

# Intel Ships New Processors Based on 45-nanometer Process

February 27 2008

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Intel Corporation today announced expanded offerings for embedded market segments with new processors with extended, 7-year life cycle support, a new chipset and a carrier-grade server. The processors, based on Intel's high-k, metal gate transistor formula and manufactured on the company's 45-nanometer process, include the Quad-Core Intel Xeon processor 5400 Series and Dual-Core Intel Xeon processor 5200 Series.

These new processors, coupled with the new power-optimized Intel 5100 Memory Controller Hub (MCH) chipset, comprise the first 45nm CPU platforms for thermally constrained bladed applications. When using the Intel 5000P chipset, the 45nm processors are ideal for full-performance and memory-intensive applications such as storage, routers, security and medical solutions, as well as communications applications such as IP Multimedia Subsystems (IMS).

The processors take advantage of Intel's Hafnium-based, high-k metal gate transistor formula, which reduces power consumption, increases switching speed and significantly increases transistor density over the company's previous 65nm manufacturing technology. These 45nm CPU-based platforms, based on the Intel 5100 MCH chipset, are ideal for 200 watt maximum power envelope specifications such as AdvancedTCA and also for NEBS Level-3 requirements.

"We're acutely aware of the performance demands and power consumption concerns of our customers and reached a remarkable 67 percent more compute performance-per-watt when we validated the Intel

5100 MCH chipset-based 45nm quad-core platform<sup>1</sup>," said Doug Davis, vice president and general manager of Intel's Embedded and Communications Group. "In addition, the 45nm quad-core processors also allow for a 22 percent performance gain over previous-generation platforms within the same thermal profile<sup>2</sup>, making it an excellent choice for compute-intensive applications such as IMS and platforms for storage, routers and security."

Intel is offering extended lifecycle support for 7 years for the Dual-Core Intel Xeon processor 5200 series (E5240, E5220, L5238) and the Quad-Core Intel Xeon processor 5400 series (E5440 and L5408). This represents an expansion from previous minimum support of 5 years.

The new Intel Carrier Grade Server TIGH2U building block offers increased choice for customers that require power efficiency and improved compute performance for high-end communication applications. Intel also announced enhancements for the Intel Carrier Grade Server TIGW1U, Intel IP Network Server NSW1U and Intel IP Network Server NSC2U. These reliable communication rack-mount servers now support the Quad-Core Intel Xeon processor 5400 Series and are ideal for telco and network applications in harsh environments with NEBS Level-3 requirements that demand high performance, energy efficiency and high I/O throughput.

The 45nm processors with extended lifecycle support are available today, and prices range from \$321 to \$690. The dual-core Intel Xeon processor L5238 at 35 watts will be available in April. The Intel 5100 MCH chipset is available today, starting at \$76.

Source: Intel

Citation: Intel Ships New Processors Based on 45-nanometer Process (2008, February 27)  
retrieved 15 August 2024 from <https://phys.org/news/2008-02-intel-ships-processors-based-nanometer.html>

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