



# Consumer Backgrounder

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## **Meet the All New 2010 Intel® Core™ Processor Family Intel® Core™ i7, i5 and i3 Not Just Faster. Smarter.**

All computers are not created equal. For the first time, there's a family of Intel processors that aren't just faster, they're smarter. Featuring a revolutionary new design, smarter laptop and PC performance is well within your reach to meet the demands of your everyday computing needs.

***Multi-task without the wait:*** Experience smart processor performance with the revolutionary new architecture and features of the all new 2010 Intel® Core™ processor family. With the Intel® Core™ i5 processor, features including Intel® Turbo Boost Technology<sup>2</sup> and Intel® Hyper-Threading Technology<sup>1</sup>, allow the computer to automatically adapt to whatever you do. Applications feel faster, and your PC is more responsive, even as you multi-task. You'll fly through everything you do simultaneously on your PC including music, movies, photos and social networking. Get more of your videos and photos online faster. How much faster? How about twice as fast as your current PC?<sup>3</sup> Now that's smart performance!

***Stunning visuals, high-definition playback:*** Integrated right inside your processor for the first time, our new graphics offer more performance than ever before. All new 2010 Intel® Core™ processors with Intel® HD Graphics deliver smooth, high-definition HD video playback and the latest home theater audio from Dolby\* and DTS\*. Our new processors support mainstream 3-D gaming without the need for an add-in video card, advanced 3-D capabilities and they offer full support for the new Microsoft Windows\* 7 operating system. Whether you are watching a Blu-ray\* movie or simply having fun playing most mainstream games, new Intel® Core™ processors with Intel® HD Graphics deliver a unique solution for a broad array of users.

***Sleek, stylish and energy efficient:*** The design of the new Intel® Core™ processors also integrate the memory controller into the processor and utilizing the Intel® 5 Series Chipset family, they enable fully functional, energy-efficient, innovative designs. The new Intel® 5

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Series chipsets use up to 50 percent less power than previous generations, and with a 65 percent smaller footprint, they enable smaller, sexier and more innovative PC styles.

**Get simply better wireless for your computer:** Stay connected throughout your busy day. Get simply better wireless for your computer with Intel® Centrino® wireless. Intel® Centrino® wireless products provide great coverage, amazing throughput and reliable connectivity - all while consuming minimal power. This includes WiMAX, a 4G wireless broadband technology, that's not only dramatically faster than WiFi, but also provides one, long-range connection that can unwire entire neighborhoods, cities and even countries.

**Ultra-thin laptops with the perfect balance of style and performance:** Enjoy the capability you've come to expect from a laptop, now in an ultra-thin design. With a platform built for systems less than an inch thick, Intel helps put sleeker laptops at your fingertips. Ultra-thin laptops with all new 2010 Intel® Core™ processors inside give you the perfect balance of performance, style and long battery life.

### Did you know? Fun Facts...

- A nanometer measures one billionth of a meter. The fastest competitive sprinters in the world would have to take about **3.125 billion steps** in the 100-meter dash if their stride lengths were 32nm.
- You could sharpen an image **28 percent faster** on Adobe Photoshop\* compared to processors manufactured on an older process.
- These new processors are **4,767 times faster** than Intel's first processor, the Intel® 4004.
- **4 million** tiny transistors would fit in the period at the end of this sentence.
- Transistors on an Intel® Core™ i5 processor act like light switches controlling the flow of electrons inside a microchip, turning on and off more than **a trillion times per second**.
- If the pace of innovation in space travel had increased at the pace of Moore's Law since 1971, you would now be able to travel at the speed of light, **671 million miles per hour**.
- The price per transistor on a chip has dropped dramatically since Intel was founded in 1968. Some people estimate that the **price of a transistor is now about the same as that of one printed newspaper character**.\*\*
- Intel's 32nm factory manufacturing process technology has a gate height (*what blocks a transistor from turning on and off*) of **0.9nm**. The average piece of paper is **0.1mm thick**. It would take **111,111 gates** stacked to equal the thickness of a single piece of paper.

<sup>1</sup> Intel® Hyper-Threading (HT) Technology (Intel® HT Technology) requires a computer system with a processor supporting Intel® HT Technology and an Intel® HT Technology-enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. The Intel® Core™ i5-750 desktop processor does not support Intel® HT Technology. For more information, including details on which processors support Intel® HT Technology, see [www.intel.com/technology/platform-technology/hyper-threading/index.htm](http://www.intel.com/technology/platform-technology/hyper-threading/index.htm)

<sup>2</sup> Intel® Turbo Boost Technology is exclusively available with Intel® Core™ i5 and i7 processor series only. Intel® Turbo Boost Technology performance varies depending on hardware, software and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel® Turbo Boost Technology. For more information, see [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost)

<sup>3</sup> Comparing the Intel® Core™ i5 650 to the Intel® Core™ 2 Duo E6400 on PCMark\* Vantage overall score

\*Other brand and names are the property of their respective owners

\*\* Source: Moore's Law In Perspective, 2005