

MiriQuid SMP5000 Scalable x86 SMP System



Profile

- Scalable 12 CPU socket SMP system
- Up to 48 processor kernels (quad core CPU)
- Large main memory up to 192 Gigabyte / chassis
- Shared memory for high performance computing
- Integrated storage up to 6 Terabyte
- Red Hat and SUSE Standard Linux
- Alternative to RISC-based systems

Specification

Symmetric Multiprocessing For Engineers

The times are over at last that symmetric multiprocessor systems (SMP) consisted of proprietary and expensive RISC-based hardware. By the MEGWARE MiriQuid SMP5000 series scalable 12-processor SMP servers are available now which are equipped with the proven x86 technology and Intel® multi-core architecture. These systems excel in their ground-breaking performance and an excellent price/performance ratio compared with the traditional high-end SMP machines.



Entering the SMP world is very cost-effective with the SMP5000 and 8 processor sockets. This system can be extended with 12 Intel® quad core processors up to 48 processor sockets according to growing demands. Using current-saving low voltage CPUs permits in addition silent operation as a desktop system in every office. A common single-phase power connection is sufficient for power

supply in this case. The universal design of the chassis accommodates up to 6 hard disks which provide up to 6 Terabyte storage for the system. The chassis can be installed easily in a 19" rack.

The MiriQuid SMP5000 series works optionally with the operating systems of the Red Hat or SUSE Linux

Enterprise editions. Thus a large number of professional support options are available which promise maximum performance and a high reliability throughout the entire operating time. The administration of this SMP server is particularly user-friendly due to its innovative single system images. The management costs are lower compared with HPC clusters.

The SMP5000 is the ideal platform for all software applications which require a large number of processors and joint access to a large main memory. A typical field of application is High Performance Technical Computing (HPTC) which is used in many applications of technical engineering. Mainly such applications, which are based on numerical algorithms for the modelling and simulation of technical processes, benefit from the enormous performance of these SMP-based computer systems.

The SMP5000 systems come with pre-installed leading life science applications, such as NAMD, DOCK, GAMESS, mpiBLAST and GROMACS. With optimized settings this freely available software achieves a clearly better performance than if it was installed by the user. The commercial software packages MOLPRO, OpenEye FRED, OpenEye Omega, BLAST, Schrödinger Jaguar and Schrödinger GLIDE also find an ideal working environment on these servers.

The SMP machines of the MiriQuid SMP5000 series are optimally suited as manufacturing departmental system. Here serial and parallel jobs can compute

very large simulations directly in the memory in mixed operation on the same system. The best known applications in the field of Computational Fluid Dynamics (CFD), as for instance FLUENT, ANSYS CFX, CD-adapco STAR-CD and AVL FIRE, can make use of this particularly well. This applies likewise to applications of Computational Structural Mechanics (CSM) to which, for instance, ANSYS Mechanical, ABAQUS Explicit, ABAQUS Standard and LSTC LS-DYNA belong. Many more applications from the most different engineering fields could be cited, for instance, inTrace OpenRT, Schlumberger ECLIPSE,

Paradigm Geophysical GeoDepth and 3DGEO 3DPSSDM.

The most impressive results in the benchmarks The MathWorks MATLAB, SPEC CPU2000 and STREAM (OMP) are a convincing argument in favour of the SMP architecture of the MEGWARE MiriQuid SMP5000.

Decide in favour of an SMP server with the performance of a computer centre.

Technical Data:

Processors

- Up to 12x dual core Intel® Xeon CPU
- Up to 12x quad core Intel® Xeon CPU

Front Side Bus

- 1,333 MHz Dual Independent Bus Architecture

RAM

- 48 FBDIMM sockets up to 192 Gigabyte
- ECC Registered DDR2 533/667 MHz

System Cache (Min.)

- 10% of the RAM are reserved for system cache

Chip Set

- Intel® E5000 chip set

Network Chip Set

- Intel® 82563EB Gigabit integrated
- Intel® 1000 network adapter

Hardware Monitoring

- National Semiconductor PC87431M
- Platform Instrumentation ASIC

Graphics

- ATI ES1000 with 16 MB memory

Storage

- Up to 6 internal hard disks
- Serial ATA (up to 1000 GB) each

Operating System

- Red Hat or SUSE Linux Standard
- Option: adapted kernels

Dimensions (H x W x D)

- Deskside: 19" x 10.5" x 30"
- Rackmount: 10.5" (6U) x 19" x 30"

Power Supply

- 110 / 220 V AC, single-phase (20 A)

Connections

- Video, keyboard, mouse, serial, 2x USB
- 7x 10/100/1000 GB Ethernet port
- 2x Chassis expansions port

Recommended Applications:

Computational Structural Mechanics (CSM):	ANSYS Mechanical, ABAQUS-Explicit, ABAQUS-Standard, LSTC LS-DYNA
Computational Fluid Dynamics (CFD):	FLUENT, ANSYS CFX, CD-Adapco STAR-CD, AVL FIRE
Computational chemistry:	Schrödinger Jaguar, Schrödinger Glide, NAMD, DOCK, GAMESS, GOLD
Bio informatics:	HMMR
Oil & gas:	Schlumberger ECLIPSE, Paradigm GeoDepth, 3DGEO 3DPSSDM

Let us advice you. Together we will find the solution tailored to your needs.
We will gladly provide a detailed quotation on equipment and prices.

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