SGI® Rackable® Standard-Depth Servers

Reliable, High Performance Intel® Xeon® Processor E5-2600 v4 Family Rackmount Solutions

Key Features

Full range of Four- to Twenty-two Core Intel® Xeon® Processor E5-2600 v4 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 v4 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 DDR4 memory per node in an ultra-dense architecture with up to 88 cores per 1U. Add to this support for Mellanox FDR, Mellanox EDR, Intel® True Scale, and Intel® Omni-Path interconnect, 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 density levels of up to 84 dual-processor servers per 42U rack. With the ability to support today's fastest twenty-two core Intel® Xeon® processors, one cabinet can deliver the compute power of—and effectively cool—3,696 processing cores.

Rackable C2112-4GP3 compute nodes deliver the ultimate in cluster density, packing four 44-core nodes into a slim 2U form factor with shared power and cooling. The powerful C2112-GP2-G and C2112-GP2-EX are ideal cluster head nodes or standalone departmental servers, offering additional extensibility and I/O options.

The Rackable C1102-GP8 is a purpose-built system for deep learning and AI accelerated analytics and supports up to four NVIDIA Tesla P100 accelerators with integrated NVIDIA NVLink high-speed bidirectional interconnect.

Rackable servers run industry-standard operating systems, with a choice of SUSE® Linux® Enterprise Server, Red Hat® Enterprise Linux or CentOS. In addition, SGI Performance Suite includes resource management tools and enhanced development libraries. And 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.

Configuration Specifications

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Model Number	C1104-GP1	C1104-GP2	C1110-GP2	C1102-GP8
Chassis Profile	1U standard-depth	1U standard-depth	1U standard-depth	1U standard-depth
Servers/System	One dual-socket	One dual-socket	One dual-socket	One dual-socket
Chipset	Intel® C612	Intel® C612	Intel® C612	Intel® C612
Processors	Two Intel® Xeon® E5-2600 v4	Two Intel® Xeon® E5-2600 v4	Two Intel® Xeon® E5-2600 v4	Two Intel® Xeon® E5-2600 v4
Max. Cores	44	44	44	44
Max. Memory	1TB in 16 slots	1.5TB in 24 slots	1.5TB in 24 slots	1TB in 16 slots
Memory Type	2400 MHz DDR4 ECC reg.	2400 MHz DDR4 ECC reg.	2400 MHz DDR4 ECC reg.	2400 MHz DDR4 ECC reg.
Max. Hard Disk Drives & Max. Capacity	Four 2.5" (max. 8TB) SATA, SAS or SSD hot-swap	Four 3.5" (max. 24TB) SATA, SAS or SSD hot-swap	Ten 2.5" (max 20TB) SATA, SAS or SSD hot-swap. Two NVMe (Optional)	Two 2.5" SATA 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, SW RAID 0, 1
Expansion Support	• 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	• Two PCIe Gen 3.0 x16 (FH 10.5"L) • One PCIe Gen 3.0 x8 (low-profile)	• Two PCIe Gen 3.0 x16 low profile • One PCIe Gen 3.0 x8 low-profile slot • Up to four NVIDIA Tesla P100 accelerators with integrated NVIDIA NVLink high-speed bidirectional interconnect
Networking (Onboard)	Dual-Port GigE controller (Intel® I350)	Quad-Port GigE controller (Intel® I350)	Quad-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
Power Supply	1660W Redundant* Platinum Level	750W Redundant* Platinum Level	750W Redundant* Platinum Level	2000W Redundant* Titanium 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
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)	1.7" (4.3cm) x 17.2" (43.7cm) x 30.6" (77.7cm)	1.7" (4.3cm) x 17.2" (43.7cm) x 35.2" (89.4cm)

Configuration Specifications (continued)

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Model Number	C2108-GP5	C2112-GP2-G	C2112-GP2-EX	C2112-4GP3
Chassis Profile	2U standard-depth	2U standard-depth	2U standard-depth	2U standard-depth
Servers/System	One dual-socket	One dual-socket	One dual-socket	Four dual-socket (hot-plug)
Chipset	Intel® C612	Intel® C612	Intel® C612	Four Intel® C612 (one per server)
Processors	Two Intel® Xeon® E5-2600 v4	Two Intel® Xeon® E5-2600 v4	Two Intel® Xeon® E5-2600 v4	Eight Intel® Xeon® E5-2600 v4 (two per server)
Max. Cores	44	44	44	176 (44 per server)
Max. Memory	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	2400 MHz DDR4 ECC reg.	2400 MHz DDR4 ECC reg.	2400 MHz DDR4 ECC reg.	2400 MHz DDR4 ECC reg.
Max. Hard Disk Drives & Max. Capacity	Eight 2.5" (max. 16TB) SATA, SAS or SSD hot-swap	Twelve 3.5" (max. 72TB) SATA, SAS or SSD hot-swap	Twelve 3.5" (max. 72TB) SATA, SAS or SSD hot-swap. Four NVMe (optional)	Twelve 3.5" or 2.5" (three per server, max. 72TB) 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
Expansion Support	• 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) • Seven PCIe Gen 3.0 x8 (5x FH 10.5" L, 1x LP, 1x Internal LP)	• Seven PCIe Gen 3.0 x8 (5FH 10.5"L, 1 LP, 1x Internal LP)	• 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 10GigE controller (Intel® X540)	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
Power Supply	2000W Redundant* Platinum Level	1000W 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
Dimensions (HxWxD)	3.44"(8.75cm) x 17.63"(44.8cm) x 31.49" (88cm)	3.5" (8.9cm) x 17.3" (44cm) x 29.1" (73.9cm)	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)

Configuration Specifications (continued)

Rackable Server Software Support	
System Software	• SUSE® Linux® Enterprise Server 11, 12 • Red Hat® Enterprise Linux® 6, 7 • CentOS 7 • VMware certified
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 TotalView® and Threadspotter™, Allinea DDT, Allinea Forge • 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.

For More Information

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

Global Sales and Support: sgi.com