



## Quartet Departmental Mainframe

### Large Shared-Memory Many-Core Computing

The Quartet™ Departmental Mainframe is designed to provide enterprise computing capabilities at your office or lab. With 512 cores of compute power and 8 or 16 TB of shared memory, the Quartet matches the capabilities of large mainframe computers costing millions of dollars.

The Quartet departmental mainframe is a rack mountable system consisting of four 2U state-of-the-art server blades packed with 8 AMD EPYC™ 7702 processors and up to 16 TB of DDR4 RAM. Our breakthrough DSMP technology, along with 200 Gbps Mellanox InfiniBand, transforms these four server blades into one interconnected mainframe server. With DSMP, all 512 cores access a single large shared memory.

The Quartet is a true Symmetric Multi-Processing (SMP) computer with a large shared memory and a single operating system image based on the Centos 8 Linux. With the Quartet, you can host critical database and enterprise applications for an order of magnitude less cost.

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

### System Specifications

- Processors:** Eight AMD EPYC 7702 Processors (2.0/3.3GHz—64 core)  
512 cores / 1024 threads
- Memory:** 128 DIMM sockets with:
  - 8 TB 3200 MHz DDR4 (64 GB DIMMs)
  - 16 TB 3200 MHz DDR4 (128 GB DIMMS)
- Storage:** 1 TB on-board M.2 OS drive  
48 3.5" SATA/SAS  
hot-swappable SSD/HDDs
- Node Interconnect:** ConnectX-6 VPI 200 Gb/s InfiniBand Dual Port PCIe Gen 4 Host Bus Adapters
- I/O:** 2x 1 GbE LAN ports  
1 10/100/1000 Mb/s management LAN  
2x USB 3.0 Ports  
1 VGA Port
- Environment:** Redundant 2200W 80+ Platinum PSU  
4x 8 cm Easy-swap counter rotating fans
- Power:** 8 120-VAC @ 15 Amp (8.8 KW max)
- Dimensions:** Standard 19 inch Rack Mountable  
Height — 8U  
348 x 438 x 730 mm (13.7" x 17.2" x 28.7")
- Gross Weight:** 4x 19.5 Kg (43-lbs) server blades

Features	Benefits
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|------------------------------|---|
| • 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>              |
| • Mainframe Replacement      | √ <i>Save millions of dollars on enterprise computing infrastructure.</i> |

### Software Specifications

- Linux OS (Centos 8)
- DSMP™ Distributed Symmetric Multi-Processing™
- OpenMP, Pthreads, POSIX, SysV IPC

Distributed Symmetric Multi-Processing™ enables Symmetric Multi-Processing on a Quartet™ Departmental Mainframe — A single system image with up to 16 TB of shared memory and 512 AMD EPYC™ cores.

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