

# Netra™ 1290 Server

Powerful, reliable, rack-ready,  
and vertically scalable



## Highlights

- Telcordia Network Equipment Building Standard (NEBS) Level 3 certification, for reliable operation in severe environmental conditions
- Scales up to 12 1.5 GHz UltraSPARC® IV+ dual-core high-performance processors
- 32 MB of external L3 cache per processor, and up to 192 GB of memory, to provide headroom for future growth
- Hot-swap CPU/memory board with Dynamic Reconfiguration, dual-grid (2N) hot-swap AC and DC power supplies, hot-swap disks, and Lights Out Management (LOM) for reduced downtime and easier maintenance
- Compact chassis with 22-inch depth fits a wide range of industry-standard racks, including most 24-inch/600mm two- and four-post racks
- Two integrated Gigabit Ethernet ports and an integrated 320 Mbyte/sec. Ultra3 SCSI port, for high-speed network and disk attachments



The Netra™ 1290 server with new high-performance UltraSPARC IV+ dual-core processors is uniquely positioned in the class of vertically integrated, ruggedized, carrier-grade servers for the telecommunications market. The Netra 1290 server provides exceptional computing power, breakthrough price/performance, and high reliability in a compact, two-per-rack frame. It scales up to 12 UltraSPARC IV+ 64-bit chip multithreading (CMT) processors, with 24 threads and up to 96 GB of memory.

The Netra 1290 server delivers enterprise-class reliability, availability, and serviceability (RAS) features like hot-swap CPU/memory boards, Lights Out Management, front and back LEDs, a removable system configuration card, and dual redundant AC/DC power supplies. Powered by the reliable, scalable Solaris™ Operating System, the NEBS Level 3-certified Netra 1290 server delivers an outstanding solution for the telecommunications industry and other applications in less than ideal environments.

The Netra 1290 server is powered by the fifth-generation, 64-bit UltraSPARC IV+ processor with chip multithreading (CMT) technology. The UltraSPARC IV+ processor has significantly enhanced cores—with two threads per socket core—and two MB on-chip L2 cache, as well as a new off-chip 32 MB L3 cache.

UltraSPARC IV+ processor-based servers deliver up to five times the performance of UltraSPARC III processor-based servers. They provide an even more compelling value when coupled with the Solaris™ 10 OS, which increases system utilization up to 80 percent with features like Solaris Containers. The Solaris 10 OS also delivers superior RAS through Predictive Self-Healing, and provides industry-leading performance, scalability, and security.

NEPs can further increase utilization and reduce costs by consolidating telecom applications. Key applications include operations and maintenance centers for fixed and wireless infrastructure networks, home location registers, mobile/wireless access gateways, database services, application development, and mission-critical business processes.

## Netra 1290 Server Specifications

### Processor

Combine up to 12 1.5 GHz, UltraSPARC IV+ processors

Architecture: Superscalar SPARC™ V9, ECC-protected

Cache per UltraSPARC IV+ processor: Level 1: 64 KB data and 64 KB instruction per pipeline; Level 2: 2 MB on-chip; Level 3: 32 MB external

### System

Processor/memory boards: Up to three CPU/memory boards, with four processors each, and up to 64 GB per board; maximum 12 processors per server

Main memory: Up to 192 GB per system

I/O: Two integrated Gigabit Ethernet ports, one integrated Ultra3-SCSI port, six short PCI slots (32/64-bit, 66 MHz, 3.3 V)

System bandwidth: 9.6 Gbyte/sec. sustained bandwidth, 31.2 Gbyte/sec. aggregate bandwidth

### Storage

Internal: Two 15K, 146-GB Ultra3-SCSI internal disks, DVD+/- RW internal drive, tape drive (optional)

External compatibility: Direct attach to Sun StorEdge™ tape libraries and disk arrays, including: Sun StorEdge™ 3000, 6000, and 9000 families, providing excellent linear scalability

### Resource management (standard)

Solaris Resource Manager, Solaris Bandwidth Manager

### Software

Operating system (minimum version): The minimum OS version for 1.5 GHz UltraSPARC IV+ processors is the Solaris™ 9 (9/05) OS and Solaris™ 10 (1/06) OS

Enterprise software: Sun Java™ Enterprise System

Languages: C, C++, Pascal, FORTRAN, Java™

Networking: ONC/NFS, TCP/IP, SunLink™, OSI, X.25, DCE, Netware

System and network management: Sun Cluster, OpenBoot™ firmware, Solaris Web Start, Solstice DiskSuite™, SunScreen™ Secure Net, VERITAS File System, VERITAS Volume Manager, Solaris Resource Manager, Solaris Bandwidth Manager

### Environmental

DC power: -48 V DC or -60 V DC nominal DC power system, four inputs, 3,980 W max.

AC power: 200-240 V single phase AC, 47-63 Hz, with two 11/20 amp circuits redundant with another two on a separate grid, 3,600 W max.

Optimum: 22° C (72° F) at 45 percent noncondensing humidity

Range: 5° C to 35° C (41° F to 95° F) normal operating at 5-85 percent continuous humidity; -5° C to 55° C at 5-90 percent continuous humidity for <96 hours under limits of Telcordia SR-3580 (NEBS) Level 3

Altitude: Up to 3,048m (10,000 ft.)

### Dimensions and weight

Dimensions: 52.7cm (20.75 in.) — 12 RU H x 44.5cm (17.5 in.) W x 55.8cm (22.0 in.) D, excluding cable arm

Weight: 107-141 kg (236-310 lbs.)

Rackmount enclosure: All Sun racks and most third-party 24-in. (600mm) and deeper racks, two per four-post rack, one per two-post rack

### Regulations (Meets or exceeds the following requirements)

Safety: UL 60950, third edition, USA; CAN/CSA-C22.2 No. 60950-00, Canada; EN 60950, third edition, Europe; S Mark, Argentina; Gost-R, Russia; CB Scheme with all national deviations

Emissions: EN55022 Class A, Europe; EN6100-3-2/3-3, Europe; FCC Class A, USA; ICES-003 Class A, Canada; VCCI Class A, Japan; CNS-13438, (BSMI-Taiwan); AS/NZ 3548 (C-tick), Australia; Gost-R, Russia

Environmental: Telcordia SR-3580, NEBS Level 3

Immunity: All European requirements; EN55024, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, and EN300-386

### Learn More

Learn more about the Netra 1290 server by visiting [sun.com/products-n-solutions/hw/networking/1290](http://sun.com/products-n-solutions/hw/networking/1290).

Regulatory markings: CE, FCC, ICES-003, C-tick, VCCI, Gost-R, BSMI, UL/cUL/S Mark, TUV-GS, MIC

### Key RAS features

Dynamic Reconfiguration (DR) of processor/memory boards, hot CPU upgrades, redundant Sun Firelane interconnect, redundant network connections, hot-swap disks, smart fans, 2N redundant hot-swap power supplies, Auto Diagnosis and Recovery, hardened operating system kernel, hardened I/O drivers, Systems Configuration Card, proactive self diagnostics, end-to-end data integrity including ECC, CPU off-lining, memory page retirement, after-kernel hot patching, and cluster support.

### Remote services

SRS Net Connect

### Services

Sun provides a worldwide services portfolio that helps enable customers to develop a Sun Netra 1290 server solution designed for reliability, availability, serviceability, and growth. Sun can assist you to build an architecture plan, assess your current IT infrastructure, improve staff skills and efficiencies, and properly install your Sun Netra 1290 system in your environment. Services highlights include: Sun Preventive Services, Enterprise Installation Services, Learning Services, Architecture Services, Migration/ Consolidation Services, Sun Managed Services, and the Accredited Installation Provider program. For more information on Sun Services, please visit [sun.com/service](http://sun.com/service).