SGI Rackable Standard-Depth Servers

Reliable, High Performance Intel® Xeon® Processor E5-2600 v2 Family Rackmount Solutions

Key Features

Full range of four- to twelve-core Intel® Xeon® processor E5-2600 v2 family factory-integrated configurations

Open architecture and flexible component choices

Fine-grained power optimization available

SGI Rackable standard-depth, rackmount servers and clusters deliver top value and performance. Their winning combination of the latest Intel® Xeon® processor E5-2600 v2 family architecture and SGI's expertise in designing and delivering the most advanced performance computing systems available makes this possible. Rackable servers support up to 512GB of memory per node in an ultra-dense architecture with up to 48 cores per 1U. Add to this support for FDR and QDR InfiniBand, 12-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 84 dual-processor servers per 42U rack. With the ability to support today's fastest eight-core Intel® Xeon® processors, one cabinet can deliver the compute power of—and effectively cool—2,016 processing cores.

Rackable C2112 compute nodes deliver the ultimate in cluster density, packing four 24-core nodes into a slim 2U form factor with shared power and cooling. The powerful C2108-RP2 is an ideal cluster head node or standalone departmental server, offering additional extensibility and I/O options. The C2110G-RP5-P also supports up to six NVIDIA® Tesla™ K-class GPU or Intel® Phi modules.

Rackable servers run industry-standard operating systems, with a choice of SUSE® Linux® Enterprise Server or Red Hat® Enterprise Linux. In addition, SGI Performance Suite includes resource management tools and enhanced development libraries. SGI Management Suite provides full system management and monitoring for both data center and High Performance Computing (HPC) environments.

SGI Rackable Clusters

SGI offers a range of factory integration options to help get customers productive sooner. From complete factory integration where SGI labels, tests and configures every system in the cluster, to delivering individual, standalone servers, SGI delivers exactly what users require based on their unique business needs. With a set of predefined parameters, SGI delivers factory-integrated solutions which take the uncertainty out of an optimized clustered environment.

World-Class Service and Support

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

Complementary Storage Solutions

We offer SGI InfiniteStorage servers with integrated storage, as well as a rich portfolio of RAID, JBOD, NAS and SAN external storage solutions that are the perfect complement to Rackable servers. Our InfiniteStorage JBOD line is particularly popular, as these systems provide both cost-effective and high-performance methods of attaching storage to Rackable servers.

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Configuration Specifications

sgi.com/servers

Server	C1104G	C1110	C2110G	C2108	C2112	
Model Number	C1104G-RP5	C1110-RP6	C2110G-RP5-P	C2108-RP2	C2112-4RP9	C2112-4RP4
Chassis Profile	1U standard-depth	1U standard-depth	2U standard-depth	2U standard-depth	2U standard-depth	2U standard-depth
Servers/System	One dual-socket	One dual-socket	One dual-socket	One dual-socket	Four dual-socket (hot-plug)	Four dual-socket (hot-plug)
Chipset	Intel® C600	Intel® C600	Intel® C602	Intel® C600	Four Intel® C600 (one per server)	Four Intel® C600 (one per server)
Processors	Two Intel® Xeon® E5-2600 v2	Two Intel® Xeon® E5-2600 v2	Two Intel® Xeon® E5-2600 v2	Two Intel® Xeon® E5-2600 v2	Eight Intel® Xeon® E5-2600 v2 series (two per server)	Eight Intel® Xeon® E5-2600 v2 (two per server)
Max. Cores	24	24	24	24	96 (24 per server)	96 (24 per server)
Max. Memory	256GB in 8 slots	512GB in 16 slots	256GB in 8 slots	768GB in 24 slots	1,024GB in 32 slots (8 slots per server)	2,048GB in 64 slots (16 slots per server)
Memory Type	1866/1600/1333/1066 MHz DDR3 ECC reg.	1866/1600/1333/1066 MHz DDR3 ECC reg.	1866/1600/1333/1066 MHz DDR3 ECC reg.	1866/1600/1333/1066 MHz DDR3 ECC reg.	1866/1600/1333/1066 MHz DDR3 ECC reg.	1866/1600/1333/1066 MHz DDR3 ECC reg.
Max. Hard Disk Drives & Max. Capacity	Four 2.5" (max. 4TB) SATA, SAS or SSD hot-swap	Four 3.5" or ten 2.5" (max. 12TB) SATA, SAS or SSD hot-swap	Ten 2.5" (max. 10TB) SATA, SAS or SSD hot-swap	Eight 3.5" (max. 24TB) SATA, SAS or SSD hot-swap	Twelve 3.5" SATA II or SSD hot-swap	Twelve 3.5" or 2.5" (three per server, max. 36TB) SATA II, SAS or SSD hot-swap
RAID Card Levels (Optional)	JBOD, RAID 0, 1, 5, 6, 10	JBOD, RAID 0, 1, 5, 6, 10	JBOD, RAID 0, 1, 5, 6, 10	JBOD, RAID 0, 1, 5, 6, 10	JBOD, software RAID 0, 1	JBOD, software RAID 0, 1, 10
Expansion Slots (Optional)	• Three PCIe 3.0 x16 slots support three double-width GPUs • One PCIe 3.0 x8 low-profile slot	• One PCIe 3.0 x16 full-height • One PCIe 3.0 x16 low-profile	• Six PCIe 3.0 x16 slots support six double-width GPUs • One PCIe 3.0 x8 low-profile slot	• Six PCIe 3.0 x8 full height, or two PCIe 3.0 x8 full height and two PCIe 3.0 x16 double-width	• Four PCIe 3.0 x16 low-profile (one per server) • Single-port FDR InfiniBand per server	• Four PCIe 3.0 x16 low-profile (one per server) • Optional single-port QDR or FDR InfiniBand per server • Four Gen3 x8 I/O module slots (one per server)
Networking (Onboard)	Dual-Port GigE controller (Intel® I350)	Three GigE controllers (two Intel® I350 and one Intel® 82574L)	Dual-Port GigE controller (Intel® I350)	Quad-Port GigE controller (Intel® I350)	Dual-Port GigE controller (Intel® I350)	Dual-Port GigE controller (Intel® I350)
IPMI Remote Management (Optional)	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0
Power Supply	1800W Redundant* Platinum Level	650W Redundant Gold Level	1800W Redundant* Platinum Level	750W Redundant Platinum Level	1620W Redundant* Platinum Level	1600W Redundant* Platinum Level
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	Standard 19" rack compatible rail mount
Dimensions (HxWxD)	1.7" (4.3cm) x 17.2" (43.7cm) x 30.6" (77.7cm)	1.7" (4.3cm) x 17.2" (43.7cm) x 26" (66.0cm)	3.5" (8.9cm) x 17.2" (43.7cm) x 30.5" (77.5cm)	3.5" (8.9cm) x 17.2" (43.7cm) x 27.8" (70.6cm)	3.47" (8.8cm) x 17.25" (43.8cm) x 28.5" (72.4cm)	3.5" (8.9cm) x 17.2" (43.7cm) x 30.4" (77.2cm)

Rackable Server Software Support	
System Software	SUSE® Linux® Enterprise Server 11 or Red Hat® Enterprise Linux 6
Software Solution Stack	• Performance Software: SGI Performance Suite • Cluster Management Software: SGI Management Suite • Job Scheduling/Workload Management: Altair® PBS Professional™, Adaptive Computing™ Moab® Cluster Suite Basic Edition • Fabric Management: SGI InfiniBand Fabric Management • File System: XFS™ 64-bit journaled file system, CXFS™ shared file system for SANs
Development Tools	• Programming Languages: Intel® C++ Compiler, Intel® Fortran Compiler, GNU compilers • Debuggers: Intel® Debugger (IDB) included with Intel® compilers, GNU Debugger (GDB), RogueWave Software® TotalView® and Threadspotter™, Allinea DDT, Intel® Inspector XE • Libraries: Intel® Math Kernel Library, Intel® Integrated Performance Primitives, Intel® Threading Building Blocks, NVIDIA CUDA Toolkit • Parallel Programming: SGI MPI, Intel® MPI, OpenMP included with Intel® compilers, OpenMPI, Intel® Trace Analyzer and Collector • Performance Analysis: Intel® VTune Amplifier XE

* Redundant per configuration

About SGI

SGI, the trusted leader in high performance computing (HPC), is focused on helping customers solve their most demanding business and technology challenges by delivering technical computing, Big Data analytics, cloud computing, and petascale storage solutions that accelerate time to discovery, innovation, and profitability.

For more information please contact an SGI sales representative at 1-800-800-7441 or visit www.sgi.com/contactus.

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