

CRAY CX 1000

Cray CX1000-SC™ Server

- 1.5U, four socket "Building Block" form factor
- Coherency switch – a proprietary feature based on Intel® OPI technology allowing scalability from a single "building block" of 32 cores up to a maximum of 4 "building blocks" with 128 cores in 6U
- Up to 1TB of memory (with 8GB DIMMS)
- Non-uniform memory access (ccNUMA)



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The Cray CX1000-SC compute node is made up of uniquely designed 1.5U “Building Blocks”, each housing 32 cores interconnected using Intel® QPI. These building blocks can be put “back to back” such that a 64 core system can be delivered with two building blocks in 3U, and 4 building blocks deliver the full 128 core capability in 6U. Each building block connects through a coherency switch, based on Intel’s QuickPath Interconnect, that delivers ccNUMA based shared memory of up to 1TB. The CX1000-SC server represents a fat memory node within the Cray CX1000 product family that delivers maximum performance for scale up jobs.

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Cray CX1000-SC Server Specifications

Form Factor	Rack mount 1.5U L-shaped drawer 2 drawers are fitted together to make up a 3U drawer
Processors	4 eight-core Intel Xeon® 7500 series processors at up to 2.26 GHz (24MB shared cache)
Architecture	1 x Intel 7500 chipset (Boxboro IOH) with QPI up to 6.4GT/s
Memory	• Up to 32 DIMM DDR3 sockets • Up to 256GB DDR3 with 8GB DIMMs • Ready to support up to 512GB DDR3 with 16GB DIMMs
Drawer interconnect switch	Supported, to make up a large 8 to 16-socket SMP node (option, available later)
Expansion slots	• 1 PCI-Express 2.0 x16 • LP slot
Compatible accelerators	• NVIDIA® Tesla™ S1070 1U Computing System • NVIDIA Tesla S2050 / S2070 1U Computing System
Storage	• Max. internal storage capacity: 500GB • 1 SATA2 7.2 krpm 2.5 inch disk (160/250/500GB)
Interconnect	• Dual-port ConnectX InfiniBand QDR controller
Ethernet	• 2 x 1Gbit Ethernet connectors • 1 x 10/100 Mbit Ethernet connection for management
Security	• Anti-intrusion switch and Trusted Platform Module chip
Management	• Integrated Baseboard Management Controller (BMC) • Local Control Panel display on drawer front
Power Supply	1 x 1500 Watts PSU
Sleep state 4 (Standby to disk)	Supported
Ultracapacitor	Ultracapacitor module to offset power outages up to 300 ms (optional)
Ventilation	4 pairs of counter rotating cooling fans
Physical spec.	44/88 x 440 x 750 mm (HxWxD) - 30 kg
OS & cluster software	Red Hat Enterprise Linux or Suse SLES & Cray Cluster Manager
Safety	CE, UL/CSA, FCC, RoHS
Warranty	1-year, optional warranty extension