Sales Brief

Entry-Level Business Server

Quad-Core Intel® Xeon® Processor 5400 Series

Cost-Optimized Solution for Business

Optimized for small and medium business, Quad-Core Intel® Xeon® processors offer solid performance and performance per watt for basic business needs without sacrificing affordability. The platform is optimized for reduced cost and power consumption, featuring the Intel® 5100 chipset and native DDR2 memory. This enables you to run more applications with a smaller footprint and budget, giving you revolutionary ways to achieve more with less.

In today's business environment, companies of all sizes depend on digital data to compete in local and global markets. With today's competitive and budget pressures, it is critical that you get the maximum value and return from your resources. Server solutions based on Intel® Xeon® processors deliver powerful business capabilities at affordable prices, giving you the flexibility you need to reach new customers, increase your revenue and achieve your business goals. New 2-socket Quad-Core Intel Xeon processor 5400[1] series-based servers help deliver new levels of performance for business processes, across a wide range of business workloads, including application servers, e-mail servers, Web servers and more.

Intel's second-generation quad-core processor, featuring a new cost-optimized Intel® 5100 Memory Controller Hub Chipset, low-cost Intel® ICH-9R I/O controller, and coupled with the energy-efficient technology found in Intel's 45nm silicon process enables improved IT application performance with excellent power efficiency and value. Supporting either one or two processors, the platform is further optimized for reduced power consumption using low-power native DDR2 memory. The high-performance, low-power, and affordable technology found in these new business servers enables you to run more business applications within a smaller IT footprint and gives you revolutionary ways to achieve more with less.

Intel® Xeon® Processor 5400[1] Series: Build Success into Your Business

Performance and Flexibility

- More than 5x increased performance over Single-Core[2]
- More than 2x better performance than Dual-Core[3]
- Supports Quad-Core or Dual-Core processors

Cost Optimized

- New chipset and I/O controller
- 6 memory slots
- Lower power DDR2 memory

Reliability

- Intel-based servers have been a foundation of business technology for nearly 30 years and are built with more reliability features than completive alternatives

For more information on the Intel® Xeon® processor, visit www.intel.com/xeon

Quad-Core Intel® Xeon® Processor 5400 Series[4]

Features	Benefits
Multi-core Processing	▪ Multi-core Intel® Xeon® processors deliver a quantum leap in processing capacity without a comparable increase in power consumption, so you can enhance your computing solutions more efficiently while helping keeping server room cool. ▪ 4 cores per processor means more computing power for your business at an extremely affordable price.
Intel® Core™ Microarchitecture	▪ Better performance on multiple application types and user environments as well as data-demanding workloads. ▪ 80W and 50W Quad-Core processors reduce cooling challenges with performance-per-watt improvements, enabling smaller server rooms.
Large 12 MB of On-die L2 Cache (2 x 6 MB)	▪ Large on-die L2 Cache stores data and instructions closer to the processor, reducing time wasted searching main memory. ▪ With 50% larger caches, the new 45nm Intel Xeon processors deliver a boost in performance[3] to your everyday business applications, giving you greater productivity.
Intel® Virtualization Technology[5]	▪ A processor hardware enhancement that allows you to create virtual servers, so you have fewer servers to manage and maintain without sacrificing application performance.
Native DDR2 Registered DIMM Technology	▪ 6 slots supporting configurable low-power DDR2 memory.[6] ▪ Fast speed memory operating at 533/667 MHz. ▪ Registered ECC DIMMs helps protect data and improve reliability.
1333 MHz Front-Side Bus (FSB)	▪ Dedicated high-speed bus (one per processor) gives you more data capacity and throughput, moving more data quickly through the system.

[1] Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See www.intel.com/products/processor_number for details.

[2] Up to 436% (5.36x) higher performance. Published/measured results on SPECint*_rate_base2006- Oct 2, 2007 Comparison between 64-bit Intel® Xeon® processor 3.80 GHz and X5450 based on SPECint*_rate_base2006 benchmark result.

64-bit Intel® Xeon® processor 3.80 GHz-based platform details: HP Proliant* DL380 G4 Server platform with two 64-bit Intel Xeon processor 3.80 GHz 2M L2 Cache, 800 MHz system bus, 8 GB (4x2 GB PC2-3200) memory, Windows Server 2003* Ent, SP1, Intel C++ Compiler 9.1 for 32-bit apps, Build 20060323Z Package ID: W_CC_P_9.1.020, Microsoft Visual Studio* .NET 2003 (for libraries), MicroQuill SmartHeap* Library 7.4. Referenced as published at 20.9. Results at http://www.spec.org/cpu2006/results/res2006q3/cpu2006-20060513-00027.html.

Quad-Core Intel® Xeon® processor X5460-based platform details: Intel Server pre-production platform with two Quad-Core Intel Xeon processor X5460 3.16GHz, 2x6Mb L2 Cache, 1333 MHz system bus, 16GB Memory DDR2-667 FBDIMM, 64-Bit SUSE Linux* Enterprise Server 10 SP1 Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64, Intel C++ Compiler for Linux32 and Linux64 Version 10.1 Build 20070725. Intel internal measurement – September 2007.

[3] System specs:
Dual-Core Intel® Xeon® processor 5160-based platform details: Fujitsu Siemens* PRIMERGY* BX620 S3, two Dual-Core Intel® Xeon® processors 5160, 3.0 GHz, 4M L2 Cache, 1333 MHz system bus, 8x1GB DDR2-RAM PC2-5300F memory, Microsoft Windows Server 2003* Enterprise x64 Edition + SP1, BEA JRockit* 5.0 P27.2.0. Measured at 138,388 bops and 138,388 bops/jvm. For more information see http://www.spec.org/jbb2005/results/res2007q1/jbb2005-20070213-00254.html.

Quad-Core Intel® Xeon® processor X5460-based platform details: Intel Server pre-production platform with two Quad-Core Intel Xeon processor X5460 3.16GHz, 2x6Mb L2 Cache, 1333 MHz system bus, 16GB Memory DDR2-667 FBDIMM, Microsoft Windows Server 2003 Enterprise x64 Edition SP1 (64-bit), BEA JRockit 5.0 P27.2.0. Intel internal measurement – September 2007.

[4] Platform is based on Intel 5100 Memory Controller Hub Chipset.

[5] Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain platform software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

[6] Mainstream support for up to 24 GB DDR2 memory. Maximum capacity of 32 GB configurable at introduction and up to 48 GB in 2008.

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