Intel® Core™ Processor Family For Enthusiasts

Unlock the Power Within

Intel® Core™ Processors in the LGA2011 v3 Socket

8. The new power number. It looks like an infinite loop, which is appropriate as that is the power you posess with the new Intel® Core™ i7-5960X processor.

8 independent cores of unbelievable power that encourage you to become the digital content creator or gamer you always wanted to be. Need cores to render? Check. Need cores to compile? Check. Need cores to seek and destroy in the latest game? Check. It seems almost unfair to add Intel® Hyper Threading Technology[4] for a total of 16 threads at your disposal. You want burst speed performance for those jobs that require a bit more frequency? Intel® Turbo Boost Technology[4] has that covered. But that little voice inside of you is saying you want even more? Let that voice know that the processor is unlocked[2,3] and is ready for you to tune it to fit your demanding needs. Tune cores, power, memory, or whatever else you need to tune to make your system fit your needs.

4th Generation Intel® Core™ Processors in the LGA1150 Socket

Looking for the perfect processor to build your gaming rig around? But you also want to edit your action videos and photos? To do this you know you need serious performance. Not to worry - Intel is proud to anounce our first 4GHz base frequency quad core processor. If it is performance you crave, then this is the processor you have been waiting for. But what if you feel the need to overclock your system to squeeze every last bit of performance out of it? Well, then this is still the perfect processor for you. The latest 4th gen Intel® Core™ i5 and Intel® Core™ i7 processors, paired with the latest Intel® 9 Series H and Z chipsets, will get you the results you want. Add in features like built in visuals and Intel® Quick Sync Video, which allows the conversion of media from one device to another and prepares your media to share online at incredible speeds, and these are processors that meet every need you have.
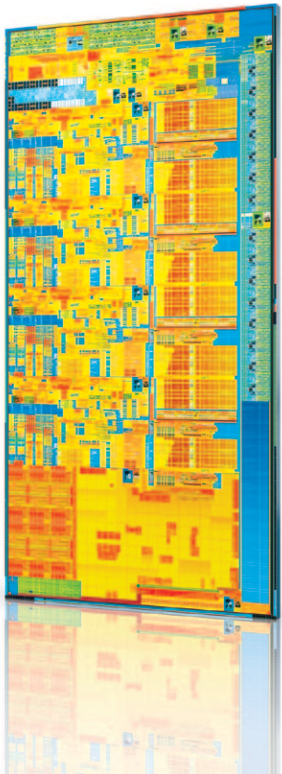
Unlocked for ultimate tuning

Want to tune every aspect of your system for the ultimate in total system control? Then the new unlocked Intel Core processors[2,3] which enable system tuning for the processor cores, memory, graphics, and power, were made for you. Whether you are a novice overclocker or a seasoned veteran, these processors will have you singing their praises in no time.

Boost Your Performance

The Intel Core processor family delivers a great PC experience. Whether you are looking for improved performance, greater adaptability, or differentiated visual features, Intel has the processor to fit your needs. Whther you use your PC for creativity, playing games, or everyday tasks such as homework and e-mail, these new processors make it easier to design, render, edit, play, and share. Intel Core

And for Intel® Core™ i7 processors, Intel® Hyper-Threading Technology[4] allows each processor core to work on two tasks at the same time, improving multitasking, speeding up the workflow, and accomplishing more in less time.

With 4th gen Intel® Core™ processors, you can boot your PC, load applications, and resume from sleep nearly instantaneously thanks to Intel's responsiveness technologies such as Intel® Smart Response Technology,[5] and Intel® Rapid Start Technology.[6]

Increased Security

The 4th gen Intel Core processor family offers hardware-level security that helps protect your devices, your data, and your online transactions.

Better Connectivity

The 4th gen Intel Core processor family automatically connects to wireless hotspots. Your e-mail, social media, and apps are always updated thanks to Intel® Smart Connect Technology.[7] Finally, wirelessly stream your HD / 3-D video and games to your TV or projector for presentations and entertainment using Intel® Wireless Display Technology.[8]

INTEL® CORE™ PROCESSORS IN THE LGA2011 v3 SOCKET FEATURES

	INTEL® CORE™ i7 PROCESSOR (LGA2011 v3)
Number of Processor Cores / Threads	8 / 16 or 6 / 12
Intel® Turbo Boost Technology[4] 2.0	Yes
Number of Memory Channels	4 (DDR4 2133 MHz)
PCI Express* Lanes	40 / 24
PCI Express 3.0	Yes
Unlocked[2,3] Core Multiplier	Yes
Intel® Hyper-Threading Technology[4]	Yes
Intel® Smart Cache	20 / 15MB L3 shared
Built-in Visuals	N/A
AES New Instructions (AES-NI)	Yes
Intel® Advanced Vector Extensions (AVX)	Yes
Overclocking Enabled[2]	Yes
Intel® Virtualization Technology (Intel® VT-x)[4]	Yes
Recommended Intel® Chipset	X99

4TH GENERATION INTEL® CORE™ PROCESSORS IN THE LGA1150 SOCKET FEATURES

	INTEL® CORE™ i7 PROCESSOR (LGA1150)	INTEL® CORE™ i5 PROCESSOR (LGA1150)
Number of Processor Cores / Threads	4 / 8	4 / 4
Intel® Turbo Boost Technology[4] 2.0	Yes	Yes
Number of Memory Channels	2 (DDR3 1333 / 1600 MHz)	2 (DDR3 1333 / 1600 MHz)
PCI Express* Lanes	16	16
Unlocked[2,3] Core Multiplier	Yes	Yes
Intel® Hyper-Threading Technology[4]	Yes	No
Intel® Smart Cache	8 MB L3 shared	6 MB L3 shared
AES New Instructions (AES-NI)	Yes	Yes
Intel® Advanced Vector Extensions (AVX)	Yes	Yes
Built-in Visuals	Yes	Yes
Intel® HD graphics 4600	Yes	Yes
Intel® Quick Sync Video	Yes	Yes
Intel® Wireless Display[8] (Intel® WiDi)	Yes	Yes
Overclocking Enabled[2]	Yes	Yes
PCI Express 3.0	Yes	Yes
Intel® Virtualization Technology (Intel® VT-x)[4]	Yes	Yes
Recommended Intel® Chipset	Z97	Z97

Intel® Core™ Desktop Processors

FEATURES AND BENEFITS OF THE 4th GENERATION CORE FAMILY

FEATURE	BENEFIT
Intel® Turbo Boost Technology[4]	Dynamically increases the processor's frequency as needed by taking advantage of thermal and power headroom when operating below specified limits.
2.0 Intel® Hyper-Threading Technology[4]	Delivers two processing threads per physical core. Highly threaded applications can get more work done in parallel, completing tasks sooner.
Built-In Visuals	Intel® HD graphics—Enhanced 3-D[1] performance for immersive mainstream and casual gaming. Can support up to three UltraHD* (4K) displays and collage display. Intel® Wireless Display[8]—Wirelessly stream HD / 3-D video and games to your TV or projector for presentations and entertainment. 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 and immersive Web browsing. Intel® InTru™ 3D[1]—Stereoscopic 3-D Blu-ray* playback in full 1080p resolution over HDMI* 1.4 and premium audio. Intel® Advanced Vector Extensions—A set of new instructions to improve software performance[11] for floating point-intensive applications such as audio processing, audio codecs, and image and video editing applications.
Integrated Memory Controller	An integrated memory controller offers stunning memory read/write performance through efficient prefetching algorithms, lower latency, and higher memory bandwidth.
Intel® Smart Cache	The shared cache is dynamically allocated to each processor core, based on workload. This significantly reduces latency[11], improving performance.
Intel® Virtualization Technology[4]	Allows one hardware platform to function as multiple "virtual" platforms by isolating computing activities into separate partitions.
Advanced Encryption Standard New Instructions	New AES instructions add hardware acceleration to AES algorithms and speeds up the execution of AES applications.
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.[10]

[1] 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.

[2] 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.

[3] Intel® Core™ i7 and Intel® Core™ i5 processors designated by "K" and "X"in the processor number are unlocked for performance tuning.

[4] 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.

[5] Requires an Intel® Core™ processor, Intel® 6 Series Express Chipsets, Intel® Rapid Storage Technology (Intel® RST) software 10.5 or above, SATA HDD, SSD 18.6 GiB. Depending on system configuration, your results may vary. Contact your system manufacturer for more information. Intel® Smart Response Technology is not available on the Intel® Z75 Express Chipset.

[6] Intel® Rapid Start Technology requires a select Intel® processor, Intel® software and BIOS update, and Intel® Solid-State Drive (Intel® SSD). Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

[7] Intel® Smart Connect Technology requires a select Intel® processor, Intel® software and BIOS update, Intel® Wireless adapter, and Internet connectivity. Solid-state memory or drive equivalent may be required. Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

[8] Requires an Intel® Wireless Display enabled PC, compatible adapter, and TV. 1080p and Blu-Ray* or other protected content playback only available on 2nd generation Intel® Core™ processor-based PCs with built-in visuals enabled. Consult your PC manufacturer. For more information, see www.intel.com/go/widi

[9] Partial overclocking: Partial overclocking is available on the four-core LGA2011 Intel® Core™ processor. Partial overclocking will allow you to adjust the core multiplier to a preset maximum.

[10] The acoustic benefits of the 4-pin header are reliant on a properly designed motherboard. Contact your board manufacturer for compatibility.

[11] Compared to previous generations of Intel Core processors