

Reliable
High Performance
Intel® Xeon®
Rackmount Solutions

KEY FEATURES

- Top performance with Intel® Xeon® Processors
- Full range of quad- and six-core processor configurations for up to 1104 cores per cabinet
- Perfect for hot aisle/cold-aisle data centers
- Industry-standard 19" rack compatible
- Eco-Logical™ AC power technologies reduce heat output and power costs
- Outstanding combination of price, capacity, and performance
- Integrated IPMI lights-out remote management
- Ships fully cabled and racked for quick, easy, plug-and-play deployment

Rackable™ Standard-Depth Servers

SGI Rackable™ standard-depth, rackmount servers and clusters deliver top value and performance, based on the winning combination of the latest Intel® Xeon® Processor 5600 series-based architecture and SGI expertise in designing and delivering the most advanced performance computing systems available. Rackable servers support up to 144GB of memory per node in an ultra-dense architecture with up to 24 cores in a slim 1U form factor. Add to this support for up to 40 Gb/sec QDR InfiniBand, six-core processors and DDR3 memory, and you have some of the most powerful cluster solutions available.

Flexible, High Density Configurations

Rackable standard-depth servers mount in industry-standard 19" racks, achieving high density levels of up to 92 dual-processor servers per 46U rack. With the ability to support today's fastest six-core Intel® Xeon® processors, one cabinet can deliver the compute power of—and effectively cool—1104 processing cores.

Rackable C2112-4TY14 compute nodes deliver the ultimate in cluster density, packing four 12-core nodes into a slim 2U form factor with shared power and cooling. The powerful C2108-TY10 and C3018-TY11 are ideal cluster head nodes or stand-alone departmental servers, offering additional extensibility and I/O options. Rackable servers run industry-standard operating systems, with a choice of SUSE® Linux Enterprise Server, Red Hat® Enterprise Linux® or Microsoft® Windows® HPC Server 2008. In addition, the SGI® ProPack™ 6 for Linux® includes resource management tools and enhanced development libraries like Flexible File Input/Output (FFIO) which provides programmers with fine-grained control of I/O transfers to maximize performance.



Leading Efficiency

SGI's unique approach to thermal management begins with each component inside our servers. Leveraging high-efficiency power supplies, memory, and Intel® Xeon® 5600 series processors, our Eco-Logical™ solutions draw the lowest possible wattage and reduce heat output. Our award-winning power reduction techniques enable any legacy data center to immediately take advantage of reduced power costs.

Simplified Serviceability

Time-saving IPMI 2.0 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.

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.



Rackable Standard-Depth Servers

Reliable, High Performance Intel® Xeon® Rackmount Solutions

Configuration Specifications

www.sgi.com/servers

SERVER	C1103	C1104	C2108	C2112	C3108
Model Number(s)	C1103-TY12	C1104-2TY9	C2108-TY10	C2112-4TY14	C3108-TY11
Chassis Profile	1U standard-depth	1U standard-depth	2U standard-depth	2U standard-depth	3U standard-depth
Servers/System	One dual-socket	Two dual-socket	One dual-socket	Four dual-socket (hot-pluggable)	One dual-socket
Chipset	Intel 5520	Intel 5520	Intel 5520	Intel 5520	Two Intel 5520
Max. Processors	Two Intel® Xeon® quad- or six-core 5500 or 5600 series	Four Intel® Xeon® quad- or six-core 5500 or 5600 series (two/server)	Two Intel® Xeon® quad- or six-core 5500 or 5600 series	Eight Intel® Xeon® quad- or six-core 5500 or 5600 series (two/server)	Two Intel® Xeon® quad- or six-core 5500 or 5600 series
Max. Cores	12	24 (12/server)	12	48 (12/server)	12
Max. Memory	96GB in 12 slots	192GB in 24 slots (96GB and 12 slots/server)	144GB in 18 slots	384GB in 48 slots (96GB and 12 slots/server)	144GB in 18 slots
Memory Type	1333/1066/800 MHz DDR3 ECC reg.	1333/1066/800 MHz DDR3 ECC reg.	1333/1066/800 MHz DDR3 ECC reg.	1333/1066/800 MHz DDR3 ECC reg.	1333/1066/800 MHz DDR3 ECC reg.
Max. Hard Disk Drives & Max. Capacity	Three 3.5" (max. 6TB) SAS or SATA II hot-swap drives	Four 3.5" (max. 8TB) SAS or SATA II hot-swap drives (two/server)	Eight 3.5" (max. 16TB) SAS or SATA II hot-swap drives	Twelve 3.5" (max. 24TB) SAS or SATA II hot-swap drives (three/server)	Eight 3.5" (max. 16TB) SAS or SATA II hot-swap drives
RAID Card Levels (Optional)	JBOD, 0, 1, 10	JBOD, 0, 1 (LSI SAS3041)	JBOD, 0, 1, 5, 6, 10	JBOD, 0, 1, 5	JBOD, 0, 1, 5, 6, 10
Expansion Slots	<ul style="list-style-type: none"> Two PCI-E 2.0 x16, or One PCI-E 2.0 x16 and two PCI-E 2.0 x8, or Four PCI-E 2.0 x8. Additional PCI-E 2.0 x4 low-profile slot available in all three configurations.	Two low profile PCI-E 2.0 x16 on risers (one/server)	Two PCI-E 2.0 x8, one PCI-E x4 and two PCI-X 133	Four PCI-E 2.0 x16 low-profile (one/server)	Two PCI-E 2.0 x16, four PCI-E 2.0 x8 and one PCI-E 2.0 x4 (dedicated to SAS RAID card)
Networking, Onboard	Dual GigE (Intel 82576)	Dual GigE (Intel 82576)/server and optional QSFP DDR or QDR (Mellanox ConnectX)/server	Dual GigE (Intel 82576)	Dual GigE (Intel 82574L) and optional QSFP QDR InfiniBand (Mellanox ConnectX)/server	Dual GigE (Intel 82576)
IPMI Remote Management (Optional)	Integrated IPMI 2.0	Integrated IPMI 2.0 + Keyboard, Video and Mouse (KVM)	Integrated IPMI 2.0 + Keyboard, Video and Mouse (KVM)	Integrated IPMI 2.0 + Keyboard, Video and Mouse (KVM)	Integrated IPMI 2.0 + Keyboard, Video and Mouse (KVM)
Power Supply	Auto-switching 100–240 VAC (50–60Hz)	Auto-switching 100–240 VAC (50–60 Hz)	720W 1+1 redundant auto-switching 100–240 VAC (50–60 Hz)	1200–1400 1+1 redundant auto-switching 100–240 VAC (50–60 Hz)	800W 1+1 redundant auto-switching 100–240 VAC (50–60 Hz)
Chassis Mount	Standard 19" rack compatible rail mount	Standard 19" rack compatible rail mount	Standard 19" rack compatible rail mount	Standard 19" rack compatible rail mount	Standard 19" rack compatible rail mount
Dimensions (HxWxD)	1.7" x 17.2" x 28.2"	1.7" x 17.3" x 27.8"	3.4" x 16.9" x 27.8"	3.5" x 17.2" x 28.5"	5.2" x 17.7" x 25.6"

Rackable Server Software Support

System Software	<ul style="list-style-type: none"> SUSE® Linux® Enterprise Server 10 or 11, Red Hat® Enterprise Linux® 5 or Microsoft® Windows HPC Server 2008
Software Solution Stack	<ul style="list-style-type: none"> SGI ProPack™ for Linux® Cluster Management Software: SGI ISLE™ Cluster Manager, SGI Management Center Job Scheduling/ Workload Management: Altair® PBS Professional™ Fabric Management: SGI InfiniBand Fabric Management Filesystem: XFS™ 64-bit journaled file system (avail. on SUSE Linux OS), CXFS™ shared filesystem for SANs
Development Tools	<ul style="list-style-type: none"> Programming Languages: Intel C++ Compiler, Intel Fortran Compiler, GNU compilers Debuggers: Intel Debugger (idb) included with Intel compilers, GNU Debugger (GDB), Rogue Wave Software TotalView, Rogue Wave Software MemoryScape, Allinea DDT, Intel Thread Checker Libraries: Intel Math Kernel Library, Intel Integrated Performance Primitives, Intel Threading Building Blocks Parallel Programming: SGI Message Passing Toolkit, SGI Array Services and Secure Array Services, Intel MPI Library, OpenMP included with Intel compilers, OpenMPI, Intel Trace Analyzer and Collector Performance Analysis: Intel VTune Performance Analyzer, Intel Trace Analyzer & Collector

Corporate Office
46600 Landing Parkway
Fremont, CA 94538
tel 510.933.8300
fax 408.321.0293
www.sgi.com

North America +1 800.800.7441
Latin America +55 11.5185.2860
Europe +44 118.912.7500
Asia Pacific +61 2.9448.1463

