SGI Rackable Standard-Depth Servers

Reliable, Flexible and Efficient AMD Opteron™ Rackmount Solutions

Key Features

Leading price/performance per watt with AMD Opteron™ 6300 series processors

SGI® Rackable™ Clusters — Complete factory integration option available

Based on an open architecture approach using the powerful AMD Opteron™ 6300 series processors, SGI Rackable two- and four-way 2U standard-depth servers mount in industry-standard 19" racks, are highly configurable, efficient, and designed to order to address specific data center needs and eliminate unnecessary costs.

Flexibility and Scalability

The Rackable C2108-G9 single-node dual-socket server is ideal for deployment as an HPC management/head node, and includes up to eight 3.5" hot-swap drives, four expansion slots and 1+1 redundant AC power supplies. The C2112-4G10 quad-node dual-socket server contains four hot-swap nodes that all share power and cooling infrastructure, making it a popular compute node choice when implementing high density HPC clusters. The system supports up to 128 cores (32 per server) and 512GB of memory (128GB/server) together with up to twelve 3.5" hot-swap drives (three/node), four low-profile expansion slots (one/node), optional QSFP QDR InfiniBand port/node and 1+1 redundant AC power supplies. The H2106-G7 is a powerful single-node quad-socket server delivering up to 64 cores of compute power and 512GB of memory using 16GB DIMMs. An ideal four-way HPC management/head node, it includes up to six 3.5" hot-swap drives, four low-profile expansion slots and 1+1 redundant AC power supplies.

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 deliverables, SGI delivers factory integrated solutions which take the uncertainty out of an optimized clustered environment

Simplified Serviceability

Time-saving IPMI 2.0 remote management technology helps reduce administrative resources and overheads. A single, highly intuitive interface provides effortless local or remote control with total lights-out management.

AMD Opteron™ Processors

SGI standard-depth servers leverage the newest AMD Opteron™ 6300 series processors delivering high workload performance while keeping power draws to a minimum. With leading price/performance per watt, our AMD-based solutions provide a robust and reliable solution for any data center.

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.

Configuration Specifications

sgi.com/servers

Server	C2108	C2112	H2106
Model Number(s)	C2108-G9	C2112-4G10	H2106-G7
Chassis Profile	2U standard-depth	2U standard-depth	2U standard-depth
Servers/System	One dual-socket	Four dual-socket (hot-pluggable)	One quad-socket
Chipset	AMD SR5670 + SP5100	Four AMD SR5670 + SP5100 (one per server)	AMD SR5690 + SR5670 + SP5100
Max. Processors	Two AMD Opteron™ 6200 or 6300 series processors	Eight AMD Opteron™ 6200 or 6300 series processors (two per server)	Four AMD Opteron™ 6200 or 6300 series processors
Max. Cores	32	128 (32 per server)	64
Max. Memory	256GB	512GB (128GB/server)	512GB
Memory Type	1600/1333/1066/800 MHz DDR3 ECC reg.	1600/1333/1066/800 MHz DDR3 ECC reg.	1600/1333/1066/800 MHz DDR3 ECC reg.
Max. Hard Disk Drives & Max. Capacity	Eight 3.5" (max. 24TB) SAS, SATA II or SSD* hot-swap drives	12 x 3.5" (three per server) SATA II or SSD* (max. 6TB/server) hot-swap drives	Six 3.5" (max. 18TB) SAS, SATA II or SSD* hot-swap drives
RAID Card Levels (Optional)	JBOD, RAID 0, 1, 5, 6, 10	JBOD	JBOD, RAID 0, 1, 5, 6, 10
Expansion Slots	1 UIO, 3 PCI-E x8	Four PCI-E 2.0 x16 low-profile (one/server)	Two PCI-E 2.0 x16 and two PCI-E 2.0 x8
Networking, Onboard	Dual GigE (Intel 82576)	Dual GigE (Intel 82576) and optional QSFP QDR InfiniBand (Mellanox ConnectX)/server	Dual GigE (Intel 82576)
IPMI Remote Management (Optional)	IPMI 2.0 + Keyboard, Video and Mouse (KVM)	Integrated IPMI 2.0 + Keyboard, Video and Mouse (KVM)	IPMI 2.0 + Keyboard, Video and Mouse (KVM)
Power Supply	720W 1+1 redundant auto-switching 100-240 VAC (50-60 Hz)	1620W 1+1 redundant auto-switching 100-240 VAC (50-60 Hz)	1400W 1+1 redundant auto-switching 180-240 VAC (50-60Hz)
Chassis Mount	Standard 19" rack compatible rail mount	Standard 19" rack compatible rail mount	Standard 19" rack compatible rail mount
Dimensions (HxWxD)	3.5" (8.9cm) x 17.2" (43.7cm) x 25.5" (64.8cm)	3.5" (8.9cm) x 17.2" (43.7cm) x 28.5" (72.4cm)	3.5" (8.9cm) x 17.2" (43.7cm) x 27.75" (70.5cm)

[1] On select configurations only
*2.5" or 3.5" form factor

Rackable Server Software Support

System Software	• SUSE® Linux® Enterprise Server 10 or 11, Red Hat® Enterprise Linux® 5 or 6
Software Solution Stack	• Performance Software: SGI Performance Suite • Cluster Management Software: SGI Management Suite • Job Scheduling/Workload Management: Altair® PBS Professional™ • Fabric Management: SGI InfiniBand Fabric Management • File system: XFS™ 64-bit journaled file system (available on SUSE Linux OS), 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), TotalView Technologies TotalViewDebugger, TotalView Technologies 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, Platform MPI, OpenMP included with Intelcompilers, OpenMPI, Intel Cluster OpenMP, Intel Trace Analyzer and Collector, TotalView Technologies TotalView Debugger, Allinea DDT, Interactive Supercomputing Star-P • Performance Analysis: Intel VTune Performance Analyzer, Intel Trace Analyzer & Collector

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