



News Fact Sheet

2nd Generation Intel® Core™ Processors Offer New Level of Visual Power, Speed, Performance for Embedded Applications

Jan. 5, 2011 — With the debut of the 2nd Generation Intel® Core™ processor family, Intel Corporation today announced it will adopt seven processors for embedded applications with 7-year extended lifecycle support. Based on Intel's cutting-edge 32-nanometer process technology, the new chips feature the company's first "visibly smart" micro-architecture to combine visual and 3-D graphics technology with performance-leading microprocessors on a single chip.

The built-in processor graphics engine will now share resources such as cache, or a memory reservoir, with the processors' core. This increases a device's computing and graphics performance while maintaining energy efficiency.

Ideal for digital signage, digital security and surveillance, industrial, medical and retail market segments, the 2nd Generation Intel Core processors allow for future technology innovation without the need to redesign hardware.

Details of the [2nd Generation Intel Core processors](#) and accompanying chipsets as they relate to the embedded market are summarized below.



[Intel Core i3/i5/i7 processors](#) paired with Intel® Q67 Express and Intel® B65 Express chipsets

With support for both dual-core and quad-core configurations, the 2nd Generation Intel Core processors improve performance and efficiency of multi-threaded applications. The new processors also include advanced features for remote management capabilities and reliability.

[Intel Core i5/i7 processors](#) offer options with Error Correcting Code (ECC) and are paired with Intel® QM67 Express and Intel® HM65 Express chipsets

These 2nd Generation Intel Core processors offer options in Ball Grid Array (BGA) packages with ECC which provide a high level of data integrity and reliability for embedded customers involved in mission-critical applications where data integrity error can result in financial loss. ECC offers single-bit error correction capabilities and double-bit error detection.

Delivering Visually Stunning Experiences: Along with the new ring architecture, the integrated graphics engine on a single die eliminates the need for a separate graphics chip, reduces latency and improves throughput. With built-in advanced media and graphics capabilities visually stunning experiences are easier to deploy and dramatically increase performance and capabilities for video processing and analytics, to bring a new level of sophistication to embedded applications.

Greater Speed and Performance: The 2nd Generation Intel Core processor family is fine-tuned and feature-rich to handle the increasingly compute intensive and multi-threaded applications of embedded solutions. The enhanced features make it easier to manage and secure new levels of performance up to 30 percent¹, matching power with more control.

Flexibility for Today and Tomorrow: Making the future a priority today, the 2nd Generation Intel Core processor family is designed to have socket compatibility with the next generation of Intel® architecture processors for scalability and reduction in redesign efforts for embedded customers. From the most affordable to the most sophisticated, these latest processors empower faster and easier development of embedded solutions across a range of price points and requirements.

- **Intel® Advanced Vector Extensions (Intel® AVX)**
Intel AVX enables digital signal image and digital signal processing workloads for compute-intensive applications such as radar detection, hurricane command centers, ruggedized navigation systems and remote medical image processing.
- **Intel® Clear Video HD Technology**
Intel Clear Video HD Technology enhances visual quality and color fidelity for spectacular HD media playback for embedded applications such as digital signage and gaming.
- **Intel® Quick Sync Video Technology**
Ideal for digital security and surveillance market segments, Intel Quick Sync Video Technology allows for accelerated video encode, decode and transcode for faster media processing.
- **Intel® Turbo Boost Technology**
This feature automatically shifts or reallocates processor cores and processor graphics resources to accelerate performance, tailoring a workload to give users an immediate performance boost when needed.

Pricing and Availability

The Core i7-2710QE and i7-2600; Core i5-2400; and Core i3-2120 are available immediately. The Core i7 and i5 processors that include ECC in the Ball Grid Array package and Core i5-2510E are scheduled to be available within 60 days. Prices for the Intel Core processors with 7-year lifecycle support range from \$138 to \$378 in quantities of 1,000.

Processor	Cores / Threads	Base Frequency	TDP	Package	ECC	Pricing per thousand units
Mobile						
Intel® Core™ i7-2710QE processor	4/8	2.1 GHz	45 W	FCPGA988	No	\$378
Intel® Core™ i7-2715QE processor	4/8	2.1 GHz	45 W	FCBGA1023	Yes	\$378
Intel® Core™ i5-2510E processor	2/4	2.5 GHz	35 W	FCPGA988	No	\$266
Intel® Core™ i5-2515E processor	2/4	2.5 GHz	35 W	FCBGA1023	Yes	\$266
Desktop						
Intel® Core™ i7-2600 processor	4/8	3.4 GHz	95 W	LGA1155	No	\$294
Intel® Core™ i5-2400 processor	4/4	3.1 GHz	95 W	LGA1155	No	\$184
Intel® Core™ i3-2120 processor	2/4	3.3 GHz	65 W	LGA1155	No	\$138

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* Other names and brands may be claimed as the property of others.

¹ Varies based on configuration.

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