

## Trio Departmental Supercomputer

*Super Computers for Innovation™*



Imagine 3.0 TB of shared memory and 192 cores of power your most demanding computing tasks. The Trio Department Supercomputer based on our Distributed Symmetric Multi-Processing (DSMP) technology turns this dream into a reality – today!


Trio Departmental Supercomputers are ideal for high performance computing applications with large memory needs: bioinformatics & life sciences (molecular modeling, genomic sequencing, and personalized medicine); engineering (coupled models & multi-dimensional simulations); energy (exploration, grid optimization); and complex financial analyses.

The Trio Departmental Supercomputer is a rack mountable system packed with 192 AMD Opteron™ series processor cores and up to 3.0 TB of RAM. Three server nodes become one interconnected supercomputer with high-speed Infiniband and our breakthrough DSMP technology.

A Trio Departmental Supercomputer is a true Symmetric Multi-Processing (SMP) supercomputer with a large shared memory and a single software image. The performance of our Trio is equivalent to expensive SMP supercomputers, but only for a fraction of their cost.

With Trio, engineers, scientists, researchers and analysts can finally afford the powerful large shared-memory SMP supercomputer that their applications demand.

### System Specifications

<b>Processors:</b>	192 Cores (Twelve AMD Opteron™ 63XX Processors)
<b>Memory:</b>	96 DIMM sockets with 2 options: <ul style="list-style-type: none"> <li>• 1.5-TB 1600 MHz ECC DDR3</li> <li>• 3.0-TB 1333 MHz ECC DDR3</li> </ul>
<b>Storage:</b>	18 Hot Swap drive bays for: <ul style="list-style-type: none"> <li>• 2- or 3-TB 7200 RPM SATA-3 Drives</li> <li>• 1-, 2- or 3-TB 7200 RPM SAS-2 Drives</li> </ul>
<b>Node Interconnect:</b>	6 Single-port QSFP 40 Gbps InfiniBand PCIe Host Bus Adapters
<b>I/O:</b>	1 DVD-ROM 1 RJ45 Gbps Ethernet 2 USB 2.0 Ports 1 VGA Port PS/2 Keyboard and Mouse Ports 1 Fast UART 16550 Serial Port 1 RJ45 Dedicated LAN supports IPMI Optional 10 Gbps Ethernet
<b>Environment:</b>	6 Redundant 1400-Watt High Efficiency Power Supplies (80 PLUS Gold Certified) Efficient Front-to-Back Cooling
	
<b>Power:</b> (per node)	1200 W: 100-140V, 50-60 Hz, 10.5-14.7 Amp 1400 W: 180-240V, 50-60Hz, 7.2-9.5 Amp
<b>Dimensions:</b>	Standard 19 inch Rack Mountable Height — 6U (10.5 inches or 267 mm) Width — 17.2 inches (437 mm) Depth — 27.75 inches (705 mm)
<b>Gross Weight:</b>	207 lbs. (93.9 kg)
<b>Software Specifications:</b>	<ul style="list-style-type: none"> <li>• Linux Support (OpenSUSE 11.4, Centos 6.4)</li> <li>• DSMP™ Distributed Symmetric Multi-Processing™</li> <li>• OpenMP, Pthreads, MPI</li> </ul> <p>Distributed Symmetric Multi-Processing™ enables Symmetric Multi-Processing on a Trio Departmental Supercomputer — a single software image with 1.5 TB or 3.0 TB single shared memory across 3 server nodes with 192 AMD Opteron™ cores.</p>

#### Features

#### Benefits

• Affordable Supercomputing	✓ Faster projects. No more delays waiting for scheduled HPC time.
• Large Single Shared Memory	✓ Ideal for large memory bioinformatics applications
• Single Software Image	✓ Simple and scalable SMP multi-threaded programming. No complicated cluster tailoring.
• Power Efficient	✓ Saves money and runs cooler
• Only 6U Rack Space	✓ Fits easily into your existing racks

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