

# CRAY CX 1000

## Cray CX1000-SM™ Server

- 3U, four socket form factor
- Support for applications requiring extensive I/O capacity



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The Cray CX1000-SM management node is a 3U server with four Intel® Xeon® 7500 series processor sockets (32 cores) and up to 256 GB of memory. The Cray CX1000-SM server has up to eight disk drives and six PCIe slots for enhanced IO and connectivity. The Cray CX1000-SM node complements the Cray CX1000-SC server and can serve as a standalone, powerful, large memory SMP compute node with tremendous IO capability or be clustered with the Cray CX1000-SC server to provide the same SMP memory and compute capability in a more compact form factor.

- 3U, four socket form factor
- Support for applications requiring extensive I/O capacity

## Cray CX1000-SM Server Specifications

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form Factor</b>                     | Rack mount 3U drawer                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Processors</b>                      | 4 eight-core Intel Xeon 7500 series processors at up to 2.26 GHz (24MB shared cache)                                                                                                                                                                                                                                                                                                                                                       |
| <b>Architecture</b>                    | 2 x Intel 7500 chipsets (Boxboro IOH) with QPI up to 6.4GT/s                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Memory</b>                          | <ul style="list-style-type: none"><li>• Up to 32 DIMM DDR3 sockets</li><li>• Up to 256GB DDR3 with 8GB DIMMs</li><li>• Ready to support up to 512GB DDR3 with 16GB DIMMs</li></ul>                                                                                                                                                                                                                                                         |
| <b>Drawer interconnect switch</b>      | Supported, to make up a large 8 to 16-socket SMP node (option, available later)                                                                                                                                                                                                                                                                                                                                                            |
| <b>Expansion slots</b>                 | <ul style="list-style-type: none"><li>• 1 PCI-Express 2.0 x16</li><li>• 5 PCI-Express 2.0 x 8</li><li>• All LP slots</li></ul>                                                                                                                                                                                                                                                                                                             |
| <b>Compatible accelerators</b>         | <ul style="list-style-type: none"><li>• NVIDIA® Tesla™ S1070 1U Computing System</li><li>• NVIDIA Tesla S2050 / S2070 1U Computing System</li></ul>                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>                         | <ul style="list-style-type: none"><li>• Max. internal storage capacity: 4800GB with SAS</li><li>• 6 SATA2 7.2 krpm disks (160/250/500GB)</li></ul> OR <ul style="list-style-type: none"><li>• 8 SAS disks (146/300/400/600GB at 10 krpm or 73/146GB at 15 krpm) with PCI-Express SAS add-on adapter</li><li>• All disks are 2.5 inches and hot-swappable</li><li>• Support of RAID 0, 1, 5, 10 (with PCI-Express SAS RAID board)</li></ul> |
| <b>Interconnect</b>                    | <ul style="list-style-type: none"><li>• Dual-port ConnectX InfiniBand QDR controller</li></ul>                                                                                                                                                                                                                                                                                                                                             |
| <b>Ethernet</b>                        | <ul style="list-style-type: none"><li>• 4 x 1Gbit Ethernet connectors</li><li>• 1 x 10/100 Mbit Ethernet connection for management</li></ul>                                                                                                                                                                                                                                                                                               |
| <b>Other I/O ports</b>                 | <ul style="list-style-type: none"><li>• 1 embedded USB connector</li><li>• 2 external USB connectors</li><li>• 1 external VGA connector</li></ul>                                                                                                                                                                                                                                                                                          |
| <b>Security</b>                        | <ul style="list-style-type: none"><li>• Anti-intrusion switch and Trusted Platform Module chip</li></ul>                                                                                                                                                                                                                                                                                                                                   |
| <b>Management</b>                      | <ul style="list-style-type: none"><li>• Integrated Baseboard Management Controller (BMC)</li><li>• Local Control Panel display on drawer front</li></ul>                                                                                                                                                                                                                                                                                   |
| <b>Power Supply</b>                    | 2 redundant, hot-swap 1600 Watts PSUx                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Sleep state 4 (Standby to disk)</b> | Supported                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ultracapacitor</b>                  | Ultracapacitor module to offset power outages up to 300 ms (optional)                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Ventilation</b>                     | 4 pairs of counter rotating cooling fans                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Physical spec.</b>                  | 133 x 440 x 750 mm (HxWxD) - 40 kg                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>OS &amp; cluster software</b>       | Red Hat Enterprise Linux or Suse SLES & Cray Cluster Manager                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Safety</b>                          | CE, UL/CSA, FCC, RoHS                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Warranty</b>                        | 1-year, optional warranty extension                                                                                                                                                                                                                                                                                                                                                                                                        |