SGI® Rackable Standard-Depth Servers

Reliable, High Performance Intel® Xeon® Processor E5-2600 v3 Family Rackmount Solutions

Key Features

Full range of Four- to Eighteen-Core Intel® Xeon® Processor E5-2600 v3 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 v3 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 1.5TB of memory per node in an ultra-dense architecture with up to 72 cores per 1U. Add to this support for QDR, FDR, and EDR InfiniBand, 18-core processors and DDR4 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 eighteen-core Intel® Xeon® processors, one cabinet can deliver the compute power of—and effectively cool—3,024 processing cores.

Rackable C2112-4GP3 compute nodes deliver the ultimate in cluster density, packing four 36-core nodes into a slim 2U form factor with shared power and cooling. The powerful C2112-GP2 is an ideal cluster head node or standalone departmental server, offering additional extensibility and I/O options.

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.

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Configuration Specifications

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Server	C1104	C1110	C2108	C2112	C2112-4
Model Number	C1104-GP1	C1110-GP2	C2108-GP5	C2112-GP2	C2112-4GP3
Chassis Profile	1U standard-depth	1U 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)
Chipset	Intel® C610	Intel® C612	Intel® C612	Intel® C612	Four Intel® C610 (one per server)
Processors	Two Intel® Xeon® E5-2600 v3	Two Intel® Xeon® E5-2600 v3	Two Intel® Xeon® E5-2600 v3	Two Intel® Xeon® E5-2600 v3	Eight Intel® Xeon® E5-2600 v3 (two per server)
Max. Cores	36	36	36	36	144 (36 per server)
Max. Memory	1TB in 16 slots	1.5TB in 24 slots	1.5TB in 24 slots	1.5TB in 24 slots	4TB in 64 slots (16 slots per server)
Memory Type	2133 MHz DDR4 ECC reg.	2133 MHz DDR4 ECC reg.	2133 MHz DDR4 ECC reg.	2133 MHz DDR4 ECC reg.	2133 MHz DDR4 ECC reg.
Max. Hard Disk Drives & Max. Capacity	Four 2.5" (max. 8TB) SATA, SAS or SSD hot-swap	Four 3.5" or ten 2.5" (max 16TB) SATA, SAS or SSD hot-swap	Eight 2.5" (max. 16TB) SATA, SAS or SSD hot-swap	Twelve 3.5" (max. 48TB) SATA, SAS or SSD hot-swap	Twelve 3.5" or 2.5" (three per server, max. 48TB) SATA II, SAS or SSD hot-swap
RAID Card Levels (Optional)	JBOD, RAID 0, 1, 10	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
Expansion Slots (Optional)	• Three PCIe 3.0 x16 slots support three double-width GPUs • One PCIe 3.0 x8 low-profile slot	• Two PCIe Gen 3.0 x16 (FH 10.5"L) • One PCIe Gen 3.0 x8 (low-profile)	• Eight internal PCIe 3.0 x16 slots • One PCIe 3.0 x8 LP slot • One external mezzanine PCIe 3.0 x8 slot	• One PCIe Gen 3.0 x16 (FH10.5"L) • Six PCIe Gen 3.0 x8 (5FH 10.5"L, 1 low-profile)	• Four PCIe 3.0 x16 low-profile (one per server)
Networking (Onboard)	Dual-Port GigE controller (Intel® I350)	Quad-Port GigE controller (Intel® I350)	Dual-Port GigE controller (Intel® I350)	Quad-Port GigE controller (Intel® I350) Dual-Port 10GigE controller (optional)	Dual-Port GigE controller (Intel® I350) Single port FDR InfiniBand per server (optional)
IPMI Remote Management (Optional)	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0	Integrated IPMI 2.0
Power Supply	1660W Redundant* Platinum Level	750W Redundant* Platinum Level	2000W Redundant* Platinum Level	1000W Redundant* Platinum Level	2000W 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
Dimensions (HxWxD)	1.7" (4.3cm) x 17.2" (43.7cm) x 30.75" (78.1cm)	1.7" (4.3cm) x 17.2" (43.7cm) x 30.6" (77.7cm)	3.4" (8.6cm) x 19" (48.2cm) x 34.3" (87.1cm)	3.5" (8.9cm) x 17.3" (44cm) x 29.1" (73.9cm)	3.5" (8.9cm) x 17.3" (44cm) x 30.5" (77.5cm)

Rackable Server Software Support	
System Software	SUSE® Linux® Enterprise Server 11, Red Hat® Enterprise Linux® 6, CentOS 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® HPC Suite Enterprise Edition, SLURM
Development Tools	• 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® 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 is a global leader in high performance solutions for compute, data analytics and data management that enable customers to accelerate time to discovery, innovation, and profitability. Visit sgi.com for more information.

For More Information

Please contact an SGI sales representative at 1-800-800-7441 or visit www.sgi.com/contactus.

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