

## 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 ccNUMA 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 CrayLink™ 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

<b>Processor Data</b> • Microprocessor 64-bit MIPS® RISC R12000™ 270 MHz 64-bit MIPS® RISC R12000™ 360 MHz • Primary caches 32KB two-way set-associative on-chip instruction cache 32KB two-way set-associative on-chip data cache • Secondary cache 270 MHz: 4MB ECC cache/processor 360 MHz: 4MB ECC cache/processor	<b>Mass Storage</b> • 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 • Tape 8 mm, 4 mm DDS2 and DDS3, DLT 40x internal • CD-ROM • SCSI RAID Challenge® RAID, 20 x 3.5" devices, up to 4 drive arrays per rack [80 drives, 4.3GB or 8.8GB] • Fibre Channel Origin Fibre Vault, 10 x 3.5" devices • RAID Up to 11 Fibre Vaults per rack [110 drives, 9.1GB or 18.2GB] • Maximum capacity 1.5TB dual tower [Ultra SCSI] 11.9TB dual tower [Fibre Channel] 46.9TB dual tower [Fibre Channel RAID]	<b>Dimensions and Weights</b> • 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																																																			
<b>Single-Tower Configuration</b> • CPU capacity 1 to 2 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 • Internal storage channels 5 XIO, 7 PCI slots with GIGAchannel™ 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	<b>Software</b> • 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], NetVisualizer™ • 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 BI security, Commercial Security Pack [CSP] • High availability IRIS FailSafe [optional for dual tower]	<b>Environmental [Nonoperating]</b> • Temperature -20° to +60 °C • Humidity 10% to 95% noncondensing • Altitude 40,000 MSL																																																			
<b>GIGAchannel</b> • 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	<b>Environmental [Operating]</b> • Temperature +5° to +35 °C • Humidity 10% to 80% noncondensing • Altitude 10,000 MSL • Noise 55 dBA																																																				
<b>PCI Options</b> Fast/Wide Ultra SCSI differential, Fast/Wide Ultra SCSI single-ended, 10Base-T/100Base-TX Ethernet, FDDI single and dual attach and UTP, Fibre Channel [for disk], ATM [third party], 8-port audio, Gigabit Ethernet, OC3, OC12	<b>Electrical and Power</b> • 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]																																																				
<b>XIO Option Cards</b> 4-port Ultra SCSI, 2-port Fibre Channel [copper or fiber], 4-port 100Base-TX with 6 460Kb/sec serial ports, 4-port ATM OC3, 1-port ATM OC12, HIPPI serial [200MB/sec full duplex], 6U and 9U VME, DIVO, GSN	<b>Regulatory</b> Origin 200 is classified FCC Class A, CE, CSA, TUV, UL, CISPR A, and VCCI Class 2 certified																																																				
	<b>Support and Warranty</b> One-year hardware warranty with advanced parts exchange; remote diagnostics support available	<b>Configuration Summary</b> <table border="1"> <thead> <tr> <th></th> <th>Single-tower Origin 200</th> <th>Dual-tower Origin 200</th> </tr> </thead> <tbody> <tr> <td>R10000 or R12000</td> <td>1 to 2</td> <td>2 to 4</td> </tr> <tr> <td>Physical memory, MB ECC</td> <td>256 to 2048</td> <td>256 to 4096</td> </tr> <tr> <td>Disk capacity, internal</td> <td>109.2GB</td> <td>218.4GB</td> </tr> <tr> <td><b>Standard I/O</b></td> <td></td> <td></td> </tr> <tr> <td>5.25" bays</td> <td>2</td> <td>4</td> </tr> <tr> <td>3.5" hot plug bays</td> <td>6</td> <td>12</td> </tr> <tr> <td><b>Base I/O</b></td> <td></td> <td></td> </tr> <tr> <td>• Serial ports</td> <td>2</td> <td>4</td> </tr> <tr> <td>• Parallel ports</td> <td>1</td> <td>2</td> </tr> <tr> <td>• 10Base-T/100Base-TX Ethernet</td> <td>1</td> <td>2</td> </tr> <tr> <td>• Internal Fast/Wide Ultra SCSI, 40MB/sec</td> <td>1</td> <td>2</td> </tr> <tr> <td>• Internal Fast/Narrow Ultra SCSI, 20MB/sec</td> <td>1</td> <td>2</td> </tr> <tr> <td>• PCI 32/64-bit slots standard</td> <td>3</td> <td>6</td> </tr> <tr> <td><b>GIGAchannel</b></td> <td></td> <td></td> </tr> <tr> <td>PCI slots</td> <td>7</td> <td>10/14*</td> </tr> <tr> <td>XIO slots</td> <td>5</td> <td>5/10*</td> </tr> </tbody> </table> <p>*Origin 200 GIGAchannel</p>		Single-tower Origin 200	Dual-tower Origin 200	R10000 or R12000	1 to 2	2 to 4	Physical memory, MB ECC	256 to 2048	256 to 4096	Disk capacity, internal	109.2GB	218.4GB	<b>Standard I/O</b>			5.25" bays	2	4	3.5" hot plug bays	6	12	<b>Base I/O</b>			• 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	<b>GIGAchannel</b>			PCI slots	7	10/14*	XIO slots	5	5/10*
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