



## Trio High Performance Server

### Large Shared-Memory Many-Core Computing

The Trio™ Departmental Mainframe is designed to provide enterprise computing capabilities at your office or lab. With 384 cores (768 threads) of compute power, 9TB of global shared memory and 576TB of storage the Trio can handle your most demanding applications, especially those requiring large memory and storage such as database applications.

The Trio high performance server is a rack mountable system consisting of three 2U state-of-the-art server blades packed with 6 AMD EPYC™ 7713 processors and 12 TB of DDR4 RAM. Our breakthrough DSMP™ technology along with 200 Gb/s InfiniBand, transforms these three server blades into a single interconnected high performance server. This allows all 384 cores to access a global large shared memory and global file system.

The Trio Departmental Mainframe is a true symmetric multi-processing (SMP) computer with a single system interface cluster operating system based on the SUSE 15 Linux. The performance of the Trio competes with large SMP mainframe class computers. This makes it ideal for in-memory database applications such as SAP-HANA. The Trio can execute large in-memory applications at substantially less cost than a mainframe.

Symmetric Computing's Trio™ delivers mainframe performance to business, industry, academia and governments at an unprecedented price point.

## System Specifications

<b>Processors:</b>	6 EPYC™ 7713 Processors ( 64-core 2.2/3.67GHz AMD) 384 cores / 768 threads
<b>Memory:</b>	12TB 3200 MHz DDR4 ( 9TB globally shared )
<b>Storage:</b>	2TB on-board M.2 OS drive 36x 3.5" SATA/SAS hot-swappable SSD/HDDs
<b>Node Interconnect:</b>	6x ConnectX-6VPI 200 Gb/s InfiniBand Dual Port 200 Gbps InfiniBand PCIe Gen 4 Host Bus Adapters ( No InfiniBand switch is needed )
<b>I/O:</b>	2x 1 GbE LAN ports 1 10/100/1000 Mb/s management LAN 2x USB 3.0 Ports 1 VGA Port
<b>Power:</b>	2x Redundant 2000W PSU ( each node ) 6x 110/208 VAC, 15 Amp, 50-60HZ
<b>Dimensions:</b>	Standard 19 inch Rack Mountable Height — 6U
<b>Gross Weight:</b>	3x 19.5 Kg ( 43-lbs ) server blades

### Features

### Benefits

- |                              |   |
|------------------------------|---|
| • Powerful Computing         | √ <i>Faster projects. Dedicated power when your project needs it.</i> |
| • Large Single Shared Memory | √ <i>Ideal for large memory applications</i>                          |
| • Single Software Image      | √ <i>Simple and scalable SMP multi-threaded programming.</i>          |
| • Only 6U Rack Space         | √ <i>Fits easily into your existing racks</i>                         |

### Software Specifications

- Linux OS ( SUSE 15 )
- DSMP™ Distributed Symmetric Multi-Processing™
- Slurm Workload Manager
- OpenMP, Pthreads, POSIX

Distributed Symmetric Multi-Processing™ enables Symmetric Multi-Processing on a Trio™ High Performance Server — A single system image with a 9TB globally shared memory and 384 AMD EPYC™ cores.

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