Top Reasons to Standardize on Intel® Core™ vPro™ processor family
Built on Intel® Core® i5 and Intel® Core® i7 processors

Up to 2.5X[1] faster multitasking that adapts to user needs
Intel® Core™ vPro™ i5 processor vs. mainstream 3-year old PC

- **Processor clock speed accelerates up to 20% faster** (e.g., 2.53 Ghz -> 3.00 Ghz) with **Intel® Turbo-Boost Technology**[2]

- **Work on two tasks simultaneously with processor supporting two threads per core**[3]

- **Performance you need for Windows* 7** when your business is ready to migrate

- **Superb visual performance for sharper images and richer color**[4]

- **Up to 50% more energy efficient vs. a 3-year old PC**[5]

Strengthen your security with faster encryption and theft protection

- **Accelerate encryption by up to 4x**[1]**, keeping background tasks in the background** with hardware-based acceleration of AES encryption algorithm[1, 6]

- **Improved ability to "brick" stolen or lost notebooks** with hardware-based, tamper-resistant "poison pill" support in enabled laptops[7]
    - **Hardware Timers**: Lock down and brick the PC if it fails to check in to the central server[7]
    - **Works with Encryption**: Delete/disable critical elements of encryption keys[7]
    - **Fast Reactivation**: Allow rapid reactivation, integrated with existing software pre-boot login[7]

Do more with less through better remote manageability[8, 9]

- **Get behind the user's keyboard, even with inoperable OS, without leaving your chair**[9, 10]
    - **KVM** remote control switch capability without the added cost - integrated IP-based redirection of keyboard-video-mouse (IP-KVM) - wired & wireless, inside & outside the firewall[9, 10]

- **Patch without keeping systems powered on during off-hours**[8, 9] Up to 56% faster time to patch saturation[9, 11] via encrypted remote power up/down/reset

- **Fix more remotely even if the OS is inoperable**[8, 9] through pre-boot remote access to BIOS settings and remote/redirected boot[8, 9]

- **Keep better track of your assets**[8, 9] through access to system information even if the OS is not functioning or the PC is powered off[8, 9]

Stay flexible and more secure with desktop virtualization[12, 13]

- **Support traditional local compute model *and* emerging virtualization models** including application virtualization, OS streaming, virtual hosted desktop, client side virtual container[12, 13]

- **Improved virtualization experience and support for Windows XP* in Windows 7***[12] with hardware acceleration for PC-side virtualization

- **Added virtualization security, protection against root kit attacks**[13] through hardware support for measured boot of a virtual image

1. Business Productivity based on SysMark* 2007, Multitasking claims based on financial calculations workload consisting of advanced spreadsheet calculation measured using Microsoft* Excel* Monte Carlo Simulation plus Virus Scan. Security workload consists of Winzip*12 decompressing an encrypted archive containing 200 photos, 125 of which are 10MP photos and 75 which are 6MP photos. 27. Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see http://www.intel.com/info/hyperthreading.   (Cross Client) Cross client claim based on lowest performance data number when comparing desktop and mobile benchmarks. Configurations and performance test as follows: (Mobile) Comparing pre-production Intel® Core™ i5-520M processor based laptops to theoretical installed base of Intel® Core™2 Duo processor T5500. Laptop system configurations: Intel® Core™ i5-520M (3 MB Cache, 2.4 GHz), with Intel®Turbo Boost Technology and Intel®Hyper-Threading Technology on pre-production Intel® Ibex Peak HM55, Dual-channel Micron* 4 GB (2x2 GB) DDR3-1066 7-7-7-20 with Intel® Graphics Media Accelerator HD graphics, Hitachi* 320 GB HDD, Intel® Matrix Storage Manager 8.9.0.1023 (BIOS, Intel® INF and Graphics: pre-production, Imoncompliant with VRD 11.1 requirements) Microsoft* Windows* 7 Ultimate 64-bit RTM. Intel® Core™2 Duo processor T5500 (2 MB Cache, 1.66 GHz, 667MHz FSB) in Lenovo* Thinkpad* T60 laptop, Mobile Intel® 945GM Express Chipset, Micron* PC5300 DDR2 667 2x1 GB 5-5-5-15 memory, Intel® GMA 950 graphics 224 MB Dynamic video memory technology, Hitachi* Travelstar* HTS721010G9SA00 SATA 100 GB 7200RPM HDD, BIOS Lenovo* 79ETD7WW 2.17 with default settings, Microsoft* Windows* Vista Ultimate. Business productivity claims based on SYSmark* 2007 preview is BAPCo's 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 financial calculations workload consisting of advanced spreadsheet calculation measured using Microsoft* Excel* Monte Carlo Simulation plus Virus Scan. Security workload consists of Winzip*12 decompressing an encrypted archive containing 200 photos, 125 of which are 10MP photos and 75 which are 6MP photos. The photos are in jpeg format. The total size of all the photos is about 830 MB. (Desktop) Comparing pre-production Intel® Core™ i5-650 processor based desktops to theoretical installed base of Intel® Core™2 Duo Processor E6400 with comparable frequency. Desktop configurations: pre-production Intel® Core™ i5-650 processor (4MB Cache, 3.20 GHz) on pre-production Intel® Ibex Peak P55, Dual-channel DS Micron* 4 GB (2x2 GB) DDR3-1333 9-9-9-24 with Intel® Graphics Media Accelerator HD graphics @ 900 MHz, Seagate* 1TB HDD, Intel® Matrix Storage Manager 8.9.1023 (BIOS, Intel® INF and Graphics: pre-production, Imon compliant with VRD 11.1 requirements), Microsoft* Windows* 7 Ultimate 64-bit RTM Intel® Core™2 Duo Processor E6400 (2M Cache, 2.13 GHz, 1066 MHz FSB) on Intel® DQ45CB, Dual channel DS Micron* 2 GB (2x1 GB) DDR2-800 5-5-5-18 with Integrated Intel® GMA 3000 onboard graphics subsystem, Seagate* 320 GB HDD, (BIOS:0059, Intel® Chipset INF: 8.4.0.1016, Graphics: 7.14.10.1329), Microsoft* Windows* 7 Ultimate 64-bit RTM, Microsoft* Windows* Vista Ultimate 32-bit. Business productivity and energy claims based on SYSmark* 2007 preview is BAPCo's 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 financial calculations workload consists of advanced spreadsheet calculation measured using Microsoft* Excel* Monte Carlo Simulation plus Virus Scan. Security workload consists of Winzip*14 decompressing an encrypted archive containing 200 photos, 125 of which are 10 MP photos and 75 which are 6 MP photos. The photos are in jpeg format. The total size of all the photos is about 830 MB.
2. Source: Intel® Turbo Boost Technology available on the Intel® Core™ i7 processor and the Intel® Core™ i5 processor only. Requires a system with Intel® Turbo Boost Technology capability. Consult your PC manufacturer. Performance varies depending on hardware, software and system configuration. **For more information, visit** http://www.intel.com/technology/turboboost
3. Requires an Intel® HT Technology enabled system, check with your PC manufacturer. Performance will vary depending on the specific hardware and software used. Not available on Intel® Core™ i5-750. **For more information including details on which processors support HT Technology, visit** http://www.intel.com/info/hyperthreading
4. Intel® HD Graphics is available on select models of the 2010 Intel® Core™ and Intel® Core™ vPro™ processor families.
5. (Cross Client) Cross-client claim based on lowest data number whencomparing desktop and mobile benchmarks. Configurations andperformance test as follows:(Mobile) Intel® Core™ i5-520M processor (3MB Cache, 2.40 GHz)with Intel® Turbo Boost Technology and Intel® Hyper-ThreadingTechnology and Mobile Intel® HM55 Express Chipset on Lenovo*ThinkPad* T410, Intel® HD Graphics and driver ver. 8.15.10.1968,Dual-channel Micron* 4GB (2x2GB) DDR3-1066, Hitachi* 320GB7200rpm HDD and driver ver. 9.5.0.1037, BIOS Lenovo* 6IET38WW(0.38) with default setting, Wireless Intel® Centrino® Advance-N6200 AGN with driver ver. 13.0.0.107, Screen size 14.1" 1280x800(32bit), Microsoft* Windows* 7 Ultimate 6.1 Build 7600 64-bit,DirectX 11, Chipset INF ver. 9.1.1.1020, Power Management LenovoPower Scheme. Approximate annual energy cost: $3.92.Intel® Core™2 Duo processor T5500 (2 MB Cache, 1.66 GHz, 667MHz FSB) in Lenovo* Thinkpad* T60 laptop, Mobile Intel® 945GMExpress Chipset, Micron* PC5300 DDR2 667 2x1 GB 5-5-5-15memory, Intel® Graphics Media Adapter 950, Hitachi* Travelstar*HTS721010G9SA00 SATA 100 GB 7200RPM HDD, BIOS Lenovo*79ETD7WW 2.17 with default settings, Microsoft* Windows*Vista* Ultimate. Approximate annual energy cost: $6.24(Desktop) Intel® Core™2 Duo processor E6400 (2M Cache, 2.13GHz, 1066 MHz FSB), Chipset: Intel® 945G Express chipset,Intel® chipset software installation file (INF): 9.0.0.1011, BIOS:CL94510J.86A.0034, Memory: Micron MT16HTF12864AY-80ED42x1GB DDR2 667MHz, Seagate ST3320620AS 320GB Barracuda7200.10 (7200 RPM, 16MB cache, NCQ, SATA2), Integrated IntelGraphics driver 7.14.10.1329, Running on Windows* Vista* x86Ultimate SP1. Approximate annual energy cost: $13.17Intel® Core™ i5-650 Processor (4M Cache, 3.20 GHz), Chipset:Intel Q57, BIOS version TMIBX10J.86A.0020, Memory: Micron*MT16JTF25664AZ-1G4 2x2GB DDR3, Seagate BarracudaST31000528AS 1TB Serial ATA (7200 RPM, 16MB cache) ,Intel HD Graphics, Chipset driver: Intel INF 9.1.1.1020, Graphicsdriver: 8.15.10.1995, Microsoft* Windows* 7 Ultimate 64-bit.Approximate annual energy cost: $8.07*Energy cost figures derived from Intel Energy Efficient 2.0methodology, described here: http://www.intelcapabilitiesforum.net/EEP/. Source of Energy Cost Data: US Department of Energy,Electric Power Monthly November 2009 with Data for August2009 (DOE/EIA-0226 (2009/11)); Average Retail Price ofElectricity, Year to Date through August 2009): 10.01 Cents/kWhResults are for illustrative purposes only. Any differencein system hardware or software design or configuration mayaffect actual performance. Buyers should consult other sourcesof information to evaluate the performance of systems
6. 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. AES-NI is available on Intel® Core™ i5-600 Desktop Processor Series, Intel® Core™ i7-600 Mobile Processor Series, and Intel® Core™ i5-500 Mobile Processor Series. For availability, consult your reseller or system manufacturer. **For more information, see** http://softwarecommunity.intel.com/isn/downloads/intelavx/AES-Instructions-Set_WP.pdf
7. Intel® Core™ vPro™ processor family includes Intel® Anti-Theft Technology—PC Protection (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
8. Intel® Core™ vPro™ processor family includes Intel® Active Management Technology (Intel® AMT). 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 & configuration. **For more information, visit** http://www.intel.com/technology/platform-technology/intel-amt
9. 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
10. KVM Remote Control (Keyboard Video Mouse) is only available with dual-core Intel® Core™ i5 vPro™ processors and i7 vPro™ processors with active integrated graphics. Discrete graphics are not supported.
11. Results shown are from the 2007 EDS Case Studies with Intel® Centrino® Pro and the 2007 EDS case studies with Intel® vPro™ processor technology, by LeGrand and Salamasick., 3rd party audit commissioned by Intel, of various enterprise IT environments and the 2007 Benefits of Intel® Centrino® Pro Processor Technology in the Enterprise, Wipro Technologies study commissioned by Intel. The EDS studies compare test environments of Intel® Centrino® Pro and Intel® vPro™ processor technology equipped PCs vs. non-Intel® vPro™ processor technology 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® Centrino® Pro processor 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 www.intel.com/ vpro, www.eds.com and www.wipro.com.
12. Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, 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
13. Intel® Core™ vPro™ processor family includes Intel® Trusted Execution Technology. No computer system can provide absolute security under all conditions. Intel® Trusted Execution Technology (Intel® TXT) requires a computer system 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

	Intel® Standard Manageability (2009)	Intel® vPro™ technology (2009)	Intel® Core™ vPro™ technology (2010)
DASH 1.1 Compliance	●	●	●
Remote Boot Control	●	●	●
Power State Management	●	●	●
Serial Over LAN	●	●	●
IDE Redirect	●	●	●
Remote BIOS control	●	●	●
Hardware and Software Inventory	●	●	●
Hardware Alerting	●	●	●
Agent Presence	●	●	●
Hardware-level Non Volatile Memory – accessible even if OS is inoperable, includes persistent event log	●	●	●
Remote Configuration	●	●	●
Hardware level filtering for network attacks	●	●	●
Access Monitor: Monitoring to deter internal attacks		●	●
Microsoft NAP and Cisco SDN support		●	●
Fast Call for Help and Remote Scheduled Maintenance/Alerts for PCs outside the firewall		●	●
Improved: wireless management off/sleep (Notebook)	n/a	●	●
Out of band KVM (keyboard, video, monitor)			●
HW-based PC "poison pill" and remote IT access to encrypted HDD		●	●
HW-based local timers - wake PC to execute client management tasks			●
HW-enabled PC Virtualization with security and mobility; great graphics and I/O performance		●	●