Intel Xeon Processor Family To Boost Performance, Memory and Graphics for Workstation Platforms

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Platform Innovations Provide Performance and Headroom for the Most Demanding Applications

SANTA CLARA, Calif., June 28, 2004 - Intel Corporation today announced availability of a new Intel® Xeon™ processor-based platform and a host of new products and technologies for its Intel Xeon processor family that significantly boost performance, memory and graphics capabilities for workstation platforms. Workstations will benefit from rich set of new technologies that address the increasingly data-hungry systems and software applications that crave performance for a range of functions such as financial and scientific data modeling to

digital filmmaking and design automation.

The new Intel processor-based workstation platform, which features an advanced Intel Xeon processor and a significantly more powerful chipset, boosts performance by up to 30 percent over previous generations1. The new platforms also help reduce power consumption and total cost of ownership.

Through a stable of technologies such as DDR2 memory, PCI Express2, a faster 800MHz system bus, Intel® Extended Memory 64 Technology, Enhanced Intel SpeedStep® Technology and more, new platforms based on the Intel Xeon processor family enjoy faster memory support, improved graphics performance, extended memory addressability and improved power management. At the heart of the new platform is an advanced Intel Xeon processor, built on Intel's industry-leading 90-nanometer manufacturing process, which continues to take advantage of Intel Hyper-Threading technology, and a new chipset optimized for workstation platforms.

"Intel has the unique ability to transform computing by delivering breakthrough innovations at the platform level while at the same time enabling thousands of solutions to be optimized for Intel architecture," said Abhi Talwalkar, vice president and general manager of Intel's Enterprise Platforms Group. "These new Intel Xeon processor-based platforms bring powerful new technologies to market providing customers with greater performance and reliability and improved memory and graphics capabilities for their business needs."

Server platforms based on the new Intel Xeon processor and other new technologies will be available from system manufacturers in the coming months, based on their validation schedules.

Intel Architecture Most Prominent for Workstations and Servers

More than 8 in 10 workstations shipping today are based on Intel architecture, according to industry analysts3. Intel® architecture also powers more than 85 percent of total server shipments3. And within the dual-processor server segment, which is the largest and fastest-growing server segment, Intel architecture-based servers account for 9 of 10 servers shipped3.

"We trust Intel architecture because it is enterprise proven", said Joseph Weisbord, chief technology officer for G-Trade, The Bank of New York's global electronic agency brokerage and member of BNY Securities Group. "Intel Xeon processors are the workhorse of our IT infrastructure, while Intel® Itanium® 2 processor-based systems power our back-end mission-critical applications, allowing us to provide 24-hour high availability global execution capabilities to our clients worldwide. This highlights our progressive and inventive use of technology to help our clients navigate the complexities of the global markets."

Board and system manufacturers worldwide are expected to offer workstation platforms based on the latest Intel Xeon processor, including Asus, Compusys, Dell, IBM, HP, Egenera, Foxconn, FSC, Fujitsu, Gigabyte, HCL, Iwill, Kraftway, Maxdata, MPC, NEC, Optimus and Tyan.

"Avid is constantly pushing the boundaries of technology in the film, video, television, broadcast, 3-D animation, and audio industries," said Joe Bentivegna, vice president of video development and operations at Avid Technology, Inc. "Our Avid DNA product line is the industry's first hybrid architecture to leverage the power of both host-based processors and dedicated hardware for accelerating media processing. Intel is delivering vast improvements in memory bandwidth, processing speed, power consumption, and overall system performance, all of which are particularly beneficial for Avid users performing complex, data-

intensive tasks, including working with large numbers of video streams at the same time, and manipulating HD images and 3-D animations in real time."

Advanced Workstation Capabilities Enabled By New Technologies
The new workstation platform, which provides faster multimedia processing, encryption, and greater support for computationally intensive graphics, features an advanced processor and chipset.

A new Intel Xeon processor (formerly codenamed "Nocona") operates at speeds up to 3.60 GHz. It integrates Demand Based Switching (DBS) with Enhanced Intel SpeedStep® Technology to dynamically adjust power and lower the processor's power demand. The new Intel® Extended Memory 64 Technology (Intel® EM64T), enables 64-bit memory addressability for greater application flexibility4. Enhancements to Intel Hyper-Threading Technology are designed to improve the performance of multithreaded applications, and expanded Streaming SIMD Extensions 3 (SSE3) Instructions improve thread synchronization for better system responsiveness in areas such as media and gaming. Additionally, beta versions of Intel's software developer tools, to help enable applications take advantage of the new technologies, including Intel EM64T, are available now with final versions available later this year.

The Intel® E7525 chipset (formerly codenamed "Tumwater") integrates for the first time several new technologies that eliminate system bottlenecks by balancing performance between the processor, I/O and memory. A powerful new 800 MHz system bus increases throughput by 50 percent compared to the previous generation. New PCI Express I/O technology doubles graphics bandwidth compared to AGP8X and provides the bandwidth for other applications, such as storage and high-speed networking. It also supports DDR2 memory technology, providing power savings up to 40 percent compared to DDR 333. With a capacity

of up to four Dual In-line Memory Modules (DIMMs) per channel at 400 MHz, DDR2 increases sustainable memory bandwidth by up to 11 percent compared to DDR 333.

"This new platform delivers more than just a faster processor," said Marc West, chief information officer of Electronic Arts. "Our capabilities are greatly extended with PCI Express technology, which gives us a competitive advantage because it provides more bandwidth, which is essential for optimal high-end gaming development and player experience."

Intel Xeon Processor-Based Servers Available Soon

The Intel Xeon processor will also be used in the next generation of dual-processor server platforms, which will be available in coming months based on the validation schedules of system manufacturers. The new platforms will be based on two advanced chipsets, the Intel® E7520 and Intel® E7320 (formerly codenamed "Lindenhurst" and "Lindenhurst-VS," respectively), and the new Intel® IOP332 I/O processor (formerly codenamed "Dobson"). The server platforms will take advantage of the same new technologies as the workstation platform introduced today, including PCI Express technology, DDR2 memory support and Intel EM64T. The platforms will be available soon from leading system manufacturers worldwide and will offer improved performance, reliability, serviceability and power savings for enterprise solutions.

Pricing and Availability

A broad family of Intel Xeon processors enables improved performance across multiple price points. The new Intel Xeon processors are available now at speeds ranging from 2.80 to 3.60 GHz. The 3.60 GHz processor is available in limited quantities as production ramps through the third quarter. Intel's list prices in quantities of 1,000 are: 3.60 GHz - $851; 3.40 GHz - $690; 3.20 GHz - $455; 3 GHz - $316; 2.80 GHz - $209. The price of the E7525 chipset, also available today, is $100 based on

1,000 units.

Intel, the world's largest chip maker, is also a leading manufacturer of computer, networking and communications products. Additional information about Intel is available at www.intel.com/pressroom.

The original press release can be found here.