



3rd Generation Intel® Core™ vPro™ Processor: Features Sales Brief



Built for Business.
Engineered for Security.

Unprecedented embedded protection with Intel® Identity Protection Technology with public key infrastructure



- Integrates hardware-based embedded security that delivers unprecedented protection for your clients and business data.^{1,2}
- Protects lost or stolen PCs with Intel® Anti-Theft Technology 4.0³ by automatically disabling access either locally or remotely – easy to restore if recovered.
- Increases protection against malware and root-kits in both virtual and physical environments with Intel® Trusted Execution Technology⁴ and Intel® Virtualization Technology.⁵
- Encrypts important business data up to four times faster without slowing performance^{6,9} using Intel® Advanced Encryption Standard-New Instructions.

Intelligent performance for your users



- Instantly on. Always connected. Always updated. New responsiveness technologies help make users more productive, more often.
- Up to 2x faster multitasking, encrypt sensitive data up to 4x faster, and run business productivity applications up to 60% faster on a 3rd generation Intel® Core™ i5 vPro™ processor vs. a 3-year-old PC.^{6,7}
- Intel® Turbo Boost Technology 2.0 adapts performance to demanding tasks, and saves energy when additional performance is not needed.⁸
- Intel® Hyper-Threading Technology with up to 8-way multitask processing enables greater productivity when working among multiple office applications.¹⁰

Remote management capabilities make PC upkeep easier and more cost effective



- Reduce maintenance costs with remote configuration, diagnosis, isolation, and repair of infected PCs, even if they are unresponsive!^{1,2}
- Reduce the need for desktide maintenance visits by up to 56%.¹¹
- Remotely see what your users see through all states, even beyond the firewall, with enhanced hardware-based KVM Remote Control,¹² now supporting up to three displays, portrait and landscape modes, and in 27 languages.
- Hardware-assisted remote shutdown, wake-up, and update of PCs during off-hours—reduces energy costs and enables up to 56% faster time to patch saturation.^{1,11}

Now available in new innovative form factors



Unprecedented protection and superior performance for your business is now offered in more ways:

- For workers on the go, choose from a wide range of thin and light business clients offering a powerful combination of intelligent performance and built-in security.
- Look for the ultra-sleek, ultra-responsive Ultrabook™ for your users who spend time on the road. This new business-class device, inspired by Intel, is sure to make traveling a breeze, by combining compactness with intelligent performance and built-in security.
- For tight quarters, select All-in-One business clients with a multi-touch interface. Available in many attractive designs, they enhance any workspace, while still delivering intelligent performance with built-in security.

Choose the 3rd Generation Intel® Core™ vPro™ Processor that's right for you

Recommended Intel® Core™ processors to meet your business needs	Intel® Core™ i7 vPro™ Processor	Intel® Core™ i5 vPro™ Processor	Intel® Core™ i7 Processor	Intel® Core™ i5 Processor	Intel® Core™ i3 Processor
Hardware-assisted security with Intel® vPro™ technology ¹	●	●	○	○	○
New, industry-leading proactive security with stronger, hardware-based technologies for applications and services: Intel® Identity Protection technology, ¹³ Intel® Anti-Theft Technology 4.0 ³ Intel® Secure Key, and Intel® OS Guard for safer business PCs and transactions	●	●	●	●	●
Remote manageability even when the PC is unresponsive with Intel vPro technology ¹	●	●	○	○	○
Immediately activate new PCs in minutes with new Intel® Setup and Configuration Service 8 for Intel vPro technology	●	●			
Customized management using Intel® vPro™ PowerShell Module for Windows PowerShell*	●	●			
Top-of-the-line performance	●	○	●	○	○
Hardware-based acceleration of encryption and decryption with Intel® AES-NI ⁶	●	●	●	●	○
Increased processor speeds when performance is needed with Intel® Turbo Boost Technology 2.0 ⁹	●	●	●	●	○
Intelligent energy efficiency	●	●	●	●	●
4-way or greater multitask processing ¹⁰	●	●	●	●	●
Stunning visual media experience with built-in visuals ¹⁴	●	●	●	●	●
Instantly on. Always connected. Always updated. New responsiveness technologies help make users more productive, more often.	●	●	●	●	●

○ Not applicable ● Advanced capability

For more information on the 3rd gen Intel Core vPro processor family, visit www.intel.com/vpro.

¹ Intel® vPro™ Technology is sophisticated and requires setup and activation. Availability of features and results will depend upon the setup and configuration of your hardware, software and IT environment. To learn more visit <http://www.intel.com/technology/vpro>.

² Requires activation and a system with a corporate network connection, an Intel® AMT-enabled chipset, network hardware and software. For notebooks, Intel AMT may be unavailable or limited over a host OS-based VPN, when connecting wirelessly, on battery power, sleeping, hibernating or powered off. Results dependent upon hardware, setup, and configuration. For more information, visit <http://www.intel.com/technology/platform-technology/intel-amt>.

³ No computer system can provide absolute security under all conditions. Intel® Trusted Execution Technology (Intel® TXT) requires a computer with Intel® Virtualization Technology, an Intel TXT-enabled processor, chipset, BIOS, Authenticated Code Modules and an Intel TXT-compatible measured launched environment (MLE). Intel TXT also requires the system to contain a TPM v1.s. For more information, visit <http://www.intel.com/technology/security>

⁴ Intel® Anti-Theft Technology (Intel® AT). No system can provide absolute security under all conditions. Requires an enabled chipset, BIOS, firmware and software and a subscription with a capable Service Provider. Consult your system manufacturer and Service Provider for availability and functionality. Intel assumes no liability for lost or stolen data and/or systems or any other damages resulting thereof. For more information, visit <http://www.intel.com/go/anti-theft>.

⁵ Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, and virtual machine monitor (VMM). Functionality, performance or other benefits will vary depending on hardware and software configurations. Software applications may not be compatible with all operating systems. Consult your PC manufacturer. For more information, visit <http://www.intel.com/go/virtualization>

⁶ Intel® Advanced Encryption Standard-New Instructions (Intel® AES-NI) requires a computer system with an AES-NI enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. For availability, consult your reseller or system manufacturer. For more information, see <http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni>.

⁷ Cross-client claim based on lowest performance data number when comparing desktop and mobile benchmarks. Configuration and performance test as follows:
Mobile: Comparing pre-production Intel® Core™ i5-2520M Processor (2C4T, 2.5 GHz, 3 MB cache), Intel reference board, 4 GB (2x2 GB) PC3-10700 (DDR3-1333)-CL9, Hitachi Travelstar 320 GB hard-disk drive, Intel® HD Graphics 3000, Driver: 2185 (BIOS:v.34, Intel v.9.2.0.1009), Microsoft Windows® 7 Ultimate 64-bit RTM Intel® Core™ 2 Duo Processor T7250 (2M Cache, 2.00 GHz, 800 MHz FSB), Intel reference board, Micron® 4 GB (2x2 GB) PC3-8500F (DDR3-1066)-400, Hitachi 320 GB hard-disk drive, Mobile Intel 4 Series Express Chipset Family w/ 8.15.10.2182 (BIOS: American Megatrends AMVACRB1.86C.0104.B00.0907270557.9.1.2.1008).

Desktop: Pre-production Intel® Core™ i5-2400 Processor (4C4T, 3.1GHz, 6 MB cache), Intel reference board, Micron® 4 GB (2x2 GB) PC3-10700 (DDR3-1333)-CL9, Seagate® 1 TB, Intel® HD Graphics 2000, Driver: 2185 (BIOS:v.35, Intel v.9.2.0.1009), Microsoft Windows® 7 Ultimate 64-bit RTM Intel® Core™ 2 Duo E6550 (2C2T, 2.33 GHz, 4 MB cache), Intel DG945GCL Motherboard, Micron 2 GB (2x1 GB) DDR2 667 MHz, Seagate 320 GB hard-disk drive, Intel® GMA 950, Driver: 7.14.10.1329, (BIOS:CL94510J.86A.0034, INF: 9.0.0.1011), Microsoft Windows® 7 Ultimate 64-bit RTM. Business productivity claims based on SYSmark™ 2007, which is the latest version of the mainstream office productivity and Internet content creation benchmark tool used to characterize the performance of the business client. SYSmark 2007 preview features user-driven workloads and usage models developed by application experts. Multitasking claims based on PCMark Vantage,* a hardware performance benchmark for PCs running Microsoft Windows® 7 or Windows Vista,* includes a collection of various single and multi-threaded CPU, Graphics, and HDD test sets with a focus on

Windows® application tests. Security workload consists of SiSoftware Sandra™ 2010—AES256 CPU Cryptographic subtest measures CPU performance while executing AES (Advanced Encryption Standard) encryption and decryption algorithm. For more information go to <http://www.intel.com/performance>.

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. Configurations: [describe config + what test used + who did testing]. For more information go to <http://www.intel.com/performance>.

⁹ Requires a system with Intel® Turbo Boost Technology capability. Intel Turbo Boost Technology 2.0 is the next generation of Turbo Boost Technology and is only available on 2nd gen Intel Core processors. Consult your PC manufacturer. Performance varies depending on hardware, software and system configuration. For more information, visit <http://www.intel.com/technology/turboboost>.

¹⁰ ENERGY STAR is a system-level energy specification, defined by the Environmental Protection Agency, that relies on all system components, such as processor, chipset, power supply, etc.) For more information, visit <http://www.intel.com/technology/epa/index.htm>.

¹¹ Requires an Intel® Hyper-Threading Technology-enabled system; consult with your PC manufacturer. Performance will vary depending on the specific hardware and software used. Not available on all Intel® Core™ processors. For more information including details on which processors support Intel HT Technology, visit <http://www.intel.com/info/hyperthreading>.

¹² Results shown are from: the 2007 EDS Case Studies "An Analysis of Early Testing of Intel® vPro™ Technology in Large IT Departments," by LeGrand and Salamasick; third-party audit commissioned by Intel, of various enterprise IT environments; and the 2007 Benefits of Intel® vPro™ Technology in the Enterprise, Wipro Technologies study, commissioned by Intel. The EDS studies compare test environments of Intel® vPro™ Technology-based PC environments vs. non-Intel® Core™ vPro™ processor technology-based PC environments. Tested PCs were in multiple OS and power states to mirror a typical working environment. The Wipro study models projected ROI of deploying Intel® vPro™ Technology. Actual results may vary and may not be representative of the results that can be expected for smaller businesses. The study is available at http://www.intel.com/Assets/PDF/casestudies/cs_edc_vpro.pdf.

¹³ KVM Remote Control (Keyboard Video Mouse) is only available with Intel® Core™ i5 vPro™ processors and i7 vPro™ processors with active integrated graphics. Discrete graphics are not supported.

¹⁴ No system can provide absolute security under all conditions. Requires an Intel® Identity Protection Technology-enabled system, including a 2nd or 3rd gen Intel® Core™ processor, enabled chipset, firmware, and software, and participating website. Consult your system manufacturer. Intel assumes no liability for lost or stolen data and/or systems or any resulting damages. For more information, visit <http://ip.intel.com>.

¹⁵ Available on the 2nd 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 depending on whether enabled on a given system or not. Whether you will receive the benefits of built-in visuals depends upon the particular design of the PC you choose. Consult your PC manufacturer whether built-in visuals are enabled on your system. Learn more about built-in visuals at <http://www.intel.com/technology/visualtechnology/index.htm>.

