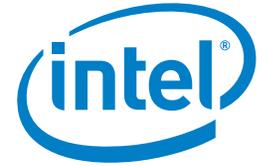


PRODUCT BRIEF

Intel® Core™ i5 Desktop Processor
with Intel® HD Graphics



Intel® Core™ i5 Desktop Processor



Product Overview

The Intel® Core™ i5 processor with Intel® HD Graphics offers an unparalleled computing experience. This revolutionary new architecture, featuring Intel® Turbo Boost Technology¹, allows for new levels of intelligent performance, advanced media and graphics features, and expanded business capabilities—all while being energy efficient.

Technology

What makes this new architecture so revolutionary? The features of Intel® Turbo Boost Technology, Intel® Hyper-Threading Technology¹, and the improvements to Intel® Smart Cache combine to create dynamic and adaptive performance that accelerates everything without the user having to do anything. Add the integration of the memory controller and the graphics to the processor and the Intel Core i5 processor gets things done faster and more efficiently.

- Intel Turbo Boost Technology adds performance when needed.
- Intel Hyper-Threading Technology offers more compute muscle while reducing wait time.

- Intel Smart Cache improves responsiveness by providing faster access to data.
- Intel HD Graphics is the ideal graphics solution for your everyday visual computing needs.

Performance has an immediate, perceptible impact on what you do on your PC. Accelerate your productivity, inspire your digital creations, and enjoy video smoothness and music quality on a system with the Intel Core i5 processor—the smart choice for home and office.

Comparison Table

	INTEL® CORE™ i5-6XX SERIES	INTEL® CORE™ i5-6X1 SERIES
Socket	LGA1156	LGA1156
Intel® Turbo Boost Technology ¹	Yes	Yes
Intel® Hyper-Threading Technology ¹	Yes	Yes
Intel® Smart Cache	4 MB L3 shared	4 MB L3 shared
Integrated Memory Controller	Yes	Yes
Number of Memory Channels	2 (DDR3 1333 MHz)	2 (DDR3 1333 MHz)
Intel® HD Graphics	Yes	Yes
Graphics Core Frequency	733 MHz	900 MHz
Intel® vPro™ Technology	Yes	No
Intel® Virtualization Technology (Intel® VT-x) ¹	Yes	Yes
Intel® Virtualization Technology for Directed I/O (Intel® VT-d) ¹	Yes	No
Intel® Trusted Execution Technology (Intel® TXT) ¹	Yes	No
AES New Instructions (AES-NI)	Yes	Yes
Intel® Express Chipset	Intel® 5 Series	Intel® 5 Series

Intel® Core™ i5 Desktop Processor

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

Features and Benefits of the Intel® Core™ i5 Processor

Feature	Benefit
Dual-Core Processing	Runs two independent processor cores in one physical package at the same frequency.
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.
Intel® Turbo Boost Technology ¹	Dynamically increases the processor's frequency as needed by taking advantage of thermal and power headroom 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 massive computational throughput. With Intel® HT Technology, highly threaded applications can get more work done in parallel, completing their tasks sooner. With more threads available to the operating system, multitasking becomes even easier. This amazing processor can handle multiple applications working simultaneously, allowing you to do more with less wait time.
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 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 AES applications.
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®-Designed Thermal Solution for Boxed Processors	Includes a four-pin connector for fan speed control to help minimize the acoustic noise levels generated from running the fan at higher speeds for thermal performance ² . Fan speed control technology is based on actual processor temperature and power usage.

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.

² The acoustic benefits of the four-pin header are reliant on a properly designed motherboard. Contact your board manufacturer for compatibility.

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