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# News Release

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## **INTEL UNLEASHES NEW SERVER PROCESSORS THAT DELIVER WORLD-CLASS PERFORMANCE AND POWER EFFICIENCY**

### **Unprecedented Support: 200 Different Systems Already Planned, More Expected**

SANTA CLARA, Calif., June 26, 2006 – Intel Corporation today introduced its dual-core Intel® Xeon® Processor 5100 series, previously codenamed “Woodcrest,” for the high-volume server, workstation, communications, storage and embedded market segments. These processors are based on the revolutionary, new Intel Core Microarchitecture coupled with the world’s most advanced manufacturing capability, offering undeniable leadership in server performance, power efficiency and value.<sup>1</sup> More than 200 server and workstation models are planned from more than 150 manufacturers with initial orders starting today.

“Simply put, the Core microarchitecture is a technical marvel that is driving a new era of power efficiency without compromising on what can only be described as eye-popping dual-core 64-bit performance,” said Pat Gelsinger, senior vice president and general manager of Intel’s Digital Enterprise Group.

The new dual-core server processors are the first to take advantage of Intel’s Core microarchitecture, a power-sensitive blueprint design that also includes several innovations to dramatically improve performance.

The Dual-Core Intel Xeon Processor 5100 series delivers up to 135 percent performance improvements<sup>2</sup> and up to 40 percent reduction<sup>3</sup> in energy consumption over previous Intel server products. It also outshines competitive offerings in dozens of real-world applications and industry

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standard benchmarks.<sup>1</sup> This unparalleled blend of power and efficiency enables equipment manufacturers to optimally balance processing capabilities within power and space constraints of smaller-sized systems that are typical of communications, storage and embedded applications.

Based on Intel's world-class manufacturing capability and leading 65-nanometer manufacturing process that further shrinks transistors and power consumption, yet also boosts speed, the 5100 series is "drop-in compatible" as part of Intel's "Bensley Platform" and available across a variety of server product segments. The Bensley platform delivers the latest server technologies, including faster and more reliable memory technology called FB-DIMMs, Intel Virtualization Technology, Intel Active Server Manager and Intel I/O Acceleration Technology.

FB-DIMMs are available today worldwide from all the major memory manufacturers and priced competitively to comparable registered DIMMs. Intel and the memory industry are collaborating on several programs to accelerate adoption of this key technology.

Intel will ship the 5100 series at frequencies up to 3.0 gigahertz speed and faster 1333 megahertz front side bus and 4 megabytes of shared L2 cache or memory reservoir between both cores. The 3 GHz version will ship with a Thermal Design Point (TDP) of 80 watts with all others rated at just 65W. An even lower voltage version will ship in the third quarter at 2.33 GHz and a TDP of just 40 watts. Woodcrest includes extreme power management techniques which drives substantially lower actual or measured at the wall power than the maximum or TDP power. At the system level, Bensley systems demonstrate unquestioned energy efficient performance leadership.

### **First Processors Using Intel Core Microarchitecture**

The microarchitecture will power these new processors and also be the foundation for Intel's upcoming mobile and desktop products branded as Intel® Core™ 2 Duo processors.

Some of the many new innovations for this multicore-optimized architecture include Intel® Wide Dynamic Execution that delivers more instructions per cycle. Every execution core is wider, allowing each core to complete up to four full instructions simultaneously using an efficient 14-stage pipeline for improved and more efficient data transferring, and thus performance.

The processors also include Intel® Advanced Smart Cache that allows one of two processing units – or cores – to use the entire memory reservoir if necessary while the other is idle and Intel® Smart Memory Access that can "hide" memory latency and bottlenecks.

Combined, these Intel-based servers can reduce real estate-associated costs and space, cooling requirements and electrical demand in server data centers for IT managers while increasing responsiveness, productivity and server uptime.

Intel expects this server family to be the fastest-ramping product in the company's history, and has set pricing for the 5100 processor family from \$209 to \$851 in 1,000-unit quantities, depending on features. Intel will also provide extended lifecycle support of 5 to 7 years for its communications, storage and embedded customers.

### **About Intel**

Intel, the world leader in silicon innovation, develops technologies, products and initiatives to continually advance how people work and live. Additional information about Intel is available at [www.intel.com/pressroom](http://www.intel.com/pressroom).

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<sup>1</sup> Based on x86 architecture dual processor server systems. See [www.intelstartyourengines.com](http://www.intelstartyourengines.com) for benchmarks and more information.

<sup>2</sup> 135 percent Performance Claim based on published results on SPECjbb2005 benchmark as of June 26, 2006. Configuration details:

Dual-Core Intel Xeon Processor 2.80 GHz based platform details: Fujitsu Siemens Computers PRIMERGY RX300 S2 server platform: Two Dual-Core Intel® Xeon® processors 2.80 GHz with 2x2MB L2 cache 800 MHz system bus, 4 GB DDR2, Microsoft Windows Server\* 2003. Java HotSpot(TM) Server VM (build 1.5.0\_06-b05). Referenced as published at 41986 bops and 41986 bops/jvm. For more information see [www.spec.org/jbb2005/results/](http://www.spec.org/jbb2005/results/)

Dual-Core Intel Xeon Processor 5160 based platform details: Fujitsu Siemens BX620 S3 Server platform with two Dual-Core Intel Xeon Processor 5160, 3.00 GHz with 4M L2 Cache, 1333 MHz system bus, 8GB (8x1GB) FB-DIMM memory, Windows 2003 Enterprise Edition. BEA JRockit(R) 5.0 P26.4.0. Referenced as published at 100407 bops and 100407 bops/jvm. For more information see [www.spec.org/jbb2005/results/](http://www.spec.org/jbb2005/results/)

<sup>3</sup> 40 percent reduction based on Processor TDP comparison between previous generation Dual-Core Intel Xeon Processor 2.80GHz and new Dual-Core Intel Xeon Processor 5160.