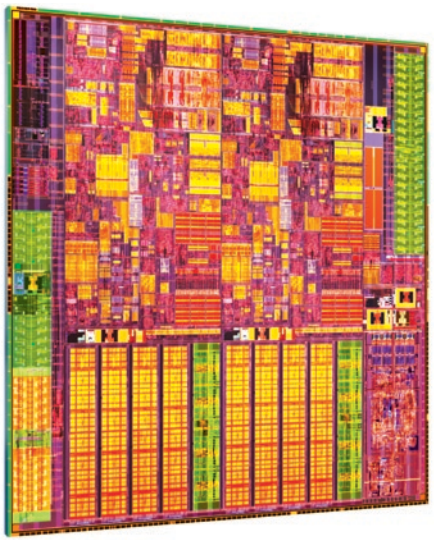
PRODUCT BRIEF
Intel® Core™ i5 Mobile Processor with Intel® Graphics Technology

Intel® Core™ i5 Mobile Processor



Product Overview

The new Intel® Core™ i5 mobile processor, part of Intel's new family of processors, puts smart performance well within your reach. The Intel Core i5 mobile processor's revolutionary architecture allows for new levels of intelligent performance, advanced media and graphics features, and expanded business capabilities for home or at work—all with the energy efficiency needed for an on-the-go lifestyle.

The Intel® Core™ i5 Family of Laptop Processors—Smart Performance with a Speed Boost

Experience smart performance with the revolutionary new architecture and features of the Intel Core i5 mobile processor family. With Intel® Turbo Boost Technology[1] and Intel® Hyper-Threading Technology[1] you get dynamic and adaptive performance when you need it for the most demanding everyday applications. Add the integration of the memory controller and graphics to the processor and you can discover smarter and faster performance, brilliant visual experience, energy efficiency, and sleeker laptops at your fingertips.

With Intel Turbo Boost Technology, the Intel Core i5 mobile processor automatically adapts to whatever you are doing on your PC, dialing up speed to respond quickly to your needs. Whether editing photos, playing games, or simply multitasking among your typical applications, the Intel Core i5 processor intelligently delivers extra performance when you need it and increases energy efficiency when you don't.

Don't let too many open applications slow you and your PC down. The Intel Core i5 mobile processor also features Intel Hyper-Threading Technology, which enables each core of your processor to work on two tasks at the same time, delivering the performance you need for smart multitasking.

Whether running a single application or multitasking intensively, the new Intel Core i5 mobile processor delivers solid performance for all your everyday applications with the ability to intelligently increase speed as needed for demanding tasks. Accelerate your productivity, inspire your digital creations, and enjoy video smoothness and music quality on a system with the Intel Core i5 mobile processor—the smart choice for home, office, and when you're on the go.

Intel® Core™ i5-500 Mobile Processor Series

	INTEL® CORE™ i5-5XXM MOBILE PROCESSOR SERIES	INTEL® CORE™ i5-5XXUM MOBILE PROCESSOR SERIES (Ultra-Low Voltage)
Processor Package	rPGA988A	BGA1288
Intel® Turbo Boost Technology[1]	Yes	Yes
Intel® Hyper-Threading Technology[1]	Yes	Yes
Number of Simultaneous Threads	4 (with Intel® HT Technology[1])	4 (with Intel® HT Technology[1])
Intel® Smart Cache	3 MB L3 shared	3 MB L3 shared
Processor Integrated Memory Controller	Yes	Yes
Number of Memory Channels	2 (DDR3 1066 MHz)	2 (DDR3 800 MHz)
Intel® HD Graphics	Yes	Yes
Intel® Express Chipset	Mobile Intel® 5 Series	Mobile Intel® 5 Series

Intel® Core™ i5 Mobile Processor
Features and Benefits

For more information on the Intel® Core™ i5 mobile processor, visit
www.intel.com/products/processor/corei5/mobile/index.htm

Features and Benefits of the Intel® Core™ i5 Mobile Processor Family

Feature	Benefit
Multi-thread / Multi-Core Processing	Provides four-way multitask processing with Intel® Hyper-Threading Technology[1] and two dedicated physical cores. Multi-thread processing helps deliver additional performance so users can experience better multitasking and multi-threaded performance across many types of applications and workloads.
Intel® Turbo Boost Technology[1]	Dynamically increases the processor's frequency as needed by taking advantage of thermal and power head-room when operating below specified limits. Get more performance automatically, when you need it the most.
Intel® Hyper-Threading Technology (Intel® HT Technology)[1]	Delivers two processing threads per physical core for a total of four threads for substantial computational throughput. With Intel® HT Technology, highly threaded applications can get more work done in parallel, completing tasks sooner. With more threads available to the operating system, multitasking becomes even easier. The processor can handle multiple applications working simultaneously, allowing you to do more with less wait time.
Intel® Smart Cache	The shared cache is dynamically allocated to each processor core, based on workload. This efficient, dual-core-optimized implementation increases the probability that each core can access data from the fast cache, significantly reducing latency to frequently used data and improving performance.
Integrated Memory Controller	An integrated memory controller offers stunning memory read/write performance through efficient prefetching algorithms, lower latency, and higher memory bandwidth.
Intel® HD Graphics	Enhanced video and 3D engine delivers smooth HD video playback and mainstream 3D gaming without the need for add-in video cards or decoders. Intel® HD Graphics featuring dynamic frequency allows the processor to automatically distribute performance between the processor and Intel integrated graphics based on application needs. Intel HD Graphics provides a suite of video processing, 3D, and software technologies designed to improve image quality and performance, including hardware-accelerated decode for Blu-ray* dual-stream picture-in-picture and 3D support for Microsoft* DirectX* 10 and OpenGL* 2.1. Supports full functionality of the Microsoft* Windows* 7 operating system and display connectivity options, including HDMI* and DisplayPort*. Enables professional-grade audio capabilities with support for Dolby* TrueHD and DTS*-HD Master Audio multi-channel bitstreaming.
Intel® Virtualization Technology (Intel® VT-x) and Intel® Virtualization Technology for Directed I/O (Intel® VT-d)[1]	Intel® VT allows one hardware platform to function as multiple "virtual" platforms. For businesses, Intel VT offers improved manageability, limiting downtime and maintaining worker productivity by isolating computing activities into separate partitions.
Advanced Encryption Standard New Instructions (AES-NI)	New AES instructions add hardware acceleration to AES algorithms and speeds up the execution of applications using AES instructions.
Intel® Trusted Execution Technology (Intel® TXT)[1]	Highly versatile set of hardware extensions for Intel® processors and chipsets which, with appropriate software, enhance platform security capabilities.
Intel® HD Boost	Includes the full SSE4 instruction set, significantly improving a broad range of multimedia and compute intensive applications. The 128-bit SSE instructions are issued at a throughput rate of one per clock cycle, allowing a new level of processing efficiency with SSE4-optimized applications.

Experience smart performance with the revolutionary new architecture and features of the Intel® Core™ i5 mobile processor family.

[1] Intel® Turbo Boost Technology, Intel® Hyper-Threading Technology, Intel® Virtualization Technology, and Intel® Trusted Execution Technology require a computer system with a processor, chipset, BIOS, enabling software and/or operating system, device drivers, and applications designed for these features. Performance will vary depending on your configuration. Contact your vendor for more information.

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