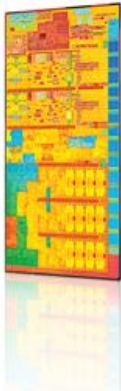




# News Fact Sheet

## The Next Generation of Computing Has Arrived: Performance to Power Amazing Experiences



The new [5<sup>th</sup> Generation Intel® Core™ processor family](#) is Intel's latest wave of 14nm processors, delivering improved system and graphics performance, more natural and immersive user experiences, and enabling longer battery life compared to previous generations. The release of the 5<sup>th</sup> Generation Intel Core technology includes 14 new processors for consumers and businesses, including 10 new 15W processors with [Intel® HD Graphics](#) and four new 28W products with [Intel® Iris™ Graphics](#). The 5<sup>th</sup> Generation Intel Core processor is purpose-built for the next generation of compute devices offering a thinner, lighter and more efficient experience across diverse form factors, including traditional [notebooks](#), [2 in 1s](#), [Ultrabooks™](#), [Chromebooks](#), [all-in-one](#) desktop PCs and [mini PCs](#). With the 5<sup>th</sup> Generation Intel Core processor availability, the “Broadwell” microarchitecture is expected to be the fastest mobile transition in company history to offer consumers a broad selection and availability of devices.

Intel also started shipping its [next generation 14nm processor for tablets](#), codenamed “Cherry Trail”, to device manufacturers. The new system on a chip (SoC) offers 64-bit computing, improved graphics with Intel® Generation 8-LP graphics, great performance and battery life for mainstream tablets. The platform offers world-class modem capabilities with LTE-Advanced on Intel® XMM™ 726x platform, which supports Cat-6 speeds and carrier aggregation. Customers will introduce new products based on this platform starting in the first half of this year.

Key benefits of the 5<sup>th</sup> Generation Intel Core family and the next-generation 14nm processor for tablets include:

**Powerful Performance.** The 5<sup>th</sup> Generation Intel Core (U series) processors utilize Intel's new 14nm process technology to improve upon the previous generation Intel Core processor's success with 35 percent more transistors on a 37 percent smaller die. The new process, combined with architectural enhancements, enables the 5<sup>th</sup> Generation Intel Core processors to deliver up to 24 percent better graphics performance, up to 50 percent faster video conversion and battery life that is up to 1.5 hours longer<sup>1</sup>. Consumers who are planning to refresh a 4-5-year-old PC will also notice significant improvements: graphics performance up to 12 times better, video conversion speed up to 8 times faster, productivity performance up to 2.5 times faster, wake times 9 times faster, all with up to 2 times longer battery life<sup>2</sup>.

**Power Efficient. Even Longer Battery Life.** Intel continues to drive battery life improvements, and the newest processor family raises the bar yet again. With power management and design improvements, plus the increased efficiency of Intel's 14nm manufacturing process, consumers get up to 1.5 hours more battery life<sup>3</sup> than the previous 4<sup>th</sup> Generation Intel Core (U series) processors. The result is more power and performance without sacrificing battery life.

**Watch. Game. Create with Intel Graphics.** The 5<sup>th</sup> Generation Intel Core processor family brings the next evolution in processor graphics architecture enabling new levels of performance and power efficiency paired with Intel's leading CPU technology. The new 5<sup>th</sup> Generation Intel Core processor



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family offers graphics options including Intel® HD Graphics 5500, HD Graphics 6000 and Intel® Iris™ Graphics 6100. All of these provide stunning visuals and enable 4K Ultra HD display, including over Intel WiDi 5.1<sup>4</sup>. Additional platform features include enhanced new codec decode support for VP8, VP9 and HEVC, as well as support for the latest graphics APIs (DX 11.2, DX 12 Ready) and graphics programmability features, including OpenCL 2.0 and OpenGL 4.3. Intel Iris Graphics includes these features plus significantly better 3D performance compared to Intel HD Graphics 5500 processors.

Whether playing the latest mainstream game, watching videos in 4K Ultra HD, or simply sharing your latest gameplay and video creations with family, Intel HD and Iris graphics deliver an eye-popping visual experience.

**Internet of Things.** Intel's 5<sup>th</sup> Generation Intel Core processors are also available to power the growing [Internet of Things \(IoT\)](#), particularly in such vertical segments as retail, manufacturing and medical. Thanks to Intel's leading 14nm process technology and architecture, the 5<sup>th</sup> Generation Intel Core processor is designed to deliver enhanced graphics and increased performance in a smaller thermal envelope, supporting the next generation of IoT solutions, while maintaining compatibility with previous generations. The improved capabilities and security features can power end-to-end IoT solutions to deliver customer benefits and business insights.

**More Natural and Immersive Experiences.** The performance of 5<sup>th</sup> Generation Intel Core processors provides the foundation for great user experiences today and in the future. When paired with [Intel® RealSense™ 3D technology](#), no wires and no passwords capabilities, and voice assistants, the 5<sup>th</sup> Generation Intel Core processors enable more natural and interactive user experiences. Intel RealSense 3D technology brings features like gesture control, 3D capture and edit, and innovative photo and video capabilities to devices. With a vision for a “no wires” experience, [Intel® Wireless Display \(WiDi\) v.5.1](#) and WiGig wireless docking provide users more control over their experience by allowing them to compute and share from virtually anywhere without the clutter of wires and cords. Intel's voice assistant technology allows the user to control your PC within the browser and enabled apps using voice commands, and now includes Wake on Voice<sup>5</sup> technology to awake your PC with just the sound of your voice.

Intel's 14nm, next-generation Intel Atom processor for tablets, “Cherry Trail”, will offer new user experiences such as Intel RealSense technology, no wires, no passwords and Intel® Context Aware™ technology capabilities, bringing new innovation and excitement to tablets. Intel RealSense Snapshot provides depth-sensing photo capabilities, giving people the power to change focus, take measurements, and add dynamic effects and motion to pictures with a touch of a finger. With its no wires capabilities, Cherry Trail enables tablets to wirelessly display content to a big screen or projector. Cherry Trail will also enable users to login with their face, fingerprint or a trusted device they assigned. Using an accelerometer, sound and light sensors, and information from the cloud, Intel Context Aware technology can determine the context or environment someone is in and provide information based on those surroundings.

**Line-Up and Availability.** The new 5<sup>th</sup> Generation Intel Core processor family includes the [Intel® Core™ i3](#), [Intel® Core™ i5](#), [Intel® Core™ i5 vPro™](#), [Intel® Core™ i7](#), and [Intel® Core™ i7 vPro™](#) processors. New Intel® Pentium® and Intel® Celeron® processors, also based on the 14nm process, are now available. 5<sup>th</sup> Generation Intel Core processor-based systems from a variety of manufacturers are expected to arrive in January. Devices based on the “Cherry Trail” platform are expected in the first half of 2015. For more information, visit [www.intel.com](http://www.intel.com).



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Processor Number	Cores/ Threads	Base Freq (GHz)	Graphics	Graphics Base / Max Freq (MHz)	L3 Cache	TDP
i7-5650U	2/4	2.2	Intel® HD Graphics 6000	300/1000	4MB	15W
i7-5600U	2/4	2.6	Intel® HD Graphics 5500	300/950	4MB	15W
i7-5550U	2/4	2.0	Intel® HD Graphics 6000	300/1000	4MB	15W
i7-5500U	2/4	2.4	Intel® HD Graphics 5500	300/950	4MB	15W
i7-5557U	2/4	3.1	Intel® Iris™ Graphics 6100	300/1100	4MB	28W
i5-5350U	2/4	1.8	Intel® HD Graphics 6000	300/1000	3MB	15W
i5-5300U	2/4	2.3	Intel® HD Graphics 5500	300/900	3MB	15W
i5-5250U	2/4	1.6	Intel® HD Graphics 6000	300/950	3MB	15W
i5-5200U	2/4	2.2	Intel® HD Graphics 5500	300/900	3MB	15W
i5-5287U	2/4	2.9	Intel® Iris™ Graphics 6100	300/1100	3MB	28W
i5-5257U	2/4	2.7	Intel® Iris™ Graphics 6100	300/1050	3MB	28W
i3-5010U	2/4	2.1	Intel® HD Graphics 5500	300/900	3MB	15W
i3-5005U	2/4	2.0	Intel® HD Graphics 5500	300/850	3MB	15W
i3-5157U	2/4	2.5	Intel® Iris™ Graphics 6100	300/1000	3MB	28W
3805U	2/2	1.9	Intel® HD Graphics	100/800	2MB	15W
3755U	2/2	1.7	Intel® HD Graphics	100/800	2MB	15W
3205U	2/2	1.5	Intel® HD Graphics	100/800	2MB	15W



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Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

<sup>1</sup>Test performed using Intel® Core™ i7-5600U Processor with Intel® HD Graphics 5500 compared to 4th Generation Intel® Core™ i7-4600U with Intel® HD Graphics 4400. 24 percent better graphics performance as measured using 3DMark IceStorm Unlimited v 1.2, up to 50 percent faster video conversion as measured using Cyberlink MediaEspresso to convert HD videos, up to 1.5 hours longer battery life based on 40Whr battery capacity watching local 1080p movie measured using MobileMark 2014. For more information go to <http://www.intel.com/performance>.

<sup>2</sup>Tests performed using Intel® Core™ i5-5300U processor normalized to a 2010 PC with Intel® Core™ i5-520UM (up to 1.866GHz, 4T/2C, 3M Cache). Up to 12 times better graphics performance as measured using 3DMark IceStorm Unlimited v1.2., 8 times faster HD video conversion as measured using Cyberlink MediaEspresso, 2.5 times faster office productivity as measured using SYSmark 2014, 9 times faster wake up resume from sleep as measured using SYSmark 2014, 2 times longer battery life based on 40Whr battery capacity watching local 1080p movie measured using MobileMark 2014. For more information go to <http://www.intel.com/performance>.

<sup>3</sup>Intel® Core™ i7-5600U Processor with Intel® HD Graphics 5500 compared to 4th Generation Intel® Core™ i7-4600U with Intel® HD Graphics 4400. Battery life based on 40Whr battery capacity watching local 1080p movie as measured using MobileMark 2014.

<sup>4</sup>Requires an Intel® Wireless Display-enabled PC, tablet, or smartphone, a compatible adapter, and a TV. 1080p and Blu-Ray\* or other protected content playback only available on select Intel® processors with built-in visuals enabled. 4K UltraHD support requires a graphics driver update coming in January 2015 and is available on select 5th Generation Intel® Core™ processors. Consult your PC manufacturer. For more information, see [www.intel.com/go/widi](http://www.intel.com/go/widi).

<sup>5</sup> Intel® Wake on Voice requires software applications to operate and must be enabled by the device manufacturer.

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