 Hz
Operating temperature	41°F to 104°F (5°C to 40°C), short term 23°F to 131°F (-5°C to 55°C)	41°F to 104°F (5°C to 40°C), short term 23°F to 131°F (-5°C to 55°C)	41°F to 104°F (5°C to 40°C), short term 23°F to 131°F (-5°C to 55°C)
Nonoperating temperature	-40°F to 158°F (-40°C to 70°C)	40°F to 158°F (-40°C to 70°C)	40°F to 158°F (-40°C to 70°C)
<b>Rack units</b>	2U	2U	2U
<b>Physical specifications</b>			
Height	3.5 in. (89 mm)	3.43 in. (87.1 mm)	3.43 in. (87.1 mm)
Width	17.4 in. (442 mm)	17.52 in. (445 mm)	17.52 in. (445 mm)
Depth	20 in. (508 mm)	20.71 in. (526 mm)	20.71 in. (526 mm)
Weight	35 lb. (16 kg)	38.5 lb. (17.5 kg)	38.5 lb. (17.5 kg)
<b>Operating system</b>	Oracle Solaris, Red Hat Enterprise Linux, SUSE Enterprise Linux, Microsoft Windows Server	Oracle Solaris, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows Server	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Enterprise Linux, VMware, Microsoft Windows
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




<b>NETRA CARRIER-GRADE ENTERPRISE BLADE SERVERS</b>			
			
<b>Name</b>	<b>Sun Netra 6000 Chassis</b>	<b>Sun Netra T6340 Server Module</b>	<b>Sun Netra X6270 M2 Server Module</b>
<b>Processor/CPUs</b>	UltraSPARC, Intel Xeon	UltraSPARC T2 Plus (1.4 GHz)/up to 2 CPUs, up to 16 cores, max. 128 threads	Two Intel Xeon 5600 series Processors (L5638 6-core 60 watt, 2.0 GHz)
<b>Memory</b>	Up to 256 GB on a single blade/up to 2.56 TB per chassis	Up to 256 GB	Up to 144 GB
<b>Mass storage</b>			
Internal disk	N/A	<ul style="list-style-type: none"> <li>Four SAS interfaces to the midplane</li> <li>Support drive with 300 GB 10,000 rpm SAS</li> </ul>	<ul style="list-style-type: none"> <li>Four SAS-2 interfaces to the midplane, two to each Network Express Module slot</li> <li>Four hot swappable Small Form Factor (SFF) 2.5" drive bays</li> </ul>
External disk and tape	oracle.com/storage	oracle.com/storage	oracle.com/storage
<b>Network</b>	Each server module has a direct connection to two PCIe Express Modules for discrete I/O connectivity and two Network Express Modules for aggregate I/O connectivity	<ul style="list-style-type: none"> <li>Two 10/100/1,000Base-T Ethernet ports using the Intel 82571EB GbE transceiver</li> <li>One dedicated 10/100Base-T Ethernet port for the management network</li> </ul>	<ul style="list-style-type: none"> <li>Two 10/100/1,000Base-T Ethernet ports</li> <li>One dedicated 10/100Base-T Ethernet port for the management network</li> </ul>
<b>PCI slots</b>		Up to 20 ExpressModules per chassis	Up to 20 ExpressModules per chassis
<b>Power/cooling</b>			
Power	Power (n+n) high-efficiency, hot-swappable, load-sharing, load-balancing power supplies	N/A; function of chassis	N/A; function of chassis
Operating temperature	41°F to 113°F (5°C to 45°C)	41°F to 90°F (5°C to 32°C)	41°F to 90°F (5°C to 32°C)
Nonoperating temperature	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)
<b>Rack units</b>	10U (AC) or 11RU (DC)	N/A	N/A
<b>Physical specifications</b>			
Height	AC: 17.25 in. (43.8 cm) / DC: 19 in. (48.2 cm)	1.75 in. (44.45 mm)	12.87 in. (327 mm)
Width	AC/DC : 17.50 in. (444.50 mm)	12.88 in. (327.15 mm)	1.7 in. (44 mm)
Depth	AC/DC: 27.25 in. (692.15 mm)	19.56 in. (496.82 mm)	20.16 in. (512 mm)
Weight	AC: 360 lb (163 kg) / DC: 368 lb (167 kg)	20 lb. (9.1 kg)	17.4 lb. (7.9 kg)
<b>Operating system</b>	Function of the Server Modules	Oracle Solaris	Oracle Solaris, Oracle Linux, Oracle VM, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware, Microsoft Windows Server
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




NETRA CARRIER-GRADE ATCA BLADES			
			
<b>Name</b>	<b>Sun Netra CT900 ATCA Blade Server</b>	<b>Sun Netra CP3060 ATCA Blade Server</b>	<b>Sun Netra CP3260 ATCA Blade Server</b>
<b>Processor/CPUs</b>	UltraSPARC, AMD Opteron, Intel Xeon	UltraSPARC T1 (1.0 GHz)/up to 1 CPU, up to 8 cores	UltraSPARC T2 Plus (1.2 GHz)/up to 1 CPU, up to 8 cores
<b>Memory</b>	N/A; memory resides on blades	Up to 16 GB	Up to 32 GB
<b>Mass storage</b>			
Internal disk	HDD resides on the blades	AMC.3 80 GB HDD	Dual SAS on rear RTM with support for two hot-swappable 300 GB HDDs
External disk and tape	<a href="http://oracle.com/storage">oracle.com/storage</a>	<a href="http://oracle.com/storage">oracle.com/storage</a>	<a href="http://oracle.com/storage">oracle.com/storage</a>
<b>Network</b>	<ul style="list-style-type: none"> <li>Dual 10/100/1,000Base-T Ethernet ports; support for 16 G or 10 G switch fabric</li> <li>Support for 1 G or 10 G switch fabric</li> </ul>	<ul style="list-style-type: none"> <li>Dual 10/100/1,000Base-T Ethernet base fabric interfaces</li> <li>Dual 1,000Base-T Ethernet extended fabric interfaces</li> </ul>	Eight Ethernet channels: two 1 G channels for base fabric, two 1 G or 10 G for extended fabric, three 1 G for Zone 3 (ARTM implementation-specific), one for front panel (1 G)
<b>Power/cooling</b>			
Power	DC: -48 V DC or -60 V	Power is a function of the Netra CT900	Power is a function of the Netra CT900
Operating temperature	41°F to 104°F (5°C to 40°C); short term 23°F to 131°F (-5°C to 55°C)	41°F to 104°F (5°C to 40°C); short term 23°F to 131°F (-5°C to 55°C)	41°F to 104°F (5°C to 40°C); short term 23°F to 131°F (-5°C to 55°C)
Nonoperating temperature	40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
<b>Rack units</b>	12U (14-slot)	N/A (ATCA Blade)	N/A (ATCA Blade)
<b>Physical specifications</b>			
Height	21 in. (533 mm)	12.7 in. (322.25 mm)	12.7 in. (322.25 mm)
Width	17.7 in. (444 mm)	11 in. (280 mm)	11 in. (280 mm)
Depth	19 in. (482 mm)	1.18 in. (30 mm)	1.18 in. (30 mm)
Weight	150 lb. (69 kg)	15 lb. (7 kg)	15 lb. (7 kg)
<b>Operating system</b>	Function of the Blades	Oracle Solaris	Oracle Solaris
<b>Warranty/service</b>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>	<a href="http://oracle.com/sun/warranty">oracle.com/sun/warranty</a>







NETRA CARRIER-GRADE ATCA BLADES				
				
<b>Name</b>	<b>Sun Netra CP3020 ATCA Blade Server</b>	<b>Sun Netra CP3220 ATCA Blade Server</b>	<b>Sun Netra CP3250 ATCA Blade Server</b>	<b>Sun Netra CP3270 ATCA Blade Server</b>
<b>Processor/CPUs</b>	AMD Opteron (1.8 GHz)/up to 1 CPU, up to 2 cores	AMD Opteron (1.8 GHz)/up to 1 CPU, up to 4 cores	Intel Xeon (2.13 GHz)/up to 2 CPU, up to 8 cores	Intel Xeon ( 1.73GHz)/2 CPUs, four cores, 16 threads
<b>Memory</b>	Up to 8 GB	Up to 32 GB	Up to 24 GB	Up to 32 GB
<b>Mass storage</b>				
<b>Internal disk</b>	Two 2.5 in. SAS drives	Dual SAS on rear RTM with support for two hot-swappable 300 GB HDDs as well as SAS HDD support through dual AMC sites	Dual SAS on rear RTM with support for two hot-swappable 300-GB HDDs as well as SAS HDD support through AMC site	Dual SAS on rear RTM with support for two hot-swappable 300-GB HDDs as well as SAS HDD support through AMC site
<b>External disk and tape</b>	oracle.com/storage	oracle.com/storage	oracle.com/storage	oracle.com/storage
<b>Network</b>	Two 10/100/1,000Base-T management ports, two 1,000Base-T base fabric, two 1000-series extended fabric; one RS-232C serial port, parallel N/A	Two GbE channels: two channels for base fabric, two 10 GbE channels for extended fabric, two RS-232 serial ports routed to the front and rear, 10 Gb/sec XAUI Ethernet (eight-lane PCIe)	Two GbE channels for base fabric, two 1 GbE and 10 GbE channels for extended fabric, two RS-232 serial ports routed to the front and rear	Two GbE channels for base fabric; two 10 GbE channels for extended fabric; two RS-232 serial ports routed to the front and rear; two USB ports
<b>Power/cooling</b>				
<b>Power</b>	Function of Netra CT900	Function of Netra CT900	Function of Netra CT900	Function of Netra CT900
<b>Operating temperature</b>	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)
<b>Nonoperating temperature</b>	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
<b>Rack units</b>	N/A (ATCA Blade)	N/A (ATCA Blade)	N/A (ATCA Blade)	N/A (ATCA Blade)
<b>Physical specifications</b>				
<b>Height</b>	12.7 in. (322.25 mm)	12.7 in. (322.25 mm)	12.7 in. (322.25 mm)	12.7 in. (322.25 mm)
<b>Width</b>	11 in. (280 mm)	11 in. (280 mm)	11 in. (280 mm)	11 in. (280 mm)
<b>Depth</b>	1.18 in. (30 mm)	1.18 in. (30 mm)	1.18 in. (30 mm)	1.18 in. (30 mm)
<b>Weight</b>	15 lb. (7 kg)	15 lb. (7 kg)	15 lb. (7 kg)	15 lb. (7 kg)
<b>Operating system</b>	Oracle Solaris, Enterprise Linux	Oracle Solaris, Microsoft Windows Server, Enterprise Linux	Oracle Solaris, Microsoft Windows Server, Enterprise Linux	Oracle Solaris, Oracle Linux, Oracle VM, SUSE Enterprise Linux, VMware, Microsoft Windows Server
<b>Warranty/service</b>	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




## Sun Unified Storage Solutions

SUN STORAGE 5100 FLASH ARRAY			
			
Name	20 Flash Modules	40 Flash Modules	80 Flash Modules
<b>Capacity</b>			
Capacity	480 GB	960 GB	1,920 GB
Domains	4	4	4
<b>I/O performance</b>			
Random read IOPS (4,000)	397,000 IOPS	795,000 IOPS	1.6 million IOPS
Random write IOPS (4,000)	304,000 IOPS	610,000 IOPS	1.2 million IOPS
<b>Throughput</b>			
Sequential read rate	3.2 GB/sec	6.4 GB/sec	12.8 GB/sec
Sequential write rate	2.4 GB/sec	4.8 GB/sec	9.7 GB/sec
<b>Latency</b>			
Read latency	0.41 ms	0.41 ms	0.41 ms
Write latency	0.28 ms	0.28 ms	0.28 ms
<b>Interfaces</b>			
Ports	16 x 4-wide SAS-1 (64 channels)	16 x 4-wide SAS-1 (64 channels)	16 x 4-wide SAS-1 (64 channels)
Zoning	Yes	Yes	Yes
<b>Power</b>			
Input	100–120 V AC or 200–240 V AC	100–120 V AC or 200–240 V AC	100–120 V AC or 200–240 V AC
Idle	129 W	157 W	213 W
Active	228 W	281 W	386 W
Power backup	4 energy storage modules (ESMs)	4 energy storage modules (ESMs)	4 energy storage modules (ESMs)
<b>Reliability</b>			
MTBF	3 million hours	3 million hours	3 million hours
Endurance (50% read/50% write)	Approximately 6 years	Approximately 6 years	Approximately 6 years
Redundant power and fans	Yes	Yes	Yes
<b>Physical specifications</b>			
Height	1.746 in. (44 mm)—1U	1.746 in. (44 mm)—1U	1.746 in. (44 mm)—1U
Width	16.750 in. (425 mm)	16.750 in. (425 mm)	16.750 in. (425 mm)
Depth	28.125 in. (714 mm)	28.125 in. (714 mm)	28.125 in. (714 mm)
Weight	35 lb. (15.9 kg)	35 lb. (15.9 kg)	35 lb. (15.9 kg)




SUN STORAGE 5100 FLASH ARRAY						
						
Name	20 Flash Modules		40 Flash Modules		80 Flash Modules	
<b>Environmental</b>	Operating	Nonoperating	Operating	Nonoperating	Operating	Nonoperating
Temperature	5°C to 35°C	-40°C to 65°C	5°C to 35°C	-40°C to 65°C	5°C to 35°C	-40°C to 65°C
Relative humidity	0–90%, 27°C max.	10–93%, 35°C max.	0–90%, 27°C max.	10–93%, 35°C max.	0–90%, 27°C max.	10–93%, 35°C max.
Altitude	3,000 m	12,000 m	3,000 m	12,000 m	3,000 m	12,000 m
Acoustic	55.4 Db		55.4 Db		55.4 Db	
Other						
Backup	4 energy storage modules		4 energy storage modules		4 energy storage modules	
Weight	35 lb (15.9 kg)		35 lb (15.9 kg)		35 lb (15.9 kg)	
Management	StorageTek Common Array Manager software		StorageTek Common Array Manager software		StorageTek Common Array Manager software	
Warranty/service	StorageTek Common Array Manager software		StorageTek Common Array Manager software		StorageTek Common Array Manager software	

SUN FLASH ACCELERATOR F20	
	
Name	Sun Flash Accelerator F20
Storage type	Low-profile PCIe card
Storage capacity	96 GB
Read/write performance	100,000/84,000 IOPS
Domains	4
Flash type (NAND)	Single-level cell
Internal disk controller	<ul style="list-style-type: none"> <li>• Interface: SAS-1</li> <li>• Ports: 2 x 4 wide</li> <li>• Disks supported: 8</li> </ul>






UNIFIED STORAGE - SUN STORAGE 7000 SYSTEMS			
  			
Name	Sun Storage 7110 System	Sun Storage 7310 Unified System	Sun Storage 7410 System
Processor	2.2 GHz six-core CPU	Up to two 2.2 GHz six-core AMD CPUs per controller	Up to four 2.2 GHz Six-core CPUs per controller
Main Memory	Up to 8 GB RAM	Up to 64 GB per node	Up to 256 GB per node
Read Optimized SSD (cache)	N/A	<ul style="list-style-type: none"> <li>Up to 600 GB (6 per node)</li> </ul>	<ul style="list-style-type: none"> <li>Up to 600 GB (6 per node)</li> </ul>
Write Optimized SSD (cache)	N/A	<ul style="list-style-type: none"> <li>Up to 16 SSDs for cluster configuration</li> </ul>	<ul style="list-style-type: none"> <li>Up to 16 SSDs for cluster configuration</li> </ul>
<b>Mass Storage</b>			
Max. storage	Up to 4.2 TB	192 TB	576 TB
<b>Network</b>			
Integrated network	Four 10/100/1,000Base-T Ethernet ports	Four 10/100/1,000Base-T Ethernet ports	Four 10/100/1,000Base-T Ethernet ports
Optional network connectivity	Dual GigE UTP; Dual GigE MMF; Quad Gigabit Ethernet UTP; Dual 10 GigE Fiber XFP (requires fiber transceiver), QDR Infiniband HCA, 8Gb FC HBA	Dual GigE UTP; Dual GigE MMF; Quad Gigabit Ethernet UTP; Dual 10 GigE Fiber XFP (requires fiber transceiver), QDR Infiniband HCA, 8Gb FC HBA	Dual GigE UTP; Dual GigE MMF; Quad Gigabit Ethernet UTP; Dual 10 GigE Fiber XFP (requires fiber transceiver), QDR Infiniband HCA, 8Gb FC HBA
Optional tape backup HBA	Dual-channel 4 Gb FC HBA; 8 Gb FC HBA	Dual-channel 4 Gb FC HBA; 8 Gb FC HBA	Dual-channel 4 Gb FC HBA; 8 Gb FC HBA
<b>Power/cooling</b>			
Power	100–120 V/200–240 V (50/60 Hz)	100–120 V/200–240 V AC (50/60 Hz)	90–264 V AC (47 Hz to 63 Hz)
Operating temperature (single, nonrack system)	5°C to 35°C (41°F to 95°F), 10% to 90% relative humidity, noncondensing	5°C to 35°C (41°F to 95°F), 10% to 90% relative humidity, noncondensing	5°C to 35°C (41°F to 95°F), 10% to 90% relative humidity, noncondensing
Nonoperating temperature	-40°F to 149°F (-40°C to 65°C), up to 93% relative humidity, noncondensing	-40°F to 149°F (-40°C to 70°C), up to 93% relative humidity, noncondensing	-40°F to 158°F (-40°C to 70°C), up to 93% relative humidity, noncondensing
Rack Units	2U	1U per node, 4U per storage array	2U per node, 4U per storage array
<b>Physical Specifications</b>			
Height	3.49 in. (88 mm)	1.746 in. (44 mm)	3.46 in. (87.85 mm)
Width	16.75 in. (426 mm)	16.75 in. (426 mm)	16.75 in. (425.5 mm)
Depth	28.125 in. (714 mm)	28.125 in. (714 mm)	28 in. (711.2 mm)
Weight	56.77 lb. (25.75 kg)	40.90 lb. (18.55 kg)	63 lb. (28.6 kg)
Operating system	Oracle VM, VMware	Oracle VM, VMware	Oracle VM, VMware
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




Unified Storage: Sun ZFS Storage Appliance				
				
Name	Sun ZFS Storage 7120	Sun ZFS Storage 7320	Sun ZFS Storage 7420	Sun ZFS Storage 7720
Processor	4x 2.4 GHz Intel® Xeon® Processors cores	8x 2.4GHz Intel® Xeon® Processors cores per controller	Up to 32x 1.86 GHz or 2.0GHz Intel® Xeon® Processors cores per controller	32x 2.26 GHz Intel® Xeon® Processors cores per controller
Main Memory	24 GB	Up to 72 GB per node	Up to 512 GB per node	Options of 128 GB, 256 GB, and 512 GB per node
Read Optimized Flash	N	Up to 8 (4 TB total)	Up to 8 (4 TB total)	Up to 8 (4 TB total)
Write Optimized Flash	96 GB	Up to 16 SSDs for cluster configuration	Up to 96 SSDs	24 per rack
<b>Mass storage</b>				
Max. storage	120 TB	192 TB	1.15 PB	720 TB
<b>Network</b>				
Integrated network	Four 10/100/1000 Base-T Ethernet ports			
Optional network connectivity	Dual GigE UTP; Dual GigE MMF; Quad Gigabit Ethernet UTP; Dual 10 GigE, QDR Infiniband HCA, 8Gb FC HBA			
Optional tape backup HBA	Dual channel 4 Gb FC HBA; 8Gb FC HBA			
<b>Power/cooling</b>				
Power	1200 W (full controller)	760 W (full controller)	1485 W (full controller)	6000 W (full system)
Altitude (operating) (Single, non-rack system)	Up to 3,048 m, maximum ambient temperature is derated by 1°C per 300 m above 900 m	Up to 3,000 m, maximum ambient temperature is derated by 1°C per 300 m above 900 m	Up to 3,048 m, maximum ambient temperature is derated by 1°C per 300 m above 900 m	Altitude (operating) (single, standalone) Up to 3000m, temperature is derated by 1C per 300m of elevation above 900m
Nonoperating temperature/humidity (single, non-rack system)	40°C to 70°C (-40°F to 158°F), up to 93% relative humidity, non-condensing	40°C to 70°C (-40°F to 149°F), up to 93% relative humidity, non-condensing	-40°C to 70°C (-40°F to 158°F), up to 93% relative humidity, non-condensing	-40 °C to 65 °C Non-operating Humidity (standalone) 93% relative humidity, 38C max. wet bulb (non condensing)
<b>Rack Units</b>	2U for controller, 4U per disk shelf	1U per node, 4U per disk shelf	3U per node, 4U per disk shelf	42U each
<b>Physical Specifications</b>				
Height	87.6mm (3.45 in.)	43.43 mm (1.71 in.)	129.85 mm (5.1 in)	79.5 inches (2,019 mm)
Width	436.5mm (17.19 in.)	425.45 mm (16.75 in.)	436.5 mm (17.2 in.)	23.5 inches (569.9 mm)
Depth	762.0mm (30.0 in.)	685.8 mm (30.0 in.)	732 mm (28.8 in.)	46 inches (1168.4 mm)
Weight	29.54 kg (65 lbs.)	16.36 kg (36 lb.)	38.5 kg (85 lbs) max	870 kg (1900 lbs)
File System	Oracle Solaris ZFS (128-bit addressability)	Oracle Solaris ZFS (128-bit addressability)	Oracle Solaris ZFS (128-bit addressability)	Oracle Solaris ZFS (128-bit addressability)
<b>Warranty/Service</b>				
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty


## Workgroup and Enterprise Datacenter Disk Storage

SUN STORAGE 6000 ARRAYS			
			
Name	Sun Storage 6180 Array	Sun Storage 6580 Array	Sun Storage 6780 Array
Controller card	Dual RAID controller	Dual RAID controller	Dual RAID controller
Cache size (with ECC protection)	4 GB per array	8, 16 or 32 GB per array	8, 16 or 32 GB per array
Host interfaces/link speeds	Four or eight 4 Gb/sec or 8 Gb/sec FC ports per controller tray	Eight 4 Gb/sec or 8 Gb/sec FC ports per controller tray	Eight 4 Gb/sec or 8 Gb/sec FC ports per controller tray (exp to 32)
Drive capacity	5 to 112 drives	5 to 256 drives	5 to 448 drives
<b>Supported drives</b>			
FC (15,000 rpm)	300 GB, 600 GB	300 GB, 600 GB	300 GB, 600 GB
SATA (7,200 rpm)	1 TB, 2 TB	1 TB, 2 TB	1 TB, 2TB
SSD	N/A	73 GB	73 GB
RAID levels	0, 1, 3, 5, 6 (p+q), 10	0, 1, 3, 5, 6 (p+q), 10	0, 1, 3, 5, 6 (p+q), 10
<b>Power/cooling</b>			
Power AC	115 V at +3 A/240 V at +2 A	515 W (+5 V at 19 A/+12 V at 35 A )	515 W (+5 V at 19 A/+12 V at 35 A )
Power DC	17 A max. operating (-42 to -60 V DC)	N/A	N/A
Heat output	460 W (1,571 BTU/hr.)	540 W (1,842 BTU/hr.)	540 W (1,842 BTU/hr.)
Rack units	3U controller tray, 3U expansion tray	3U controller tray, 3U expansion tray	3U controller tray, 3U expansion tray
Operating system	Oracle Solaris, Oracle Linux, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows Operating System	Oracle Solaris, Oracle Linux, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows Operating System	Oracle Solaris, Oracle Linux, Red Hat Enterprise Linux, Novell SUSE Enterprise Linux, VMware, Microsoft Windows Operating System
NEBS certified	Yes (AC and DC)	No	No
Warranty/service	oracle.com/sun/warranty	oracle.com/sun/warranty	oracle.com/sun/warranty




## Tape Storage

TAPE LIBRARIES					
					
Name	StorageTek SL8500 Modular Library System	StorageTek SL3000 Modular Library System	StorageTek SL500 Modular Library System	StorageTek SL48 Tape Library	StorageTek SL24 Tape Autoloader
<b>Max. throughput/hr., native; alternative tape drives provide varying throughput rates</b>	Mid-Range LTO 5 (640 drive, 140 MB/sec): 322.6 TB/hr. Enterprise T10000B (640 drive, 120 MB/sec): 276.5 TB/hr.	Mid-Range LTO 5 (56 drive, 140 MB/sec): 28.2 TB/hr. Enterprise T10000B (56 drive, 120 MB/sec): 24.2 TB/hr.	LTO 5 (18 drives, 140 MB/sec): more than 9 TB/hr.	LTO 5 (140 MB/sec): 1 TB/hr.	LTO 5 (140 MB/sec): 504 GB/hr.
<b>Max. capacity, native; alternative tape drives provide varying capacities</b>	Mid-range LTO 5 (100,000 slots): 150 PB Enterprise T10000B (100,000 slots): 100 PB	Mid-range LTO 5 (100,000 slots): 8.9 PB Enterprise T10000B (5,925 slots): 5.9 PB	LTO 5 (575 slots): 862 TB	LTO 5 (48 slots): 72 TB	LTO 5 (24 slots): 36 TB
<b>Max. number of cartridge slots</b>	100,000 slots	5,925 slots	575 slots, LTO only; 494 slots mixed media	48 slots	24 slots
<b>Number and type of tape drives</b>	Up to 64 drives (min. configuration) or up to 640 drives (max. configuration) of any combination of supported drives, including T10000 B (FICON, FC); T9840D (FICON, FC); LTO 4/5 (FC)	Up to 56 drives of any combination of supported drives, including T10000 B (FICON, FC); T9840D (FICON, FC); LTO 4/5 (FC)	1 to 18 drives, including LTO 4/5 (SCSI/FC)	Up to two full-height or four half-height drives, including LTO 4/5 (SCSI, FC)	One full-height or two half-height drives, including LTO 4/5 (SCSI, FC, SAS)
<b>Supported host platforms</b>	Oracle Solaris, Microsoft Windows, UNIX, Linux, Z/OS	Oracle Solaris, Microsoft Windows, UNIX, Linux, Z/OS	Oracle Solaris, Microsoft Windows, UNIX	Oracle Solaris, Microsoft Windows, UNIX	Oracle Solaris, Microsoft Windows, UNIX
<b>Any-cartridge Any-slot technology</b>	Yes	Yes	Yes	No	No
<b>Dimensions (H x W x D)</b>	Min. configuration: 93.15 in. x 67.3 in. x 109.0 in. (236.6 cm x 170.81 cm x 276.9 cm)	Min. configuration: 77.5 in. x 36 in. x 48 in. (1.97 cm x 91.4 cm x 122.1 cm)	Min. configuration: 14.0 in. x 18.9 in. x 33.14 in. (35.6 cm x 48.0 cm x 81.1 cm)	Out-of-box: 3.4 in. x 17.5 in. x 30.65 in. (8.7 cm x 44.5 cm x 7.8 cm) <sup>1</sup>	Out-of-box: 3.4 in. x 17.5 in. x 30.65 in. (8.7 cm x 44.5 cm x 7.8 cm)
<b>Weight</b>	Min. configuration: 4,309 lb. (1,954 kg)	Min. configuration: 796 lb. (361.1 kg)	Min. configuration: 76.4 lb. (34.56 kg)	Out-of-box: 34.3 lb. (15.6 kg)	Out-of-box: 34.3 lb. (15.6 kg)

TAPE DRIVES			
			
<b>Name</b>	<b>StorageTek T10000B Tape Drive</b>	<b>StorageTek T9840D Tape Drive</b>	<b>StorageTek LTO Tape Drives</b>
<b>Average file access time</b>	62 sec	16.5 sec	LTO 4: 62 sec LTO 5: 52 sec
<b>Data transfer rate, native</b>	120 MB/sec	30 MB/sec	LTO 4: 120 MB/sec (80 MB/sec half-height) LTO 5: 140 MB/sec
<b>Capacity, native (uncompressed)</b>	1 TB	75 GB	LTO 4: 800 GB LTO 5: 1.5 TB
<b>Interface</b>	2 Gb FICON, 4 Gb FC (automation, rackmount)	2 Gb FC, FICON, ESCON (automation, rackmount)	Ultra 320 SCSI, SAS (half-height only), 8 Gb FC (automation only)
<b>Dimensions—automation (H x W x D)</b>	3.5 in. x 5.75 in. x 16.75 in. (8.89 cm x 14.61 cm x 42.55 cm)	3.25 in. x 15.0 in. (8.3 cm x 38.1 cm)	5.7 in. x 1.6 in. x 8.1 in. (14.47 cm x 4.1 cm x 20.82 cm)

TAPE ENCRYPTION	
	
<b>Name</b>	<b>StorageTek Crypto Key Management System 2.0</b>
<b>Components</b>	Consists of a cluster configuration (2-20) of Sun Fire rackmounted servers running Oracle Solaris 10 and each containing a Sun Crypto Accelerator 6000 card
<b>Standards/drives supported</b>	FIPS 140-2 security requirements; CCM-AES-256 encryption; up to 3,000 drives (T10000B, T9840D, or LTO 4/5) and 1,000,000 keys from a single KMS cluster



TAPE VIRTUALIZATION			
			
<b>Name</b>	<b>StorageTek Virtual Storage Manager (VSM) System - VSM 5e</b>	<b>StorageTek Virtual Storage Manager (VSM) System - VSM 5</b>	<b>StorageTek Virtual Library Extension - VLE</b>
<b>Capacity</b>	800 GB or 1.25 TB	1.25 TB, 2.5 TB, 5 TB, 7.5 TB, 11 TB, 14 TB, 28 TB, 45 TB, 68 TB, or 90 TB	220 TB, 440 TB, 660 TB, 880TB
<b>Host connectivity</b>	Mainframe	Mainframe	Mainframe
<b>Storage connectivity</b>	8 FICON or 16 ESCON, 4 Ethernet IP support	8 FICON or 16 ESCON, 4 Ethernet IP support	16 Ethernet IP (connection to VSM5)
<b>Performance</b>	15,000 rpm disk drives	15,000 rpm disk drives	7,200 RPM disk drives
<b>Virtual tape libraries/drives/carts</b>	256 virtual tape drives	256 virtual tape drives	N/A
<b>Cache</b>	8 GB (physical) 32 GB (effective - 4:1 compression)	32 GB (physical) 128 GB (effective - 4:1 compression)	128 GB (physical) 512 GB (effective - 4:1 compression)
<b>Nonvolatile storage</b>	1,024 MB (effective – 4:1 compression)	1,024 MB (effective – 4:1 compression)	N/A
<b>Min. software requirements</b>	HSC 6.1/VTCS 6.1, z/OS 1.1+	HSC 6.1/VTCS 6.1, z/OS 1.1+	HSC 6.1/VTCS 6.1, z/OS 1.1+

TAPE MEDIA			
			
Name	StorageTek T10000 Data Cartridge	StorageTek 9940 Data Cartridge	StorageTek 9840 Data Cartridge
Capacity, native (uncompressed)	120 GB (Sport), 500 GB (T10000A); 240 GB (Sport), TB (T10000B)	60 GB (T9940A), 200 GB (T9940B)	20 GB (T9840A/B), 40 GB (T9840C), 75 GB (T9840D)
Supported tape drives	T10000A, T10000B	T9940A, T9940B	T9840A, T9840B, T9840C, T9840D
Drive compatibility	Read/write	Read/write	Read/write
WORM or VolSafe secure media technology	Yes	Yes	Yes
Name	StorageTek LTO Ultrium 5 Data Cartridge	StorageTek LTO Ultrium 4 Data Cartridge	StorageTek LTO Ultrium 3 Data Cartridge
Capacity, native (uncompressed)	1.5 TB	800 GB	400 GB
Supported tape drives	LTO 5	LTO 4, LTO 5	LTO 3, LTO 4
Drive compatibility	Read/write	Read/write; LTO 5 at 800 GB, 120 MB/sec	Read/write; LTO 4 at 400 GB, 80 MB/sec
WORM or VolSafe secure media technology	Yes	Yes	Yes

## Contact Us

For more information about Oracle's Sun servers, storage, and networking equipment, visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative.



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