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Fact Sheet

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INTEL® CORE™ ULTRA-LOW VOLTAGE PROCESSORS FOR ULTRA THIN NOTEBOOKS

In January, Intel launched the 2010 Intel® Core[™] Processors including performance ultra-thin processors. Today we are extending the family of ultra thin processor and introducing the Nehalem Architecture Powered by ultra-low-voltage 2010 Intel® Core[™] processors for consumers.

Now consumers can get PC with good performance without compromising the stylish looks they want, thanks to ultra-thin notebooks powered by 2010 Intel® CoreTM processors. They're light enough to carry all day and offer longer battery life.

Intel is launching 4 new Intel® CoreTM ultra-low voltage processors equipped with enhanced Intel® HD Graphics with dynamic frequency:

- Four new Intel® Core® ultra-low voltage processors
 - Intel[®] Core[™] i7-660UM, Intel[®] Core[™] i5-540UM, Intel[®] Core[™] i5-430UM, Intel[®] Core[™] i3-330UM
- Key features include:
 - Intel® Turbo Boost Technology[#]
 - Intel® Hyper Threading Technology
 - Intel® HD Graphics
 - 18W TDP

Also introducing:

- New ULV Intel® Pentium® ultra-low voltage Processor U5400
- New Intel[®] Celeron[®] ultra-low voltage Processor U3400
- For more information, go to
 - www.intel.com/pressroom/kits/ultrathin

Below are additional details for the new Intel[®] Core[™] ultra-low voltage processors:

Intel® Core™ i7/i5 ultra-low voltage processor Family

- Intel® Turbo Boost Technology² 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)³ 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.
- Intel® HD Graphics with dynamic frequency Enhanced video and 3D engine delivers HD video playback and mainstream 3D gaming without the need for add-in video cards. Intel® HD Graphics provides a suite of advanced video processing, 3D, and software technologies designed to improve image quality and performance, including support for hardware-accelerated decode for Blu-ray* dual-stream picture-in-picture content and 3-D support for Microsoft* DirectX* 10 and OpenGL* 2.1. Intel® HD Graphics, on mobile processors, has the capability of dynamically increasing graphics frequency when thermal headroom in the platform exists, enabling additional graphics performance on demanding applications. Supports full functionality of the Microsoft* Windows* 7 operating system and various display connectivity options, including HDMI* and DisplayPort*. Enables professional-grade audio capabilities with multi-channel bit streaming support for Dolby* TrueHD and DTS* Premium Suite.
- **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 and DDR3 support An integrated memory controller offers excellent memory read/write performance through efficient pre-fetching algorithms, lower latency, and higher memory bandwidth. The New Intel® Core[™] Processor family includes support for dual channel DDR3 memory technology up to 800MHz. The key advantages of DDR3 are the higher bandwidth and the increase in performance at a lower power than DDR2.
- **18W Thermal Design Power** Enables sleek, ultra thin notebook designs with low thermal design power.
- **Enabling Industry Leading Battery Life** Enables industry leading battery life with low average power ultra thin ULV processors.
- **Intel® Virtualization Technology (Intel® VT-x)** 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.
- Intel® Virtualization Technology for Directed I/O (VT-d) Intel® VT-d extends Intel's Virtualization Technology roadmap by providing hardware assists for I/O virtualization solution.
- 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) – Highly versatile set of hardware extensions for Intel processors and chipsets which, with appropriate software, enhance platform security capabilities.

Intel® CoreTM i3 ultra-low voltage processor

- Intel® Hyper-Threading Technology³ (Intel® HT Technology) 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.
- Intel® HD Graphics with dynamic frequency Enhanced video and 3D engine delivers HD video playback and mainstream 3D gaming without the need for add-in video cards. Intel® HD Graphics provides a suite of advanced video processing, 3D, and software technologies designed to improve image quality and performance, including support for hardware-accelerated decode for Blu-ray* dual-stream picture-in-picture content and 3D support for Microsoft* DirectX* 10 and OpenGL* 2.1. Intel® HD Graphics, on mobile processors, has the capability of dynamically increasing graphics frequency when thermal headroom in the platform exists, enabling additional graphics performance on demanding applications. Supports full functionality of the Microsoft* Windows* 7 operating system and various display connectivity options, including HDMI* and DisplayPort*. Enables professional-grade audio capabilities with multi-channel bit streaming support for Dolby* TrueHD and DTS* Premium Suite.
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- **Intel® Virtualization Technology (Intel® VT-x)** 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.

Intel® Pentium and Celeron ultra-low voltage processors

Intel is also launching ULV versions of the Intel® Pentium and Celeron processors, the U5400 and U3400, for entry level computing in a sleek ultra thin notebook.

Processor Number	Base Clock Speed (GHz)	Turbo Frequency (GHz)	Cores/Threads	Intel(R) Smart	Graphics Frequency (MHz)	1 ku Boxed Pricing
Intel [®] Core™ i7-660UM	1.33	Up To 2.40 GHz	2/4	4M	166-500	\$305
Intel [®] Core™ i5-540UM	1.20	Up To 2.00 GHz	2/4	3M	166-500	\$241
Intel [®] Core™ i5-430UM	1.20	Up To 1.73 GHz	2/4	3M	166-500	N/A*
Intel [®] Core™ i3-330UM	1.20	n/a	2/4	3M	166-500	N/A*
Intel [®] Pentium [®] Processor U5400	1.20	n/a	2/2	3M	166-500	N/A*
Intel [®] Celeron [®] Processor U3400		n/a	2/2	2M	166-500	\$134

New Processor Specifications & Pricing (1Ku volume order pricing)

* These SKUs are targeted at retail and SMB and are subject to terms and conditions with OEMs that target those markets. We are not disclosing these 1KU prices publicly at this time.

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- 1 Performance tests and ratings are measured using specific systems and/or components and reflect approximate performance of Intel products as measured by those tests. Any difference in system hardware, software, or configuration may affect actual performance. Buyers should consult other sources of information to evaluate performance of systems or components they are considering purchasing. For more information on performance tests and performance of Intel products, visit www.intel.com/performance/resources/limits.htm
- 2 Intel® Turbo Boost Technology is exclusively available with Intel® Core[™] i5 and i7 processor series only. Intel® Turbo Boost Technology performance varies depending on hardware, software and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel® Turbo Boost Technology. For more information, see <u>www.intel.com/technology/turboboost</u>
- 3 Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Intel® Hyper threading Technology is exclusively available with Intel® Core[™] i3, i5 and i7 processor series only. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see www.intel.com/info/hyperthreading
- 4 Intel® Flexible Display Interface (Intel ® FDI) and the chipset graphic display interfaces require a computer system with a processor, chipset, BIOS and enabling software for the Intel® Graphic Media Accelerator.

- 5 Intel® Rapid Storage Technology (Intel® RST) requires the computer have an Intel® RST-enabled Intel chipset, RAID controller in the BIOS enabled and the Intel Rapid Storage Technology software driver installed. Please consult your system vendor for more information.
- 6 Intel® vPro[™] Technology, Intel® Virtualization Technology (Intel® VT), and Intel® Trusted Execution Technology (Intel® TXT) 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.
- 7 Intel® High Definition Audio requires a system with an appropriate Intel chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers and speakers. For more information about Intel® HD audio, refer to http://www.intel.com/design/chipsets/hdaudio.htm .