



Duet High Performance Server

Large Shared-Memory Many-Core Computing

Imagine 256 cores of compute power, 8TB of shared memory and 288TB of storage for your most demanding applications. The Duet™ high performance server based on our patented Distributed Symmetric Multi-Processing (DSMP™) technology turns this image into a reality.

Our Duet high performance server is a rack mountable system consisting of two 2U state-of-the-art server blades packed with 4 AMD EPYC™ 7702 processors and up to 8 TB of DDR4 RAM. Our breakthrough DSMP technology along with 200 Gbps InfiniBand transforms these two server blades into a single interconnected high performance server. With DSMP, all 256 cores access a single large shared memory.

Our Duet high performance server is a true symmetric multiprocessing (SMP) computer with a large shared memory and a single operating system image based on the Centos 8 Linux. The performance of our Duet competes with large SMP mainframe class computers. With the Duet, your department could be executing its most demanding computations for an order of magnitude less cost.

The Symmetric Computing Duet™ delivers mainframe class performance to business, industry, academia and governments at an unprecedented price point.

System Specifications

- Processors:** 4 AMD EPYC™ 7702 Processors (2.0/3.3GHz—64 core)
256 cores / 512 threads
- Memory:** 64 DIMM sockets with either:
 - 8TB 3200 MHz DDR4 (128 GB DIMMs)
 - 4TB 3200 MHz DDR4 (64 GB DIMMs)
- Storage:** 1 TB on-board M.2 OS drive
24x 3.5" SATA/SAS
hot-swappable SSD/HDDs
- Node Interconnect:** 2x ConnectX-5 VPI 200Gb/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:** 4 120-VAC @ 15 Amp (4.4 KW max)
- Dimensions:** Standard 19 inch Rack Mountable Height — 4U
174 x 438 x 730 mm (6.9" x 17.2" x 28.7")
- Gross Weight:** 2x 19.5 Kg (43-lbs) server blades

Features	Benefits
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| • Affordable SuperComputing | √ <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. No complicated cluster tailoring.</i> |
| • Only 4U Rack Space | √ <i>Fits easily into your existing racks</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 Duet™ High Performance Server — A single system image with up to 8TB shared memory and 256 processor cores.

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