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News Fact Sheet

Intel Introduces 10 New “Smart” Processors for Embedded

New 32nm Processors with Improved Performance and Power Management

Jan. 7, 2010 – Today Intel Corporation announced that 10 processors from the new 2010 Intel® Core™ processor family and three new chipsets will be supported with 7-year extended manufacturing lifecycles for embedded market segments. The new 2010 Core processors deliver smart, energy-efficient performance for embedded developers in communications, digital signage, retail, industrial and medical segments. More than 200 design wins for Core are expected from embedded developers.

Details of the processors and chipsets as they relate to embedded market segments are summarized below. To learn more about the 2010 Intel Core processor series for desktop and mobile applications, please visit: www.intel.com/pressroom/CES.



To meet the specific space constraints, performance and graphics demands that are typical of embedded applications, Intel is supporting the 2010 Core mobile processors and pairing them with the Mobile Intel® QM57 Express chipset. The company also is pairing desktop and workstation versions of the processors with the Intel® Q57 and Intel® 3450 chipsets.

Unique Features for Embedded Devices

- Intel tailored four of the 2010 Core mobile processor versions – Core i7-610E, Core i7-620LE, Core i7-620UE and the Core i5-520E – to include Error Correcting Code (ECC). ECC corrects memory without the need for system reset and is critical for embedded designs that require high data integrity standards. For example, ECC in smart retail registers helps protect against register system memory errors that might otherwise result in numerical miscalculations.
- The processors also come in Ball Grid Array packaging, which increases the structural integrity of the board design, reduces package size and improves electrical performance. This design is beneficial for applications such as portable military devices and digital signs.

Smart Computing

- The processors are based on Intel’s “Nehalem” microarchitecture and feature [Intel® Turbo Boost Technology](#) and [Intel® Hyper-Threading Technology](#), which provide intelligent, adaptive performance. For example, with a Core processor-based system, an IT administrator at a bank could provide better management of system workloads and power consumption for embedded applications such as information kiosks, digital signs and ATM machines.

Remotely Managed Devices

- Many of the processors also support [Intel® vPro™ Technology](#), which maximizes system uptime by remote system security, maintenance and manageability for embedded applications.
- For example, in a retail environment with networked point-of-sale systems, digital signs and merchandise kiosks, administrators could remotely diagnose and service equipment that is hard to reach, and deliver targeted content to customers for a more personal shopping experience.

Rich Media and Graphics

- The integrated graphics engine on the 2010 Intel Core processors provide higher video resolution, frame rates and complex video content analysis for applications such as video surveillance systems and anonymous video analytics on digital signs that enable content owners to gather metrics for more effective advertising campaigns.

Processor-Adopt Details

- Additional mobile versions of the 2010 Intel Core processors that were adopted for the embedded market segments include the dual-core Core i7-620M and Core i5-520M.
- The Core 2010 processors adopted from the desktop line-up for embedded market segments include the 32nm dual-core Core i5-660 and Core i3-540, and the 45nm quad-core Core i7-860 and Core i5-750.

Pricing and Availability

The Core i7-620M and 860; Core i5-520M, 750 and 660; and Core i3-540 are available immediately. The Core i7 and i5 processors that include ECC in the Ball Grid Array package will be available within 30 days. Prices for the Intel Core processors with 7-year lifecycle support range from \$133 to \$332 in quantities of 1,000.

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