



## 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 256 cores of compute power and 8 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™ 7601 processors and up to 8 TB of DDR4 RAM. Our breakthrough DSMP technology, along with 100 Gbps Mellanox InfiniBand, transforms these four server blades into one interconnected mainframe server. With DSMP, all 256 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 7.4 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 a unprecedented price point.

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

### System Specifications

<b>Processors:</b>	256 Cores (Eight 32-core 2.2/3.2GHz AMD EPYC™ 7601 Processors)
<b>Memory:</b>	128 DIMM sockets with either: <ul style="list-style-type: none"> <li>• 8 TB 2666 MHz DDR4 (64 GB DIMMs)</li> <li>• 4 TB 2666 MHz DDR4 (32 GB DIMMs)</li> </ul>
<b>Storage:</b>	512 GB on-board M.2 OS drive 24x 2.5" U.2, 72 2.5" SATA/SAS hot-swappable SSD/HDDs
<b>Node Interconnect:</b>	12x ConnectX-5 VPI 100 Gb/s InfiniBand Dual Port 100 Gbps InfiniBand PCIe Gen 3 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>Environment:</b>	Redundant 1200W 80+ Platinum PSU 4x 8 cm Easy-swap counter rotating fans
<b>Power:</b>	8 120-VAC @ 15 Amp (3.6 KW max)
<b>Dimensions:</b>	Standard 19 inch Rack Mountable Height — 8U 348 x 438 x 730 mm (13.7" x 17.2" x 28.7")
<b>Gross Weight:</b>	4x 19.5 Kg (43-lbs) server blades

### Software Specifications

- Linux OS (Centos 7.4)
- 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 8 TB of shared memory and 256 AMD EPYC™ cores.

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