



Duet High Performance Server

Large Shared-Memory Many-Core Computing

Imagine 128 cores of compute power and 4 TB of shared memory for your most demanding applications. The Duet™ high performance server based on our patented Distributed Symmetric Multi-Processing (DSMP™) technology turns this dream 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™ 7601 processors and up to 4 TB of DDR4 RAM. Our breakthrough DSMP technology along with 100 Gbps InfiniBand transforms these two server blades into a single interconnected high performance server. With DSMP, all 128 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 7.4 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.

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

System Specifications

- Processors:** 128 Cores (Four 32-core 2.2/3.2GHz AMD EPYC™ 7601 Processors)
- Memory:** 64 DIMM sockets with either:
 - 4 TB 2666 MHz DDR4 (64 GB DIMMs)
 - 2 TB 2666 MHz DDR4 (32 GB DIMMs)
- Storage:** 512 GB on-board M.2 OS drive
12x 2.5" U.2, 36 2.5" SATA/SAS
hot-swappable SSD/HDDs
- Node Interconnect:** 2x ConnectX-5 VPI 100Gb/s InfiniBand
Dual Port PCIe Gen 3 Host Bus Adapters
(No InfiniBand switch is needed)
- 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 1200W 80+ Platinum PSU
4x 8 cm Easy-swap counter rotating fans
- Power:** 4 120-VAC @ 15 Amp (2.4 KW max)
- Dimensions:** Standard 19 inch Rack Mountable
Height — 4U
174 x 438 x 730 mm (6.86" x 17.2" x 28.7")
- Gross Weight:** 2x 19.5 Kg (43-lbs) server blades

Features	Benefits
• 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 7.4)
- 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 4 TB shared memory and 128 AMD EPYC™ cores.

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