



See Beyond the Limits

Companies today worry about the security of their transaction and data, and invest heavily in protection strategies. In addition, many enterprises are managing demanding applications and accessing increasing amounts of data. They need computing power that matches their needs and budget, where and when it matters most. Oracle's products and solutions can support business needs from end to end, throughout the lifecycle of the data centre

More than 30 years of systems expertise and innovative thinking have gone into creating Oracle servers. These systems are some of the most secure, reliable, and scalable systems in the industry. They are the core building blocks for mission-critical enterprise computing; enterprise application environments; and virtualization and cloud deployments. Oracle's complete portfolio of servers, storage, systems software, and networking products are engineered to work together to deliver unique capabilities for information security, record-breaking performance, simplified management, and cost-saving efficiencies.

The Right Solutions for Enterprise Needs

The deployment of IT resources is vital to enterprises. They want to plan IT projects carefully so they can select the right

servers, storage products, and infrastructure to make the network as efficient as possible. An open and scalable design approach lets enterprises mix and match Oracle compute, storage, and network components so that all resources in the data center work as a powerful and integrated system, driving better efficiency across the IT infrastructure.

Optimized Solutions

Oracle's Optimized Solutions are applications-to-disk solutions comprising Oracle's servers, storage, and networking components; Oracle Solaris; Oracle Linux; Oracle Database; Oracle Fusion Middleware; and Oracle applications. Oracle is the only company to provide the complete technology stack—engineering, tuning, and collaboration is done at every level. More information about Oracle Optimized Solutions is available [here](#).




How to Use This Guide



This guide features all of Oracle's servers, with each section listing a full line of products and their specifications. Read [Oracle's Full Line of Integrated Storage Systems](#) to see all of Oracle's storage products.




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Oracle's Server Product Guide




SPARC SERVERS: POWERED BY SOFTWARE IN SILICON TECHNOLOGY			
			
Name	SPARC T7-1 Server	SPARC T7-2 Server	SPARC T7-4 Server
Processor/CPUs	<ul style="list-style-type: none"> Thirty-two core, 4.13 GHz SPARC M7 processor SPARC T7-1 servers are always configured with a single SPARC M7 processor, not expandable Up to 256 threads per processor (up to 8 threads per core) 	<ul style="list-style-type: none"> Thirty-two core, 4.13 GHz SPARC M7 processor SPARC T7-2 servers are always configured with two SPARC M7 processors, not expandable Up to 256 threads per processor (up to 8 threads per core) 	<ul style="list-style-type: none"> Thirty-two core, 4.13 GHz SPARC M7 processor SPARC T7-4 servers may be configured with either two or four SPARC M7 processors, upgradeable from two to four processors Up to 256 threads per processor (up to 8 threads per core)
Memory	512 GB maximum memory configuration with 32 GB DIMMs	1 TB maximum memory configuration with 32 GB DIMMs	<ul style="list-style-type: none"> 2 TB maximum memory configuration with a four processor system and 32 GB DIMMs 1 TB maximum memory configuration with a two processor system and 32 GB DIMMs
Mass storage			
Internal disk	<ul style="list-style-type: none"> Up to eight 600 GB or 1,200 GB 2.5 in SAS-3 drives Integrated DVD drive Optional internal storage may be installed within the standard drive bays, including SSDs and NVMe drives 	<ul style="list-style-type: none"> Up to six 600 GB or 1,200 GB 2.5 in SAS-3 drives Integrated DVD drive Optional internal storage may be installed within the standard drive bays, including SSDs and NVMe drives 	<ul style="list-style-type: none"> Up to eight 600 GB or 1,200 GB 2.5 in SAS-3 drives Optional internal storage may be installed within the standard drive bays, including SSDs and NVMe drives
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage-tape.html
Network			
Expansion bus and ports	<ul style="list-style-type: none"> Expansion bus: six low-profile PCIe 3.0 (four x8 and two x16 or x8 wired) slots Ports: four external USB (two front USB 2.0 and two rear USB 3.0), one RJ45 serial management port, console 10/100 network port, VGA port 	<ul style="list-style-type: none"> Expansion bus: eight low-profile PCIe 3.0 (four x8 and four x16) slots Ports: four external USB (two front USB 2.0 and two rear USB 3.0), one RJ45 serial management port, console 10/100 network port, two VGA ports (one front, one rear) 	<ul style="list-style-type: none"> Expansion bus: sixteen low-profile PCIe 3.0 slots, each accessed via a hot-plug carrier (eight x8 and eight x16) slots Ports: four external USB 3.0 (two front, two rear), one RJ45 serial management port, console 10/100 network port, two VGA ports (one front, one rear)
Power/cooling			
Power	Two hot-swappable AC 1,000 W redundant (1 + 1) power supplies	Two hot-swappable AC 2,000 W redundant (1 + 1) power supplies	Four hot-swappable AC 3,000 W redundant (2 + 2) power supplies
Operating temperature	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 (41° F to 95° F)
Nonoperating temperature	-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 (-40° F to 149° F)
Rack units	• 2 RU	• 3 RU	• 5 RU
Physical specifications			
Height	87.6 mm (3.5 in.); 2U	129.8 mm (5.11 in.); 3U	215 mm (8.5 in.); 5U
Width	445.0 mm (17.5 in.)	436.5 mm (17.185 in.)	445 mm (17.5 in.)
Depth	737 mm (29 in.)	752.5 mm (29.63 in.)	835 mm (32.9 in.)
Weight	Approx. 25.6 kg (56.4 lb.),	Approx. 37.2 kg (82 lb.)	Approx. 84.8 kg (186.55 lb.),
Operating system	<ul style="list-style-type: none"> Oracle Solaris 11.3 or later Oracle Solaris 10 1/13* Oracle Solaris 10 8/11* Oracle Solaris 10 9/10* *Plus required patches 	<ul style="list-style-type: none"> Oracle Solaris 11.3 or later Oracle Solaris 10 1/13* Oracle Solaris 10 8/11* Oracle Solaris 10 9/10* *Plus required patches 	<ul style="list-style-type: none"> Oracle Solaris 11.3 or later Oracle Solaris 10 1/13* Oracle Solaris 10 8/11* Oracle Solaris 10 9/10* *Plus required patches



SPARC SERVERS: POWERED BY SOFTWARE IN SILICON TECHNOLOGY		
		
Name	SPARC M7-8 Server	SPARC M7-16 Server
Processor/CPUs	<ul style="list-style-type: none"> • Thirty-two core, 4.13 GHz SPARC M7 processor • Two hundred fifty-six threads per processor (eight threads per core) • Two to eight processors per system 	<ul style="list-style-type: none"> • Thirty-two core, 4.13 GHz SPARC M7 processor • Two hundred fifty-six threads per processor (eight per core) • Four to sixteen processors per system
Memory	Four TB maximum memory per system using 32 GB DIMMs	Eight TB maximum memory per system using 32 GB DIMMs
Internal disk	<ul style="list-style-type: none"> • No 	<ul style="list-style-type: none"> • No
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Expansion bus and ports	Up to 24 low-profile PCIe 3.0 (x16) slots, each accessed via a hot-plug carrier	Up to 48 low-profile PCIe 3.0 (x16) slots, each accessed via a hot-plug carrier
Power	6x 3,000 W hot-swappable AC 3,000 W power supplies with N+N redundancy	16x 3,000 W hot-swappable AC 3,000 W power supplies with N+N redundancy
Operating temperature	5° C to 35° C (41° F to 95° F)	5° C to 35° C (41° F to 95° F)
Nonoperating temperature	-40° C to 65° C (-40° F to 149° F)	-40° C to 65° C (-40° F to 149° F)
Rack units	10	42
Height	78.66 in. (1,998 mm); without rack: 17.2 in. (438 mm)	78.66 in. (1,998 mm)
Width	23.62 in. (600 mm); without rack: 19.0 in. (483 mm)	23.62 in. (600 mm)
Depth	47.24 in. (1,200 mm); without rack: 32.0 in. (813 mm)	47.24 in. (1,200 mm)
Weight	824 lb. (374 kg); without rack: 405 lb. (184 kg)	1,650 lb. (749 kg)
Operating system	<ul style="list-style-type: none"> • Oracle Solaris 11.3 or later • Oracle Solaris 10 1/13* • Oracle Solaris 10 8/11* • Oracle Solaris 10 9/10* • *Plus required patches 	<ul style="list-style-type: none"> • Oracle Solaris 11.3 or later • Oracle Solaris 10 1/13* • Oracle Solaris 10 8/11* • Oracle Solaris 10 9/10* • *Plus required patches



SPARC SERVERS			
			
Name	SPARC T5-2 Server	SPARC T5-4 Server	SPARC T5-8 Server
Processor/CPU's	<ul style="list-style-type: none"> • Sixteen-core 3.6 GHz SPARC T5 processor • Two processors per system, maximum • Max. 256 threads 	<ul style="list-style-type: none"> • Sixteen-core 3.6 GHz SPARC T5 processor • Four processors per system, maximum • Max. 512 threads 	<ul style="list-style-type: none"> • Sixteen-core 3.6 GHz SPARC T5 processor • Eight processors per system, maximum • Max. 1,024 threads
Memory	Up to 1 TB	Up to 2 TB	Up to 4 TB
Mass storage			
Internal disk	<ul style="list-style-type: none"> • Up to six 300 GB or 600 GB 2.5 in. SAS drives or 400 GB SATA SSDs • Optional Flash Accelerator F80 PCIe card • Internal DVD: One slim line SATA DVD+/-RW. 	<ul style="list-style-type: none"> • Up to eight 300 GB or 600 GB 2.5 in. SAS drives, or 400 GB SATA SSDs • Optional Flash Accelerator F80 PCIe card 	<ul style="list-style-type: none"> • Up to eight 300 GB or 600 GB 2.5 in. SAS drives, or 400 GB SATA SSDs • Optional Flash Accelerator F80 PCIe card
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Network			
Expansion bus and ports	<ul style="list-style-type: none"> • Four 10 GbE (100 Mbps/1 Gbps/10 Gbps) • Eight low-profile PCIe 3.0 (x8 wired) slots • Four external USB 3.0 ports (2 rear USB 3.0 ports; two front USB 2.0 ports) 	<ul style="list-style-type: none"> • Four 10 GbE (100 Mbps/1 Gbps/10 Gbps) • Sixteen low-profile PCIe 3.0 (x8 wired) slots accessed via a PCIe hot-plug carrier • Four external USB 3.0 ports (two front, two rear), one internal USB 2.0 port, one RJ45 serial management port, Console 10/100 network port, VGA port 	<ul style="list-style-type: none"> • Four 10 GbE (100 Mbps/1 Gbps/10 Gbps) • Sixteen low-profile PCIe 3.0 (x8 wired) slots accessed via a PCIe hot-plug carrier • Four external USB 3.0 ports (two front, two rear), one internal USB 2.0 port, one RJ45 serial management port, Console 10/100 network port, VGA port
Power/cooling			
Power	Two hot-swappable AC 2,060 watt redundant (1+1) power supplies	Two hot-swappable AC 3,000 watt redundant (1 + 1) power supplies	Four hot-swappable AC 3,000 watt redundant (2 + 2) power supplies
Operating temperature	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 (41° F to 95° F)
Nonoperating temperature	-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 (-40° F to 149° F)
Rack units	3U	5U	8U
Physical specifications			
Height	129.85 mm (5.11 in.)	215 mm (8.5 in.)	50 mm (13.8 in.)
Width	436.5 mm (17.185 in.)	445 mm (17.5 in.)	445 mm (17.5 in.)
Depth	732 mm (28.82 in.)	800 mm (31.5 in.)	800 mm (31.5 in.)
Weight	Approximately 36.28 kg (80 lbs.)	Approx. 75.4 kg (166 lbs.)	Approx. 118.6 kg (261.5 lbs.)
Operating system	<ul style="list-style-type: none"> • Preinstalled: Oracle Solaris 11.2 • Supported options as control domain: Oracle Solaris 11.1 or later and Oracle Solaris 10 1/13 • Minimum version of Oracle Solaris supported as a guest domain: Oracle Solaris 10 9/10 plus Oracle Solaris 10 1/13 SPARC bundle 	<ul style="list-style-type: none"> • Preinstalled: Oracle Solaris 11.2 • Supported options as control domain: Oracle Solaris 11.1 or later and Oracle Solaris 10 1/13 • Minimum version of Oracle Solaris supported as a guest domain: Oracle Solaris 10 9/10 plus Oracle Solaris 10 1/13 SPARC bundle 	<ul style="list-style-type: none"> • Preinstalled: Oracle Solaris 11.2 • Supported options as control domain: Oracle Solaris 11.1 or later and Oracle Solaris 10 1/13 • Minimum version of Oracle Solaris supported as a guest domain: Oracle Solaris 10 9/10 plus Oracle Solaris 10 1/13 SPARC bundle


SPARC SERVERS	
	
Name	SPARC M6-32 Server
Processor/CPUs	<ul style="list-style-type: none"> • SPARC V9 architecture • Up to 32 twelve-core 3.6 GHz SPARC M6 processors • Up to 96 compute threads per processor for a maximum 3,072 threads per system • 12 floating point units per SPARC M6 processor • 12 cryptography units per SPARC M6 processor • On-chip encryption instruction with direct non-privileged support for 16 industry-standard cryptographic algorithms plus random number generation in each of the twelve cores. AES, Camellia, CRC32c, DES, 3DES, DSA, ECC, Kasumi, MD5, RSA, SHA-1, SHA-224, SHA-256, SHA-384, SHA-512
Memory	Up to 32 TB
Mass storage	
Internal disk	Up to thirty-two 600 GB 2.5 in. SAS drives or 400 GB SSDs.
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Optical drive	N/A
Network	
Expansion bus and ports	<ul style="list-style-type: none"> • Up to thirty-two 10 GbE (100 Mbps/1 Gbps/10 Gbps) using configured base I/O cards • Sixty-four low-profile PCIe 3.0 (x8 wired) slots accessed via a PCIe hot-plug carrier • Two RJ45 console ports on each SP (2): one serial management port, one 1 GbE network port
Power/cooling	
Power	<ul style="list-style-type: none"> • Twelve hot-swappable AC 7,000 watt redundant (6 + 6) power supplies • Maximum operating input current per power cord (3-phase power, 3 + 3 total cords): 200 to 240 V AC, 48A; 380 to 415 V AC, 24A; 480 V AC, 20A
Operating temperature	5° C to 35° C (41° F to 95° F)
Nonoperating temperature	0° C to 50° C (32° F to 122° F)
Rack units	N/A
Physical specifications	
Height	2,000 mm (78.7 in.)
Width	904 mm (35.6 in.)
Depth	1,451 mm (57.1 in.)
Weight	3,697 lbs. (1,677 kg)
Operating system	<ul style="list-style-type: none"> • Oracle Solaris 11.1 or later • Oracle Solaris 10 1/13 (using Oracle Solaris guest domains) • Applications certified only for Oracle Solaris 8 or Oracle Solaris 9 may be installed in an Oracle Solaris legacy zone in an Oracle Solaris 10 1/13 guest domain



SPARC ENTRY-LEVEL SERVERS	
	
Name	SPARC T4-1 Server
Processor/CPUs	<ul style="list-style-type: none"> • Eight-core 2.85 GHz SPARC T4 processor; • One processor per system • Max. 64 threads
Memory	Up to 512 GB
Mass storage	
Internal disk	<ul style="list-style-type: none"> • Up to eight 300 GB or 600 GB 2.5-in. SAS drives or 400 GB SATA SSDs • Optional Flash Accelerator F80 PCIe card • Internal DVD: One slimline SATA DVD+/- RW
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Network	
Expansion bus and ports	<ul style="list-style-type: none"> • Four 10/100/1000 Mb/sec Ethernet ports; • Up to two optional 10 GbE (XAU1) connections • Six PCIe 2.0 module slots (6 x8 wired) • Four external USB ports (2 rear USB 2.0 ports;two front USB 2.0 ports)
Power/cooling	
Power	Two hot-swappable AC 1200 watt redundant (N+1) power supplies
Operating temperature	5°C to 35°C (41°F to 95°F)
Nonoperating temperature	-40°C to 65°C (-40°F to 149°F)
Rack units	2U
Physical specifications	
Height	88 mm (3.49 in.)
Width	425 mm (16.75 in.)
Depth	714 mm (28.13 in.)
Weight	Approximately 27.2 kg (60 lb.)
Operating system	<ul style="list-style-type: none"> • Oracle Solaris 11.1 or later • Oracle Solaris 11 11/11 • Oracle Solaris 10 1/13 • Oracle Solaris 10 8/11 Support for Oracle Solaris 10 9/10 or Oracle Solaris 10 10/09 with Oracle Solaris 10 8/11 patch set



FUJITSU M10 SERVERS			
			
Name	Fujitsu M10-1 Server	Fujitsu M10-4 Server	Fujitsu M10-4S Server
Processor/ CPUs	<ul style="list-style-type: none"> SPARC64 X: 16-core dual-threaded SPARC V9 architecture, ECC-protected One 16-core CPU 	<ul style="list-style-type: none"> SPARC64 X 16-core processors SPARC V9 architecture, ECC-protected As many as four CPUs (two CPUs per board/two boards per unit) 	<ul style="list-style-type: none"> SPARC64 X 16-core processors SPARC V9 architecture, ECC-protected As many as 4 CPUs: 1-unit configuration As many as 16 CPUs: 4-unit configuration As many as 64 CPUs: 16-unit configuration
Memory	Up to 512 GB with 32 GB DIMM	Up to 2,048 GB per unit, with 32 GB DIMM	<ul style="list-style-type: none"> Up to 2 TB per unit, with 32 GB DIMM: 1-unit configuration Up to 8 TB per unit, with 32 GB DIMM: 4-unit configuration Up to 32 TB per unit, with 32 GB DIMM: 16-unit configuration
Mass storage			
Internal disk	As many as eight 600 GB or 900 GB internal 2.5-in. SAS HDDs or 200 GB SAS SSDs	As many as eight 600 GB or 900 GB internal 2.5-in. SAS HDDs or 200 GB SAS SSDs	As many as eight 600 GB or 900 GB internal 2.5 in. SAS HDDs or 200 GB SAS SSDs
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Network			
Expansion bus and ports	<ul style="list-style-type: none"> Three PCI Express 3.0 short, low-profile slots (eight lanes) As many as 23 PCI Express slots with optional PCI expansion unit 4-port GbE, 1-port SAS, 2-port USB 	<ul style="list-style-type: none"> 11 PCI Express 3.0 short, low-profile slots (eight lanes) As many as 71 PCI Express slots with optional PCI expansion unit 4-port GbE, 1-port SAS, 2-port USB 	<ul style="list-style-type: none"> 8 PCI Express 3.0 short, low-profile slots (eight lanes): 1-unit configuration 32 PCI Express 3.0 short, low-profile slots (eight lanes): 4-unit configuration 128 PCI Express 3.0 short, low-profile slots (eight lanes): 16-unit configuration Up to 928 PCI Express slots with optional PCI expansion unit 4-port GbE, 1-port SAS, 2-port USB per unit
Power/cooling			
Power	100 V to 120 V ± 10% (50/60 Hz), 200 V to 240 V ± 10% (50/60 Hz)	200 V to 240 V ±10% (50/60 Hz)	<ul style="list-style-type: none"> Power option 1: AC power: 200 V to 240 V ±10%, one-phase (50/60 Hz) Power option 2: AC power: 200 V to 240 V ±10%, 3-phase delta (50/60 Hz) Power option 3: AC power: 380 V to 415 V ±10%, 3-phase star (50/60 Hz) Power cords Plug: IEC309-60A, three-pin, IP67, 4m
Operating temperature	5°C to 35°C (41°F to 95°F) at an altitude of 0 m to 500 m	5°C to 35°C (41°F to 95°F) at an altitude of 0 m to 500 m	5°C to 35°C (41°F to 95°F) at an altitude of 0 m to 500 m
Nonoperating temperature	<ul style="list-style-type: none"> -20°C to 60°C (packed) 0°C to 50°C (non-packed) 	<ul style="list-style-type: none"> -20°C to 60°C (packed) 0°C to 50°C (non-packed) 	<ul style="list-style-type: none"> -20°C to 60°C (packed) 0°C to 50°C (non-packed)
Rack units	1RU	4RU	4RU per unit up to 80 in 2 racks
Physical specifications			
Height	4.25 cm (1.67 in.)	17.5 cm (6.9 in.)	17.5 cm (6.9 in.)
Width	43.1 cm (17.0 in.)	44.0 cm (17.3 in.)	44.0 cm (17.3 in.)
Depth	72.1 cm (28.4 in.)	74.6 cm (29.4 in.)	81.0 cm (31.9 in.)
Weight	18 kg (39.7 lb.)	58 kg (127.9 lb.)	60 kg (132.3 lb.)
Operating system	<ul style="list-style-type: none"> Oracle Solaris 10 Oracle Solaris 11 	<ul style="list-style-type: none"> Oracle Solaris 10 Oracle Solaris 11 	<ul style="list-style-type: none"> Oracle Solaris 10 Oracle Solaris 11



x86 ENTERPRISE CLASS SERVERS		
		
Name	Oracle Server X5-2 System	Oracle Server X5-2L System
Processor/ CPUs	One or two processors from Intel® Xeon® processor E5-2600 v3 product family	One or two processors from Intel® Xeon® processor E5-2600 v3 product family
Memory	<ul style="list-style-type: none"> 8 GB and 16 GB registered or 32 GB load-reduced DDR4 DIMMs 24 DDR4 DIMM slots (12 DIMM slots per CPU socket) Supports up to 768 GB of memory capacity 	<ul style="list-style-type: none"> 8 GB and 16 GB registered, or 32 GB load-reduced DDR4 DIMMs 24 DDR4 DIMM slots (12 DIMM slots per CPU socket) Supports up to 768 GB of memory capacity
Mass storage		
Internal disk	<ul style="list-style-type: none"> Eight 2.5-in. front-accessible disk bays for SAS-2 HDDs or SAS-3 SSDs, and up to four NVMe SSDs Optional DVD R/W drive 	<p>Three-disk cage options with front-accessible disk bays:</p> <ul style="list-style-type: none"> Eight 2.5-in. disk bays for SAS-2 HDDs or SAS-3 SSDs, and up to four NVMe SSDs, as well as an optional DVD R/W drive Twelve 3.5-in. disk bays for SAS-2 HDDs and two rear-accessible 2.5-in. disk bays for SAS-2 HDDs or SAS-3 SSDs Twenty-four 2.5-in. disk bays for SAS-2 HDDs or SAS-3 SSDs, and up to four NVMe SSDs, as well as two rear-accessible 2.5-in. disk bays for SAS-2 HDDs or SAS-3 SSDs
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Graphics	VGA 2D graphics controller embedded	VGA 2D graphics controller embedded
Network		
Expansion bus and ports	<ul style="list-style-type: none"> Four PCIe Gen 3 slots Four 100/1000/10000Base-T Ethernet ports One dedicated 10/100/1000Base-T Ethernet management port One asynchronous RJ45 serial port 	<ul style="list-style-type: none"> Six PCIe Gen 3 slots Four 100/1000/10000Base-T Ethernet ports One dedicated 10/100/1000Base-T Ethernet management port One asynchronous RJ45 serial port
Power/cooling		
Power	Dual redundant, hot-swappable power supply: 100 V AC to 240 V AC	Dual redundant, hot-swappable power supply: 100 V AC to 240 V AC
Operating temperature	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 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Rack units	1U	2U
Physical specifications		
Height	42.6 mm (1.7 in.)	87.6 mm (3.5 in.)
Width	436.8 mm (17.2 in.)	444.5 mm (17.5 in.)
Depth	737.0 mm (29.0 in.)	737.0 mm (29.0 in.)
Weight (max.)	40 lb. (18.1 kg)	<ul style="list-style-type: none"> 8-disk configuration – 24.5 kg (54 lb.) 12-disk configuration – 29.9 kg (66 lb.) 24-disk configuration – 29.0 kg (64 lb.)
Operating system	<ul style="list-style-type: none"> Oracle Solaris Oracle Linux Oracle VM Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware Microsoft Windows Server 	<ul style="list-style-type: none"> Oracle Solaris Oracle Linux Oracle VM Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware Microsoft Windows Server


x86 ENTERPRISE CLASS SERVERS		
		
Name	Oracle Server X5-4	Oracle Server X5-8
Processor/ CPUs	<ul style="list-style-type: none"> Two or four Intel® Xeon® processor E7-8895 v3 processors Up to 18 cores per processor 	<ul style="list-style-type: none"> 4 or 8 CPU modules, each with one Intel® Xeon® processor E7-8895 v3 product family CPU 18 cores per processor
Memory	<ul style="list-style-type: none"> Up to 96 DIMMs (24 DIMMs per processor) 16 GB DDR3 ECC registered low-voltage DIMMs or 32 GB DDR3 ECC registered low-voltage LRDIMMs Two memory riser cards required per processor Maximum memory capacity of 3 TB 	<ul style="list-style-type: none"> Up to 192 DIMMs (24 per CPU module) 16 GB DDR3-1,600 GHz ECC registered DIMMs or 32 GB DDR3-1,600 GHz load-reduced ECC DIMMs (LRDIMM) 6 TB maximum memory capacity
Mass storage		
Internal disk	<ul style="list-style-type: none"> Six 2.5" SAS-3 front-accessible, hot-swappable drive bays and optional DVD+/-RW All bays can be populated with SAS-3 HDDs or SSDs 12 Gbps RAID HBA supporting levels: 0, 1, 5, 6, 10, 50, 60 with 1 GB of DDR3 onboard memory with flash memory backup via embedded internal SAS3 HBA PCIe Card Up to four NVMe SSDs 	<ul style="list-style-type: none"> Eight 2.5" SAS-3 front-accessible, hot-swappable drive bays All bays can be populated with SAS-3 HDDs or SSDs for up to 9.6 TB of internal storage 12 Gb/sec RAID HBA supporting levels: 0, 1, 5, 6, 10, 50, 60 with 1 GB of DDR3 onboard memory with flash memory backup via embedded internal SAS-3 HBA PCIe card
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Graphics	<ul style="list-style-type: none"> VGA 2D graphics controller embedded: 8MB Resolution: 1,600 x 1,200 x 16 bits @ 60 Hz via the rear HD15 VGA port (1,024 x 768 when viewed remotely via Oracle ILOM) 	<ul style="list-style-type: none"> VGA 2D graphics controller embedded: 8 MB Resolution: up to 1,600 x 1,200 x 16 bits @ 60 Hz (1,024 x 768 when viewed remotely via Oracle ILOM)
Network		
Expansion bus and ports	<ul style="list-style-type: none"> Eleven PCIe Gen 3 slots Dedicated 10/100/1000BaseT Ethernet network management port In-band, out-of-band, and sideband network management access via any one of the four main ports on the server or the dedicated port RJ-45 serial management port 	<ul style="list-style-type: none"> Sixteen PCIe Gen 3 slots Dedicated 10/100/1 GbE network management port via RJ-45 connector In-band, out-of-band, and sideband network management access RJ-45 serial management port
Power/cooling		
Power	<ul style="list-style-type: none"> Rated line voltage: 100–127 VAC (two-processor configuration); 200–240 VAC Rated input current: 100–127 VAC 12A (two-processor configuration); 200–240 VAC 10A Two hot-swappable rear accessible power supplies with N+N redundancy 	<ul style="list-style-type: none"> Rated line voltage: 200–240 VAC (50/60 Hz) Rated input current: 23 A (12 A max per cord) Four hot-swappable front accessible power supplies with N+N redundancy
Operating temperature	5° C to 35° C (41° F to 95° F)	5° C to 35° C (41° F to 95° F)
Nonoperating temperature	-40° C to 68° C (-40° F to 154° F)	-40° C to 68° C (-40° F to 154° F)
Rack units	3U	5U
Physical specifications		
Height	Height: 129.9 mm (5.1 in.)	Height: 219.25 mm (8.63 in.)
Width	Width: 436.5 mm (17.2 in.)	Width: 445 mm (17.5 in.)
Depth	Depth: 732.0 mm (28.8 in.)	Depth: 834 mm (32.8 in.)
Weight (Max)	Weight: 40 kg (88 lb.) max.	Weight: 99.79 kg (220 lb.) maximum
Operating system	<ul style="list-style-type: none"> Oracle Solaris (preinstall option) Oracle Linux (preinstall option) Oracle VM (preinstall option) Red Hat Enterprise Linux VMware Microsoft Windows Server For more information on software, go to: Oracle Server X5-4 Options & Downloads 	<ul style="list-style-type: none"> Oracle Solaris (preinstall option) Oracle Linux (preinstall option) Oracle VM (preinstall option) Red Hat Enterprise Linux VMware Microsoft Windows Server For more information on software, go to: Oracle Server X5-8 Options & Downloads



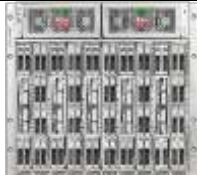
x86 ENTERPRISE CLASS SERVERS	
	
Name	Sun Server X4-2L System
Processor/ CPUs	One or two processors from Intel Xeon processor E5-2600 v2 product family
Memory	Sixteen DDR3 DIMM slots (eight DIMM slots per CPU socket); Supports from 8 GB (1x 8 GB) to 512 GB (16 x 32 GB) of memory
Mass storage	
Internal disk	Three disk cage options with front-accessible disk bays: <ul style="list-style-type: none"> • Twenty-four 2.5-in. disk bays for SAS-2 HDDs or SATA SSDs and two rear-accessible 2.5-in. disk bays for SAS-2 HDDs or SATA SSDs • Eight 2.5-in. disk bays for SAS-2 HDDs or SATA SSDs and DVD R/W drive • Twelve 3.5-in. disk bays for SAS-2 HDDs and two rear-accessible 2.5-in. disk bays for SAS-2 HDDs or SATA SSDs
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Graphics	VGA 2D graphics controller embedded
Network	
Expansion bus and ports	Four 100/1000/10000 Base-T Ethernet ports; One serial RJ-45 port; Six USB 2.0 ports (two front, two rear, two internal); Six PCIe 3.0 slots
Power/cooling	
Power	Dual redundant, hot-swappable power supply: 100 v AC to 240 v AC
Operating temperature	41°F to 95°F (5°C to 35°C)
Nonoperating temperature	-40°F to 158°F (-40°C to 70°C)
Rack units	2U
Physical specifications	
Height	87.6 mm (3.5 in.)
Width	444.5 mm (17.5 in.)
Depth	737.0 mm (29.0 in.)
Weight (Max)	63 lb. (28.5 kg)
Operating system	<ul style="list-style-type: none"> • Oracle Solaris • Oracle Linux • Oracle VM • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • VMware • Microsoft Windows Server

x86 ENTERPRISE CLASS SERVERS		
		
Name	Sun Server X4-4 System	Sun Server X4-8 System
Processor/CPU	Two or four Intel Xeon E7-8895 v2 Processors	Four or eight Intel Xeon E7-8895 v2 Processors
Memory	<ul style="list-style-type: none"> • 16 GB and 32 GB low voltage DDR3 DIMMs • 96 DDR3 DIMM slots (24 DIMM slots per CPU socket) • Supports up to 3 TB of memory capacity 	<ul style="list-style-type: none"> • 16 GB and 32 GB low voltage DDR3 DIMMs • 192 DDR3 DIMM slots (24 DIMM slots per CPU module) • Supports up to 6 TB of memory capacity
Internal disk	Six front accessible 2.5-inch disk bays for SAS-2 HDDs or SATA SSDs	Eight 2.5-inch disk bays for SAS-2 HDDs or SATA SSDs
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Graphics	VGA 2D graphics controller embedded	VGA 2D graphics controller embedded
Expansion bus and ports	<ul style="list-style-type: none"> • Four 100/1000/10000MBase-T Ethernet ports • One dedicated 10/100/1000MBase-T Ethernet management port • One asynchronous RJ45 serial port • Eleven PCIe Gen 3 slots 	<ul style="list-style-type: none"> • Two 10/100/1000MBase-T Ethernet ports • One 10/100/1000MBase-T Ethernet management port • One asynchronous RJ45 serial port • Sixteen hot-pluggable PCIe Gen 3 slots
Power	Two redundant, hot-swappable power supplies; 100 to 240 V AC	Four N+N redundant, hot-swappable, front accessible power supplies; 100 to 240 V AC
Operating temperature	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 154°F (-40°C to 68°C)	-40°F to 158°F (-40°C to 70°C)
Rack units	3U	5U
Height	129.9 mm (5.1 in)	219.25 mm (8.63 in)
Width	436.5 mm (17.2 in.)	445 mm (17.5 in.)
Depth	732 mm (28.8 in.)	834 mm (32.8 in.)
Weight (max)	40 kg (85 lbs.)	99.79 kg (220 lbs.)
Operating system	<ul style="list-style-type: none"> • Oracle Solaris • Oracle Linux • Oracle VM • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • VMware • Microsoft Windows Server 	<ul style="list-style-type: none"> • Oracle Solaris • Oracle Linux • Oracle VM • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • VMware • Microsoft Windows Server

NETRA SYSTEMS		
		
Name	Netra SPARC T4-1 Server	Netra SPARC T4-2 Server
Processor/CPU	SPARC T4 (2.85GHz)/ one CPU, up to 8-cores	SPARC T4 (2.85GHz) /two 8-core processor
Memory	Up to 256GB	Up to 512GB
Mass storage		
Internal disk	<ul style="list-style-type: none"> Up to four 2.5-inch SAS disk drives, with DVD+/-RW All 2.5-inch disk bays can be populated with either HDDs or SSDs 	<ul style="list-style-type: none"> Up to four 2.5-inch SAS disk drives, with DVD+/-RW All 2.5-inch disk bays can be populated with either HDDs or SSDs
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Network		
Expansion bus and ports	<ul style="list-style-type: none"> 4 x 1Gb (10/100/1000 MB/sec) integrated Ethernet ports. Up to two optional slots for 10GbE XAU1 connection 5 PCIe module slots 	<ul style="list-style-type: none"> 4 x 10/100/1000 MB/sec integrated Ethernet ports; Up to two optional 10GbE XAU1 connection 10 PCIe module slots
PCI slots	Five PCIe (2x Fh/HI) slots or XAU1 combination	Ten PCIe (2x Fh/HI) slots, or XAU1 combination slots
Power/cooling		
Power	DC: -48 V DC or -60 V DC AC power: 100 to 240 V AC, 50 to 60 Hz	DC: -48 V DC or -60 V DC AC power: 100 to 240 V AC, 50 to 60 Hz
Operating temperature	41°F to 113°F (5° C to 45°C)	41°F to 113°F (5° C to 45°C)
Non operating temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Rack units	2U	4U
Physical specifications		
Height	327.2 mm (3.43 in.)	172.2 mm (6.86 in.)
Width	445 mm (17.52 in.)	445 mm (17.52 in.)
Depth	526 mm (20.71 in.)	530 mm (20.87 in.)
Weight	18.6kg (41lb.)	33 kg (72.6 lb.)
Operating system	Oracle Solaris	Oracle Solaris

NETRA SYSTEMS		
		
Name	Netra Server X5-2	Netra Server X3-2
Processor/CPUs	One or Two Intel Xeon Processor E5-2600 v3 product family	Two Intel Xeon Processor E5-2600 v2 product family (embedded)
Memory	<ul style="list-style-type: none"> 8 GB and 16 GB registered or 32 GB load-reduced DDR4 DIMMs 24 DDR4 DIMM slots (12 DIMM slots per CPU socket) Supports up to 768 GB of memory capacity 	Up to 512 GB per system
Mass storage		
Internal disk	<ul style="list-style-type: none"> Eight-disk chassis, eight 2.5-inch SAS-3 front-accessible, hot-swappable disk bays with no DVD-RW Six-disk chassis, six 2.5-inch SAS-3 front-accessible, hot-swappable disk bays and DVD-RW All 2.5-inch disk bays can be populated with either SAS-3 HDDs and SSDs or four NMVe SSDs 	<ul style="list-style-type: none"> Eight disk chassis, eight 2.5" SAS-2 front-accessible hot-swappable disk bays with no DVD-RW. Six disk chassis, six 2.5" SAS-2 front-accessible hot-swappable disk bays and DVD-RW All 2.5-inch disk bays can be populated with either HDDs or SSDs
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Network		
Expansion bus and ports	Four on-board auto-sensing 100/1000/10000 Mb Base-T Ethernet ports	Four 10/100/1000/10000 Base-T Ethernet ports
PCI slots	Six PCIe 3.0 slots: two x16 and four x8 slots	Six PCIe 3.0 LP slots – Six (6) x8-lane slots
Power/cooling		
Power	DC: -48 V DC or -60 V AC: 100 to 240 V AC, 50 to 60 Hz	DC: -48 V DC or -60 V AC: 100 to 240 V AC, 50 to 60 Hz
Operating temperature	5°C to 45°C (41°F to 113°F), short term -5°C to 55°C (23°F to 131°F)	5°C to 45°C (41°F to 113°F), short term -5°C to 55°C (23°F to 131°F)
Nonoperating temperature	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)
Rack units	2U	2U
Physical specifications		
Height	87 mm (3.43 in.)	87 mm (3.43 in.)
Width	445 mm (17.52 in.)	445 mm (17.52 in.)
Depth	640.0 mm (25.2 in.)	527.8 mm (20.78 in.)
Weight	17.5 kg (38.5 lb.)	18.5 kg (40.8 lb.)
Operating system	<ul style="list-style-type: none"> Oracle Solaris Oracle Linux Red Hat Enterprise Linux SUSE Linux Enterprise Server Microsoft Windows Server Oracle VM VMware 	<ul style="list-style-type: none"> Oracle Solaris Oracle Linux Oracle VM Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware Microsoft Windows Server

NETRA SYSTEMS	
	
Name	Netra Modular System
Compute	Two to Thirty Oracle Server X5-2M compute nodes
Networking	<ul style="list-style-type: none"> • Fabric 1: redundant 10/40 Gb/sec Oracle Ethernet Switch ES2-64 • Fabric 2 and 3: redundant 10/40 Gb/sec Oracle Ethernet Switch ES2-72 (optional) • Fabric 4: Each compute node provides 1x 10 G Base-T port to uplink patch panel
Software	<ul style="list-style-type: none"> • Oracle Linux (preinstalled option) • Oracle Solaris • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • Microsoft Windows Server • Oracle VM (preinstalled option) • VMware • KVM • Hyper-V • Oracle OpenStack for Oracle Linux
Environment	
Operating temperature	5°C to 40°C (41°F to 104°F), short term -5°C to 50°C (23°F to 122°F)
Thermal and Cooling	
Power in Watts	Base Rack: • Maximum: 4,000 Typical: 1,300 Full Rack: Maximum: 24,000 Typical: 13,300
Dimensions and Weight	
Height	42U, 78.66 in. – 1,998 mm
Width	26.06 in. – 662 mm
Depth	41.73 in. – 1060 mm
Weight	1,089 kg (2, 400 lb.) fully populated

BLADE SERVER MODULES AND CHASSIS			
			
Name	SPARC T5-1B Server Module	Sun Blade X4-2B Server Module	Sun Blade 6000 Chassis
Processor/ CPUs	One sixteen-core 3.6 GHz SPARC T5 processor with 128 threads per module	Two processors from Intel Xeon processor E5-2600 v2 product family	SPARC, Intel Xeon
Memory	Up to 512 GB	Up to 768 GB	Up to 384 GB on a single blade; up to 3.84 TB per chassis
Mass storage			
Internal disk	<ul style="list-style-type: none"> Two hot-swappable SFF 2.5-in. drive bays Supports HDDs and SSDs 	<ul style="list-style-type: none"> Four hot-swappable SFF 2.5-in. drive bays Supports HDDs and SSDs 	
External disk and tape	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html	http://www.acardia.co.uk/oracle/sun-servers-and-storage/sun-storage-tape.html
Network			
Expansion bus and ports	<ul style="list-style-type: none"> Two 10/100/1000 Base-T Ethernet ports using the Intel Ethernet Controller I350 One dedicated 10/100 Base-T Ethernet port for the management network, which can be optionally shared with the main network ports if desired Two express modules for blade-specific I/O Two PCIe x8 links to network express modules via optional fabric expansion module 	<ul style="list-style-type: none"> Two 10/100/1000 Base-T Ethernet ports One dedicated 10/100 Base-T Ethernet port for the management network Two express modules for blade-specific I/O Two PCIe x8 links to network express modules via optional fabric expansion module 	<ul style="list-style-type: none"> Each server module has a direct connection to two PCIe ExpressModules for discrete I/O connectivity and Two network express modules for aggregate I/O connectivity
Power/cooling			
Power	N/A; function of chassis	N/A; function of chassis	(N+N) High-efficiency, hot-swappable, load-sharing, load-balancing power supplies
Operating temperature	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)
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	10U
Physical specifications			
Height	327.2 mm (12.9 in.)	12.9 in. (327.2 mm)	438.2 mm (17.3 in.)
Width	44.5 mm (1.8 in.)	1.8 in. (44.5 mm)	444.5 mm (17.5 in.)
Depth	511.7 mm (20.2 in.)	20.2 in. (511.7 mm)	692.2 mm (27.3 in.)
Weight	7.7 kg (17.0 lb.) fully configured	20.2 lb. (9.1 kg)	159.0 kg (350.0 lb.) fully configured
Operating system	<ul style="list-style-type: none"> Preinstalled: Oracle Solaris 11.2 Supported options as control domain: Oracle Solaris 11.1 or later and Oracle Solaris 10 1/13 Minimum version of Oracle Solaris supported as a guest domain: Oracle Solaris 10 9/10 plus Oracle Solaris 10 1/13 SPARC bundle 	<ul style="list-style-type: none"> Oracle Solaris Oracle Linux Oracle VM Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware Microsoft Windows Server 	Function of the server modules



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For more information about Oracle's servers, storage, and networking equipment, visit www.acardia.co.uk or call 0345 230 1055 to speak to an Oracle representative.



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