

# Netra™ 440 Server



Driving next-generation networks

### Key highlights

- **Rugged**— Network Equipment Building Standard (NEBS) Level 3 (L3)-certified (DC version), NEBS-compliant (AC version), and ETSI-compliant carrier-grade server for reliable operation in harsh environmental conditions.
- **Compact**— The Netra™ 440 server is 5 RU and less than 20 inches deep, delivering excellent capacity per rack while leaving ample space for cable management.
- **Expandable**— Up to four 1.6-GHz UltraSPARC® IIIi processors, 32 GB memory, four 146-GB, 15K-RPM Ultra320 SCSI disks, and six PCI slots help enable future expandable disks to provide excellent scalability for high-throughput applications.
- **Adaptable**— Fits a wide range of industry-standard racks, including 19-inch, 23-inch, and 600mm two- and four-post racks.
- **High-availability**— Hot-swappable, redundant disk drive and AC or DC power supplies, front and back system LEDs, System Configuration Card, Advanced Lights Out Manager, and Dry Content Alarm can offer easier maintenance and more uptime.
- **Security and Investment Protection**— The Netra 440 server, with 64-bit UltraSPARC IIIi microprocessors and the Solaris™ Operating System, enables an architecture that is robust and reliable, scales readily, provides binary compatibility with existing applications, and maintains consistency across all tiers of the network.

### Rugged and Reliable for the Toughest Environments

The Netra 440 server is the latest generation of Sun’s carrier-grade, quad-processor servers designed to meet the needs of the most demanding applications, under the most strenuous environmental conditions. This highly scalable, rugged server offers high availability and expandability features in a compact, rack-optimized, 5-U package. The Netra 440 server integrates two auto-negotiating Gigabit Ethernet ports to provide multiple connectivity for high-speed, high-bandwidth networking. System uptime is enhanced by hot-swappable, front-accessible disk drives and redundant, hot-swappable AC or DC power supplies.

Additionally, the Netra 440 server comes standard with advanced management features like Advanced Lights Out Manager (ALOM), which provides simple remote monitoring and management from anywhere on the network, while the System Configuration Card (SCC) and other serviceability features enable quick system upgrades and repairs, thereby reducing the mean time to repair (MTTR).

The Netra 440 server helps enable investment protection with binary and application compatibility through an end-to-end SPARC®/Solaris architecture, increasing operation efficiency while eliminating costs for application porting and maintenance.

The Netra 440 server is OEM-ready, offering guaranteed product lifecycle, product change notification, and extended end-of-life (EOL) periods, making it the ideal platform for long-lived telecom and OEM applications and services. Rugged and reliable, the Netra 440 delivers a compelling solution for deployments in challenging computing environments.



# Netra 440 Server System Requirements

## Architecture

Processor	Two to four 1.28/1.6-GHz UltraSPARC IIIi
Architecture	64-bit, four-way Superscaler SPARC V9
Cache	64-KB data, 32-KB instruction, and 1-MB integrated L2
Main memory	Four DIMM slots per processor, DDR PC2100 or faster registered ECC. System configuration from 4 GB to 32 GB

## Standard Integrated Interfaces

Network	Two 10/100/1000Base-T Ethernet
Network management	One 10Base-T Ethernet
Serial management	One TIA/EIA-232-F (RJ45) port
Serial	One TIA/EIA-232-F asynchronous (DB9) port
SCSI	Ultra320 SCSI multimode (SE/LVD)
USB	Four OHCI 1.0-compliant interfaces, supporting dual speeds of 12-Mbits and 1.5-Mbits/sec. each
Expansion bus	Six internal PCI 2.2-compliant expansion slots: <ul style="list-style-type: none"> <li>• Three 64-bit, 33/66-MHz 3.3 V full-length</li> <li>• Three 64-bit, 33-MHz 5 V full-length</li> </ul>
Alarms	Four fail-safe, dry-contact alarms (critical, major, minor, and user)
System Configuration Reader and Card (removable)	Front-accessible for transfer of system configuration information, including host ID, MAC address, NVRAM

## Mass Storage and Media

Internal disk	Up to four hot-swap, Ultra320 SCSI, 73/146-GB 15K-RPM disks
Internal DVD	Optional slimline DVD-ROM Optional slimline DVD RW
External disk (optional)	Sun StorEdge™ 3000 Series Sun StorEdge 6000 Series Sun StorEdge 9900 Series
External tape (optional)	(LTO 2 and SDLT 320 versions) Sun StorEdge L25 Sun StorEdge L100 Sun StorEdge L180

See [sun.com/netra](http://sun.com/netra) for the most current list.

## Software

Operating system	Solaris 8 (07/03) and later, Solaris 9 (12/03) and later, or Solaris 10 (3/05) and later
Languages	C/C++, FORTRAN, Java™ programming languages; all other standard Sun-supported languages
Networking	ONC™, NFS, TCP/IP, SunLink™, OSI, MHS, IPX™/SPX
Management	SunVTS™, SRS Net Connect, SRM, ALOM
High availability	Sun™ Cluster 3.X, Netra HA Suite
Applications	Sun Java™ Enterprise System software

## Power Supplies

Two required, four for redundancy (hot-swappable). The below measurements are with two power supplies

	DC	AC
Max. input power	1040 W	1000 W
Max. output power	800 W	800 W
Max. power consumption (typ.)	777 W	827 W
Max. input current	23A max.	11A (at 90VAC)
Redundancy	2+2, hot-swap with independent power cords	

## Environment

AC power	90-264V AC (47-63 Hz)
DC power	-40 V to -75 V DC (range), single or dual power sources -48 V or -60 V DC (nominal)
Operating temperature	5° C to 40° C (41° F to 104° F) 5% to 85% relative humidity, noncondensing. Short term: -5° C to 55° C (25° F to 113° F), 5% to 90% relative humidity, noncondensing, but not to exceed 0.024 kg water/kg dry air (0.053 lbs. water/2.205 lbs. dry air)
Nonoperating temperature	-40° C to 70° C (-40° F to 158° F), up to 93% relative humidity, noncondensing, 38° C (100.4° F) max wet bulb
Altitude (operating)	Up to 3000m
Altitude (nonoperating)	Up to 12,000m
Acoustic noise	Declared noise emissions in accordance with ISO 9296: Operating: 7.0 B [LWAd(1B=10dB)] Idling: 7.0 B [LWAd(1B=10dB)]
ETSI	EN 300-019-2-1,2,3, Table 3.1 and 3.1E <ul style="list-style-type: none"> <li>• Except -5° C cold start</li> <li>• Except condensing humidity</li> <li>• Except rain</li> </ul>

Seismic	GR-63-CORE requirements for earthquake Zone 4
---------	---

## Regulatory Agency Certifications

Product Categories	Information Technology Equipment Telecommunications Network Equipment
Safety	CULUS, TUV GS, CB scheme with all national differences CE, CCC, GOST R, S-MARK
EMC	Class A FCC, CE, VCCI, BSMI, C-Tick, MIC, CCC, GOST
Telecommunications (DC only)	Telecordia SR 3580 NEBS Level 3

## Dimensions and Weight

Height	222mm (8.75 in.), 5-RU
Width	440mm (17.3 in.), including bezel
Depth	476mm (18.75 in.) to rear connectors 495mm (19.5 in.) overall maximum depth
Weight	32.2 kg (71 lb.); 36.0 kg (79.4 lb.) fully configured with rackmount kit
Enclosure	Fits into a standard 19-inch-wide rack. Rack kit includes: 19-inch two/four-post. Additional rack kits available: 23-inch two-post, 600mm x 600mm, and 19-inch four-post slide adjustable up to 863.6mm

## Upgrades

Upgrades for the Netra 440 server are available through the Sun™ Upgrade Advantage Program. Contact your local Sun Sales representative for details

## Warranty

Hardware support	One year return to Sun, parts repair and replacement
Software installation	90 days
Call response	Eight hours
Delivery	Return to Sun

Get the details.

Find out more about the Netra 440 — Sun's latest UltraSPARC® IIIi, four-way, NEBS Level 3-certified (DC version) and ETSI-compliant server — by visiting [sun.com/netra](http://sun.com/netra).