Datasheet

Origin™ 200

Scalable Multiprocessing Server with an Industry-Leading Combination of Price/Performance, I/O Bandwidth, RAS, and Investment Protection

Sharing and delivering information simply and seamlessly, when and where it is needed, are essential to business success. The fundamental nature of information exchange is changing radically—constantly accelerating in immediacy, diversity, and density. With UNIX® tools and performance, scalability in all dimensions, interoperability services, and an entry price comparable to PC-based servers, Origin 200 makes perfect business sense.

Grows as Your Business Grows

Modular in design, Origin 200 allows you to pay only for what you need now—with no additional cost for unused potential. Unlike other symmetric multiprocessing (SMP) servers that accommodate additional processors without growing I/O bandwidth, the Origin 200 NUMA architecture adds bandwidth and slot capacity by adding a second tower. Like typical SMPs, however, Origin 200 uses a simple shared-memory programming model provided by the NUMAlink™ interconnect, which extends shared memory between two towers.

Quick and Easy Integration and Administration

Origin 200 is easy to set up and administer and includes comprehensive software tools to guide the initial setup and configuration tasks. From initial login, SGI™ Internet Gateway software guides you through networking and file setup tasks and makes it possible to interact with and administer the server through a Web browser from any system on your intranet.

Out-of-the-Box Productivity

SGI supports a broad spectrum of complete prepackaged solutions for Origin 200 designed to deliver immediate productivity and empower your business. Application areas such as file serving, Internet serving, media streaming, high availability, image rendering, and scientific or technical computing have optimized available hardware and software packages. Origin solution templates allow you to capitalize on field-tested success and show immediate results by eliminating configuration guesswork.

Seamless Interoperability for a Multiplatform Environment

With interoperability support for PC and Macintosh® filesystems, Origin 200 fits seamlessly into your multiplatform computing environment. Network integration is accomplished easily through the use of optional Windows®, NetWare™, Samba, and AppleShare® services.

Reliability, Availability, and Serviceability—Critical to Your Success

Resilient to failure, Origin 200 features embedded environmental sensors and a system controller that manages power and cooling systems locally or to a remote location. The addition of the optional IRIS FailSafe™ software provides failover capability between two servers to ensure uninterrupted availability for your critical enterprise applications. Origin 200 servers feature ECC memory and cache, dual SCSI controllers, hot-pluggable drives, and optional redundant power configurations to ensure that your uptime is maximized.

Origin 200
Technical Specifications

Processor Data

• Microprocessor	64-bit MIPS® RISC R10000® 360 MHz 64-bit MIPS RISC R12000™ 270 MHz
• Primary caches	32KB two-way set-associative on-chip instruction cache 32KB two-way set-associative on-chip data cache
• Secondary cache	360 MHz: 4MB ECC cache/processor 270 MHz: 4MB ECC cache/processor

Single-Tower Configuration

• CPU capacity	1 to 2 R10000 or R12000 CPUs per tower
• Memory capacity	256MB to 2GB ECC protected
• Cache coherency	Fully in hardware
• Interleaving	4-way per bank
• I/O bandwidth	1.15GB/sec sustained, 1.44GB/sec peak
• Memory bandwidth	630MB/sec sustained, 720MB/sec peak
• I/O slots	3 full-size 32/64-bit 33 MHz 3.3/5 V PCI, 200MB/sec sustained 5 XIO, 7 PCI slots with GIGAchannel™
• Internal storage channels	1 40MB/sec Fast/Wide Ultra SCSI and 1 20MB/sec Fast/Narrow Ultra SCSI
• Storage capacity	6 3.5" fixed media hot-pluggable drive bays, 2 5.25" removable media drive bays
• Communication	1 10Base-T/100Base-TX, 2 460Kb/sec serial ports, 1 parallel port
• Cooling	3 variable-speed fans

Dual-tower system also available

GIGAchannel

• Bus type	XIO, PCI
• XIO	Additional 5 slots
• XIO bandwidth	1.15GB/sec sustained, 1.44GB/sec peak
• PCI	Additional 4 slots
• PCI bandwidth	200MB/sec sustained, 267MB/sec peak

PCI Options

Fast/Wide Ultra SCSI differential, Fast/Wide Ultra SCSI single-ended, 10Base-T/100Base-TX Ethernet, FDDI dual attach, Fibre Channel, 8-port audio, Gigabit Ethernet, OC3, OC12

XIO Option Cards

4-port Ultra SCSI, 1-port Fibre Channel (copper or fiber), 4-port 100Base-TX with 6 460Kb/sec serial ports, 4-port ATM OC3, HIPPI serial (200MB/sec full duplex), 6U and 9U VME, DIVO, GSN, FDDI dual attach

Mass Storage

• Interfaces	Ultra SCSI and Fibre Channel
• Maximum bandwidth	40MB/sec Ultra SCSI, 100MB/sec Fibre Channel
• Device capacity	Ultra SCSI: 9.1GB, 18.2GB, Fibre Channel: 9.1GB, 18.2GB, 36 GB
• Tape	4 mm DDS4, DLT
• CD-ROM	40x internal
• Fibre Channel	SGI™ TP9100, 12 x 3.5" devices
• RAID	TP9100, Up to nine TP9100s per rack (108 drives, 18GB, 36GB, 73GB)
• Maximum capacity	11.9TB dual tower (Ultra SCSI) 67.3TB dual tower (Fibre Channel) 265TB dual tower (Fibre Channel RAID)

Software

• System	IRIX® 6.5 ASE, X/OPEN XPG4 BASE 95, IEEE POSIX 1003.2, and 1003.1b, 1003.1c FIPS 151-2, UNIX® System V.4, 4.3 BSD extensions, MIPS ABI, SVID issue 3, X11R6, Motif™ Window Manager 1.2, IRIS GL™, OpenGL®
• Networking	TCP/IP, NFS™ V2/V3, RSVP, DHCP, Bulk Data Service (BDSpro), NetVisualyzer™
• Server	XFS™ 64-bit journaled filesystem with guaranteed rate I/O, system MIB (Provision), software distribution
• Web server	Netscape® Enterprise server, Netscape FastTrack Web server, SGI Internet Gateway
• Propel	IRIS NetWorker, IRIXPro™ Systems Management Toolbox, Performance Co-Pilot™ system and network performance monitoring software
• Compilers	ANSI C, C++, Fortran 77, Ada, Pascal, Power C Accelerator (PCA), Power Fortran 77, Fortran 90, Power Fortran 90
• PC/Macintosh Integration	Syntax TotalNET Advanced Server (TAS), supports Windows® 95 and Windows NT® (SMB), NetWare, AppleShare, Samba for IRIX
• Security	Trusted IRIX™ version 6.x with B1 security, Commercial Security Pack (CSP)
• High availability	IRIS FailSafe (optional)

Support and Warranty

One-year hardware warranty with advanced parts exchange; remote diagnostics support available

Dimensions and Weights

• Tower dimensions	23" H, 26.5" D, 9" W (58.4 cm H, 67.3 cm D, 22.8 cm W)
• Rack-mountable	19" customer supplied rack or SGI rack
• Rack-mounted dimensions	6.8" H, 25" D, 17.4" W (17.3 cm H, 63.5 cm D, 44.2 cm W)
• Weight	59 lb (27 kg) minimum

Environmental (Nonoperating)

• Temperature	-20 ° to +60 °C
• Humidity	10% to 95% noncondensing
• Altitude	40,000 MSL

Environmental (Operating)

• Temperature	+5 ° to +35 °C
• Humidity	10% to 80% noncondensing
• Altitude	10,000 MSL
• Noise	55 dBa

Electrical and Power

• Voltage	110/220 VAC 1 Phase auto-sensing worldwide power supply
• Power supply	Standard 483 W, Optional Redundant Power Supply (RPS)
• Frequency	50/60 Hz
• Heat dissipation	2,300 BTU/hr, maximum
• Electrical service	100/110 VAC @ 15A, 200/220 VAC @ 10A
• Service type	U.S., Japan, NEMA 5-15P (110 V), 6-15P (220 V)

Regulatory

Origin 200 is classified FCC Class A, CE, CSA, TUV, UL, CISPR A, and VCCI Class 2 certified

Configuration Summary

	Single-tower Origin 200	Dual-tower Origin 200
R12000	1 to 2	2 to 4
Physical memory, MB ECC	256 to 2048	512 to 4096
Disk capacity, internal	216GB	432GB
Standard I/O		
5.25" bays	2	4
3.5" hot plug bays	6	12
Base I/O		
• Serial ports	2	4
• Parallel ports	1	2
• 10Base-T/100Base-TX Ethernet	1	2
• Internal Fast/Wide Ultra SCSI, 40MB/sec	1	2
• Internal Fast/Narrow Ultra SCSI, 20MB/sec	1	2
• PCI 32/64-bit slots standard	3	6
GIGAchannel		
PCI slots	7	10/14*
XIO slots	5	5/10*

**Origin 200 GIGAchannel*

Corporate Office
1600 Amphitheatre Pkwy.
Mountain View, CA 94043
(650) 960-1980
www.sgi.com

North America 1(800) 800-7441
Latin America 1(650) 933-4637
Europe (44) 118.925.75.00
Japan (81) 3.5488.1811
Asia Pacific (65) 771.0290

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