Reliable High Density
AMD Opteron™
Rack-Mount Solutions

SGI® Half-Depth Servers



KEY FEATURES

Patented half-depth, back-to-back mounted chassis achieves 2x density per cabinet

Full range of dual- and quad-core configurations for up to 704 processing cores

High drive count configurations ideal for bulk storage deployments—up to 336TB per cabinet

Energy-efficient AC and DC power technologies reduce heat output and power costs by up to 67%

Front-facing ports and clean cabling reduce service time up to 75%

Open architecture, flexible component choices support specific business needs and budget

Outstanding combination of price, capacity, and performance

Integrated Roamer™ lights-out remote management
Ships fully cabled and racked for quick, easy, plug-and-play deployment

SGI's half-depth, rack-mount servers incorporate a unique, industry-leading approach to thermal management and power efficiency to enable power savings and higher levels of reliability in any data center environment. Our half-depth servers are available in a broad range of configurations from 1U to 3U high, and are mounted back-to-back to achieve twice the density over competitors' solutions.

With processing performance of up to 704 cores in just one cabinet and storage capacity of up to 336TB per cabinet, SGI's half-depth, high density systems are ideal for IT environments where space and power are constrained. Our high-efficiency AC and DC power technologies reduce overall power consumption and heat output in any legacy data center, while increasing uptime and reliability.

Flexibility and Scalability

SGI servers are highly configurable and built-to-order to address specific data center needs and eliminate unnecessary costs. Based on an open architecture approach using AMD Opteron processors, SGI rack-mount servers are available in a full range of customizable configurations.

High Efficiency

SGI's unique approach to thermal management begins with each component inside our servers. Leveraging high-efficiency power supplies, memory, and AMD Opteron processors, our patented solutions draw the lowest possible wattage and reduce heat output. With innovative AC and DC power alternatives at the system, cabinet and data center level, our award-winning power reduction techniques enable any legacy data center to immediately take advantage of reduced power costs.

Space Saving Density

Our unique half-depth form factor enables back-to-back mounting to achieve high density levels of up to 88 single- or dual-processor compute servers or networking gear. With the ability to support today's fastest dual- and quad-core AMD Opteron processors, one cabinet can generate the compute power—and effectively cool—704 processing cores. Alternatively, for bulk storage applications a 44U cabinet populated with our 12-drive S3012 storage servers mounted back-to-back delivers up to 336TB of bulk storage.

Improved Serviceability

Time-saving Roamer™ remote management technology helps reduce administrative resources and overhead. A single, highly intuitive interface provides effortless local or remote control with total lights-out management. Ports, connectors and cables are located in front for rapid service and maintenance.

AMD Opteron™ Processors

SGI servers leverage the newest AMD Opteron quad-core processors, delivering low peak power draws combined with high workload performance. With leading price performance per watt, our AMD-based solutions are available with registered DDR2 memory for a robust and reliable solution.

World-Class Service and Support

SGI products are fully backed by a range of warranty and support offerings, and our Professional Services team is available to help with solutions outside traditional support packages in areas ranging from HVAC, power and network design to customer-specific operating system solutions.

sgi®

SGI Half-Depth Servers

Reliable High Density AMD Opteron Rack-Mount Solutions

Configuration Specifications

					
SERVER SERIES	1000	2000		3000	
Model Number	C1001/C1002	C2000/C2002/C2004	C2005	C3001	S3006/S3009/S3012
Chassis Profile	1U half-depth	2U half-depth	2U half-depth	3U half-depth	3U half-depth
Processors	Up to two dual-core AMD Opteron 2200 or quad-core 2300 Series processors	Up to two dual-core AMD Opteron 2200 or quad-core 2300 Series processors	Up to two dual-core AMD Opteron 2200 or quad-core 2300 Series processors	Up to two dual-core AMD Opteron 2200 or quad-core 2300 Series processors	Up to two dual-core AMD Opteron 2200 or quad-core 2300 Series processors
Max. Cores	Eight	Eight	Eight	Eight	Eight
Chipset	NVIDIA nForce Pro 3600	NVIDIA nForce Pro 3600	NVIDIA nForce Pro 3600	NVIDIA nForce Pro 3600	NVIDIA nForce Pro 3600
Memory	C1001: Up to 128GB (16 1GB, 2GB, 4GB or 8GB 667MHz DDR2 DIMMs) C1002: Up to 64GB (eight DIMMs)	Up to 128GB (16 1GB, 2GB, 4GB or 8GB 667MHz DDR2 DIMMs)	Up to 128GB (16 1GB, 2GB, 4GB or 8GB 667MHz DDR2 DIMMs)	Up to 128GB (16 1GB, 2GB, 4GB or 8GB 667MHz DDR2 DIMMs)	Up to 128GB (16 1GB, 2GB, 4GB or 8GB 667MHz DDR2 DIMMs)
Hard Disk Drives & Max. Capacity	SAS or SATA II hot-swap drives C1001: one 3.5" (max. 1TB) or two 2.5" (max. 600GB) C1002: two 3.5" (max. 2TB) or four 2.5" (max. 1.2TB)	3.5" SAS or SATA II drives C2000: two internal drives (max. 2TB) C2002: two hot-swap drives (max. 2TB) C2004: four hot-swap drives (max. 2TB)	SAS or SATA II hot-swap drives in two modular zones: (max. 5TB) Upper zone: two 3.5", four 3.5", two 3.5" + four 2.5" or eight 2.5" Lower zone: one 3.5", two 2.5" or one internal 3.5"	One 3.5" hot-swap SAS or SATA II drive (max. 1TB)	3.5" hot-swap SAS or SATA II drives S3006: six drives (max. 6TB) S3009: nine drives (max. 9TB) S3012: 12 drives (max. 12TB)
RAID Card Levels (Optional)	JBOD, 0, 1	C2000: JBOD, 0, 1 C2002: JBOD, 0, 1 C2004: JBOD, 0, 1, 5, 6, 10	JBOD, 0, 1, 5, 6, 10, 50, 60	N/A	JBOD, 0, 1, 5, 6, 10
Expansion Cards	C1001: One PCI Express slot on riser C1002: N/A	C2000/C2002: Up to two slots on risers C2004: One PCI Express slot on riser	Up to five PCI Express low-profile slots or one slot on riser (configuration dependent)	Up to six slots	S3006/S3009: Up to five slots S3012: One PCI Express slot on riser*
Networking, Onboard	Dual GigE C1001: Broadcom 5721 C1002: Marvell 88E1116	Dual GigE (Broadcom 5721 or Marvell)	Dual GigE (Broadcom 5721 or Marvell)	Dual GigE (Broadcom 5721 or Marvell)	Dual GigE (Broadcom 5721 or Marvell)
Video, Onboard	C1001: ATI ES1000, 16MB C1002: Aspeed AST2050	ATI ES1000, 16MB	ATI ES1000, 16MB	ATI ES1000, 16MB	ATI ES1000, 16MB
Roamer™ Remote Management Card/LCD (Optional)	C1001: Serial or IP + Keyboard, Video and Mouse (KVM) C1002: N/A (Integrated IPMI 2.0 + KVM)	Serial or IP + Keyboard, Video and Mouse (KVM)	Serial or IP + Keyboard, Video and Mouse (KVM)	Serial or IP + Keyboard, Video and Mouse (KVM)	Serial or IP + Keyboard, Video and Mouse (KVM)
IPMI Remote System Management (Optional)	IPMI 2.0	IPMI 2.0	IPMI 2.0	IPMI 2.0	IPMI 2.0
Power Supply	Auto-switching 100-240 VAC (50-60 Hz) or -48 VDC	Auto-switching 100-240 VAC (50-60 Hz) or -48 VDC	Auto-switching 100-240 VAC (50-60 Hz) or -48 VDC	Auto-switching 100-240 VAC (50-60 Hz) or -48 VDC	S3006: 550W or 750W 1+1 redundant auto-switching 100-240 VAC (50-60 Hz) S3009/S3012: auto-switching 100-240 VAC (50-60 Hz) or -48 VDC
Chassis Mount	SGI cabinets with back-to-back mounting for double density; standard 19" rack compatible	SGI cabinets with back-to-back mounting for double density; standard 19" rack compatible	SGI cabinets with back-to-back mounting for double density; standard 19" rack compatible	SGI cabinets with back-to-back mounting for double density; standard 19" rack compatible	SGI cabinets with back-to-back mounting for double density; standard 19" rack compatible
Dimensions (HxWxD)	C1001: 1.75" x 17.6" x 15.5" C1002: 1.75" x 17.6" x 16.1"	3.5" x 17.6" x 15.5"	3.5" x 17.6" x 15.5"	5.25" x 17.6" x 15.5"	5.25" x 17.6" x 15.5"

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