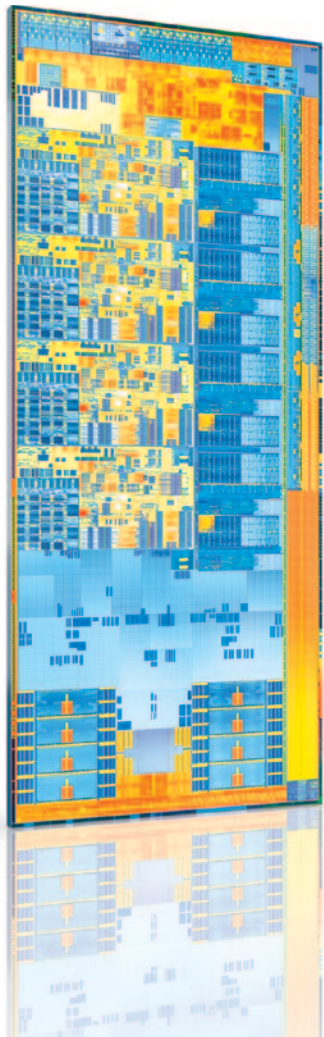(intel®)

3rd Generation Intel® Core™ Processor Family For Home—Desktop

Product Overview

A new PC can provide you with unique and expanded capabilities. And when it is powered by a visibly smart 3rd generation Intel® Core™ processor, it can deliver amazing performance. Smart features give your PC the ability to adapt to your needs, as well as stunning visuals built-in for an enhanced experience that you can both see and feel. You can enjoy a wide selection of entertainment, create and share your great memories, and explore and connect to what interests you most. Rediscover what's possible with a new computer. The only thing more amazing than our technology is what you'll do with it.

The 3rd gen Intel Core processor family features Intel® Turbo Boost Technology[1] 2.0, delivering a burst of processor speed automatically when the workload demands additional performance and greater adaptability, and Intel® Hyper-Threading Technology[1], allowing each processor core to work on two tasks at the same time, improving multitasking and speeding up the workflow. So whether you use your PC to be creative, play games, or for everyday tasks such as homework, these new processors offer the performance and features you want to get more done in less time.

Add to Your Imagination

The 3rd gen Intel Core processors feature built-in visuals,[2] a suite of visual enhancements that provide everything you need to enjoy a smooth, seamless, stunning experience on your PC. Spend minutes rather than hours to edit, convert, and share your videos. Add a new dimension to your viewing experience with 3-D.[3] Unlock a world of premium HD movies and content,[4] viewing images and HD video the way they were meant to be seen—sharper, smoother, and richer. Play your favorite games with no extra hardware needed. The built-in visuals of the 3rd gen Intel Core processor eliminate the need for many of the functions provided by a discrete graphics card, reducing power consumption and system cost.

Unlock Your Full Potential

Unlocked[5] 3rd gen Intel Core processors feature top-of-the-line speed and our best desktop visuals built in. With overclocking enabled, you get the flexibility to set your system specs just the way you like.

Energy Efficient

The 3rd gen Intel Core processors provide options for innovative system designs and enable more energy-efficient platforms that can meet ENERGY STAR*[6] and other global environmental requirements.

(intel® inside™ CORE™ i7) (intel® inside™ CORE™ i5) (intel® inside™ CORE™ i3)

Select the 3rd Generation Intel® Core™ Processor to Fit Your Lifestyle

**Intel® Core™ i7 Processor—
Visibly Smart Performance at its Best.**
Top-of-the-line performance for your most demanding tasks.

**Intel® Core™ i5 Processor—
Visibly Smart Performance with a Boost.**
The visibly smart Intel® Core™ i5 processor delivers performance that adapts to your needs and stunning visuals.

**Intel® Core™ i3 Processor—
A Visibly Smart Start.**
The visibly smart Intel® Core™ i3 processor provides amazing multitasking performance and stunning visuals.

3rd Generation Intel® Core™ Desktop Processor Family

For more information on the 3rd generation Intel® Core™ processor family, visit **www.intel.com**

3RD GENERATION INTEL® CORE™ PROCESSOR FAMILY COMPARISON

	INTEL® CORE™ i7 PROCESSOR	INTEL® CORE™ i5 PROCESSOR	INTEL® CORE™ i3 PROCESSOR
Number of Processor Cores / Threads	4 / 8	4 / 4	2 / 4
Intel® Turbo Boost Technology[1] 2.0	Yes	Yes	No
Intel® Hyper-Threading Technology[1]	Yes	No	Yes
Intel® Smart Cache	8 MB L3	6 MB L3	3 MB L3
AES New Instructions (AES-NI)	Yes	Yes	No
Intel® HD Graphics with DirectX* 11	4000	2500 / 4000	2500 / 4000
Intel® Virtualization Technology (Intel® VT-x)[1]	Yes	Yes	Yes
Performance Tuning Enabled[5,7]	Yes	Yes	No
Recommended Intel® Express Chipset	Z77	H77	H61[8]

The 3rd generation Intel® Core™ processor can deliver amazing performance and stunning visuals with smart features that adapt to your needs.

FEATURES AND BENEFITS OF THE 3RD GENERATION INTEL® CORE™ PROCESSOR FAMILY

FEATURE	BENEFIT
Intel® Turbo Boost Technology[1] 2.0	Dynamically increases the processor's frequency as needed by taking advantage of thermal and power headroom to give you a burst of speed when you need it.
Intel® Hyper-Threading Technology[1]	Delivers two processing threads per physical core. Highly threaded applications can get more work done in parallel, completing tasks sooner.
Integrated Memory Controller	An integrated memory controller offers stunning memory read/write performance through efficient prefetching algorithms, lower latency, and higher memory bandwidth.
Built-In Visuals[2]	**Intel® Quick Sync Video**—Delivers fast conversion of video for portable media players, online sharing, and video editing and authoring. **Intel® Clear Video HD**—Visual quality and color fidelity enhancements for HD playback for a sharper, smoother, and richer picture. **Intel® InTru™ 3D**[3]—Stereoscopic 3-D Blu-ray* playback in full 1080p resolution over HDMI* 1.4 and premium audio. **Intel® HD Graphics**—Enhanced 3-D performance for immersive mainstream and casual gaming. **Intel® Advanced Vector Extensions**—A set of new instructions to improve software performance for floating point-intensive applications such as audio processing, audio codecs, and image and video editing applications.
Intel® Smart Cache	The shared cache is dynamically allocated to each processor core, based on workload. This significantly reduces latency, improving performance.
AES New Instructions (AES-NI)	New AES instructions add hardware acceleration to AES algorithms and speeds up the execution of AES applications.
Intel® Virtualization Technology[1]	Allows one hardware platform to function as multiple "virtual" platforms. Offers improved manageability by limiting downtime and maintaining productivity by isolating computing activities into separate partitions.
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.[9]

[1] Intel® Turbo Boost Technology, Intel® Hyper-Threading Technology, and Intel® Virtualization 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] Available on the 3rd gen Intel® Core™ processor family. Includes Intel® HD Graphics, Intel® Quick Sync Video, Intel® Clear Video HD Technology, Intel® InTru™ 3D Technology, and Intel® Advanced Vector Extensions. Also optionally includes Intel® Wireless Display, if it is enabled on a system. Whether you will receive the benefits of built-in visuals depends upon the particular design of the PC you choose. Consult your PC manufacturer to see if built-in visuals are enabled on your system. Learn more about built-in visuals at www.intel.com/technology/visualtechnology/index.htm

[3] Viewing stereo 3-D content requires 3-D glasses and a 3-D capable display. Physical risk factors may be present when viewing 3-D material.

[4] Requires Intel® Insider™, a hardware-based content protection mechanism, requires an Intel® Core™ processor-based PC with built-in visuals. Consult your PC manufacturer. Online content available from qualified providers. For more information, visit www.intel.com/go/intelinsider

[5] Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the processor beyond its specifications.

[6] ENERGY STAR* denotes a system level energy specification, defined by the U.S. Environmental Protection Agency, that relies upon all of the system's components, including processor, chipset, power supply, HDD, graphics controller, and memory to meet the specification. For more information, visit www.energystar.gov

[7] Intel® Core™ i7 and Intel® Core™ i5 processors designated by "K" in the processor number are unlocked for performance tuning and support Intel® HD Graphics 4000.

[8] Intel® Express Chipset H61-based boards must be reconfigured by the motherboard manufacturer with Manageability Engine-ME8 firmware, BIOS, and drivers to enable support for the Intel® 3rd generation processor family. Contact your motherboard manufacturer for more information.

[9] 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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