Datasheet

Origin™ 200 GIGAchannel™

Multiprocessing Server with Multiple Gigabyte-per-Second Channels Provides I/O on Demand for Bandwidth-Intensive Applications

High I/O and Attractive Price/Performance

The unbridled growth of enterprise data aggressively demands more of your networking infrastructure and creates an urgent need for servers with a scalable I/O architecture that supports higher bandwidth networking standards.

Origin™ 200 GIGAchannel™ is the first and only workgroup server to cost-effectively meet the challenge head-on—embracing the emerging standards of Gigabit Ethernet and 100MB-per-second Fibre Channel. The fast memory and the expandable I/O of Origin 200 GIGAchannel are made possible by the SGI NUMA-based modular system design, the same architecture as that of the top-of-the-line Origin™ 2000 server. Origin 200 GIGAchannel enables multidimensional scalability and tool-free expansion and redeployment within minutes. With the addition of gigabyte-per-channel throughput, high-performance I/O channels are now a cohesive architectural element across the entire line of Origin™ servers.

Unprecedented Speed for Data-Intensive Environments

For performance, Origin 200 GIGAchannel comes standard with five XIO slots, each capable of supporting the full bandwidth of XIO at an industry-leading sustainable rate of 1250MB per second. For the growing number of data-intensive environments that mandate gigabyte data-throughput rates, Origin 200 GIGAchannel can handle the load. Origin 200 GIGAchannel also comes standard with seven 64-bit PCI slots—three slots on one bus and four slots on a second bus—providing the needed connections for popular PCI additions. Like other models of the Origin 200 server, Origin 200 GIGAchannel is available in both deskside and rack-mountable configurations.

Sustained and Reliable Bandwidth and Throughput

Today, fast processing power is a given system requirement, but a more accurate and useful measurement is sustained and reliable application performance. System bandwidth and total I/O throughput are the necessary factors for success, and Origin 200 GIGAchannel delivers both. While most of today's SMP servers give you fast processors in yesterday's I/O systems, Origin 200 GIGAchannel delivers industry-leading sustainable throughput for bandwidth-hungry solutions such as scientific and technical computing, media streaming for audio and video, computer-based training, large database decision support, high availability, and multiplatform networking.

Easy Upgrades Offer Investment Protection

For customers with existing Origin 200 server solutions, upgrades to Origin 200 GIGAchannel are available to provide the performance enhancements and scalable I/O demanded by today's applications. With high-bandwidth XIO available on all Origin servers, you can now focus on processor expandability needs when deciding between Origin 200 GIGAchannel or the mid- to high-range Origin 2000 system. Consistent architecture and application integrity throughout the Origin server line protect your business investment and provide multiple expansion paths to keep pace with your business growth and data demands.

Origin 200 GIGAchannel 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 (4 R10000 or R12000 CPUs per system)
• 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	7 32/64-bit 33 MHz 3.3/5 V PCI slots, 5 XIO slots
• Internal storage channels	140MB/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

I/O Subsystem

• Bus type	XIO, PCI
• XIO	5 slots
• XIO bandwidth	1.26GB/sec sustained aggregate, 1.6GB/sec peak
• PCI	7 slots
• PCI bandwidth	200MB/sec sustained, 267MB/sec peak x 2 PCI buses

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, 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, 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, 36GB
• 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)* 265.5TB 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 (two units) (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 (two units) (17.3 cm H, 63.5 cm D, 44.2 cm W)
• Weight	120 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 GIGAchannel	Dual-tower Origin 200 GIGAchannel
• 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	7	10/14*
• XIO slots	5	5/10*

**With optional second GIGAchannel upgrade*

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