




## Take business PCs to the next level.

Superior hardware-enabled security and manageability with Intel® Centrino® Pro processor technology for notebook PCs and Intel® vPro™ processor technology for desktop PCs.





< **Superior Remote Diagnostic and Repair:** Conduct down-the-wire diagnostics and repair even if the OS is down. >

< **Speedy Remote Inventory:** Remotely inventory hardware and software assets on network-connected PCs — whether powered down or the OS is inoperable. >

< **Advanced Virus Isolation:** Use hardware-based virus filtering and isolation to protect PCs on the network. >

< **Fast Patch Saturation:** Enable greater patch saturation in less time with encrypted remote PC power-on and update. >

< **Smart Security Agent Detection:** Use hardware to make sure security agents remain active and operational. >

# Improve operational efficiency and increase up-time with Intel-based notebook and desktop PCs

*Time is at a premium.*

*Your budget is stretched thin.*

*And attending to day-to-day employee computing crises consumes virtually all of your resources.*

The new Intel® Centrino® Pro processor technology for notebook PCs and Intel® vPro™ processor technology for desktop PCs will change your IT reality. With hardware-based advances in management and security, you can reduce the time and resources required to maintain and protect both notebook and desktop PCs.

Building on a common technology foundation, notebook computers with Intel Centrino Pro processor technology and desktops with Intel vPro processor technology offer a unified approach for managing and securing computers throughout your organization. With the latest IT management consoles, you can manage your notebooks and desktops over a wired or secure wireless network even if the OS is inoperable or the PC is powered off<sup>1</sup> (See graphic on p. 5 for complete connectivity capabilities).

Plus, both Intel Centrino Pro and Intel vPro processor technology-based PCs contain the high performance, energy-efficient Intel® Core™2 Duo processor. Now, Intel hardware capabilities can provide proactive security, built-in manageability and energy-efficient performance for both your notebook and desktop PCs.

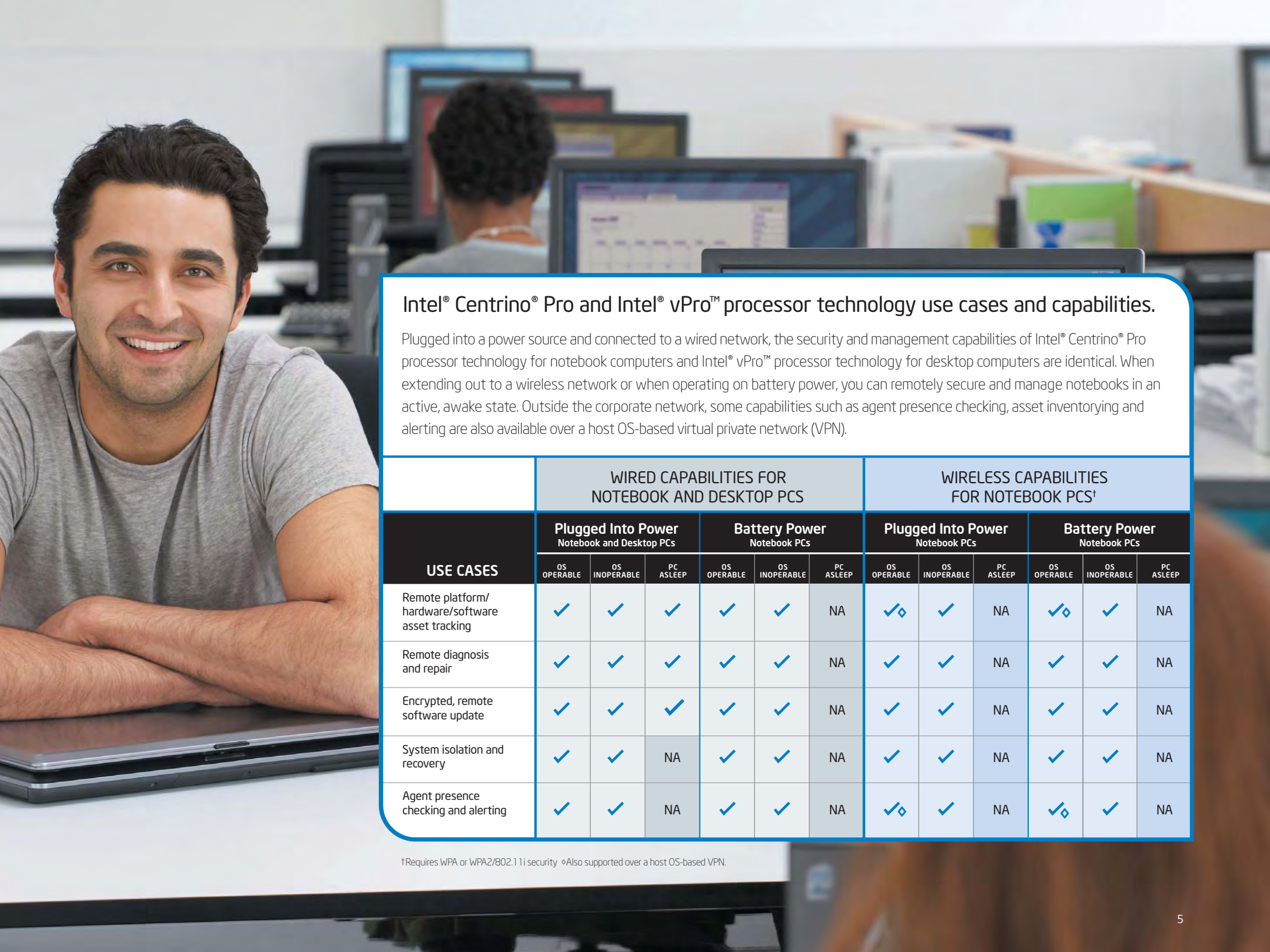
# A unified framework for secure remote management of PCs.

*Intel® Centrino® Pro and Intel® vPro™ processor technology enable more accurate inventories, greater policy compliance, fewer desktside service visits and less interruption to business operations.*

Enable secure remote management of all your notebooks with Intel® Centrino® Pro processor technology and desktops with Intel® vPro™ processor technology from the same console.<sup>2</sup>

These computers incorporate hardware-based security and enhanced maintenance and management capabilities that integrate seamlessly with management solutions from leading Independent Software Vendors (ISVs). Because these capabilities are built into the hardware, Intel Centrino Pro and Intel vPro processor technology provide IT with down-the-wire security and management access even when powered off, the operating system is unresponsive or software agents are disabled.

Notebooks with Intel Centrino Pro processor technology and desktops with Intel vPro processor technology enjoy the support of a wide range of PC manufacturers and technology service providers. These high-performance, feature-rich PCs are ready to accommodate new technologies or software such as Windows Vista\* or Office 2007.\* Powered by the Intel Core 2 Duo processor, you also get exceptional performance to support compute intensive applications as well as powerful desktops with small, compact designs and notebooks with great battery life.



## Intel® Centrino® Pro and Intel® vPro™ processor technology use cases and capabilities.

Plugged into a power source and connected to a wired network, the security and management capabilities of Intel® Centrino® Pro processor technology for notebook computers and Intel® vPro™ processor technology for desktop computers are identical. When extending out to a wireless network or when operating on battery power, you can remotely secure and manage notebooks in an active, awake state. Outside the corporate network, some capabilities such as agent presence checking, asset inventorying and alerting are also available over a host OS-based virtual private network (VPN).

USE CASES	WIRED CAPABILITIES FOR NOTEBOOK AND DESKTOP PCS						WIRELESS CAPABILITIES FOR NOTEBOOK PCS†					
	Plugged Into Power Notebook and Desktop PCs			Battery Power Notebook PCs			Plugged Into Power Notebook PCs			Battery Power Notebook PCs		
	OS OPERABLE	OS INOPERABLE	PC ASLEEP	OS OPERABLE	OS INOPERABLE	PC ASLEEP	OS OPERABLE	OS INOPERABLE	PC ASLEEP	OS OPERABLE	OS INOPERABLE	PC ASLEEP
Remote platform/ hardware/software asset tracking	✓	✓	✓	✓	✓	NA	✓◊	✓	NA	✓◊	✓	NA
Remote diagnosis and repair	✓	✓	✓	✓	✓	NA	✓	✓	NA	✓	✓	NA
Encrypted, remote software update	✓	✓	✓	✓	✓	NA	✓	✓	NA	✓	✓	NA
System isolation and recovery	✓	✓	NA	✓	✓	NA	✓	✓	NA	✓	✓	NA
Agent presence checking and alerting	✓	✓	NA	✓	✓	NA	✓◊	✓	NA	✓◊	✓	NA

†Requires WPA or WPA2/802.11i security ◊Also supported over a host OS-based VPN.



## INTEL® CENTRINO® PRO PROCESSOR TECHNOLOGY

Beyond their proactive security and built-in manageability features, notebooks with Intel® Centrino® Pro processor technology deliver the outstanding mobile experience of the Intel Centrino processor technology family. Mobile users will enjoy:

- Up to two times more processor performance when multi-tasking<sup>3</sup> and great battery life.
- Secure, flexible wireless connectivity supporting 802.11 a/b/g wireless protocols and Intel® Next-Gen Wireless-N technology offering five times the performance and twice the wireless range<sup>4</sup> on a new wireless n network.
- Over twice the performance on graphics applications<sup>5</sup> and support for Windows Vista's\* latest graphic interface, Aero\* 3D-desktop, for a better user experience.
- Up to 2X faster performance when loading frequently used applications and up to 20% faster boot time with optional Intel® Turbo Memory<sup>6</sup> when running Windows Vista.

# Proactively protect your notebook and desktop PCs.

Protect your infrastructure and ensure business continuity with the unique hardware-enhanced security technologies in notebooks with Intel® Centrino® Pro processor technology and desktops with Intel® vPro™ processor technology. Now you can stop many threats before they reach the operating system, isolate infected systems and update PC security software more efficiently and effectively than ever before.

The hardware-based capabilities of Intel Centrino Pro and Intel vPro processor technology improve network traffic filtering and isolate clients under attack to protect your network. Automatic verification of the presence of security agents and immediate remote restoration enhances your preventive security efforts. And with secure, reliable remote wake-up functionality, you can deploy off-hours patches across your enterprise faster and without disrupting end users.<sup>††</sup>

Intel Centrino Pro and Intel vPro processor technology also enable more accurate inventories to ensure all systems are compliant with security policies. Additionally, the hardware-assisted anti-virus protection of Execute Disable Bit protects your PCs from certain viruses that use buffer overflow attack.<sup>7</sup>

<sup>††</sup>Improving Asset Inventories and Reducing IT Costs with Intel® vPro™ Technology - EDS Lab Evaluation, April 2006



## VIRTUAL APPLIANCES AND INTEL® vPRO™ PROCESSOR TECHNOLOGY

Intel® Virtualization Technology<sup>®</sup> (Intel® VT) enables deployment of virtual appliances from leading third-party security and management vendors such as Altiris,<sup>\*</sup> Lenovo<sup>\*</sup> and Symantec<sup>\*</sup> on desktop PCs with Intel® vPro™ processor technology. Invisible to users and under IT control, these tamper resistant virtual appliances provide a more secure, stable environment for critical services such as deep packet inspection for malicious software and policy compliance monitoring.

# Lower costs and improve efficiency with built-in manageability.

Using hardware-based security and management technology you can support both notebooks with Intel® Centrino® Pro processor technology and desktops with Intel® vPro™ processor technology. These capabilities work with management solutions from leading ISVs such as Altiris\*, HP\* LANDesk\* and Microsoft\* to enhance control of your company's computers and streamline operations.

When desktops or notebooks experience issues, you can speed recovery times and minimize desk-side visits. Intel Centrino Pro and Intel vPro processor technology can help diagnose and repair systems remotely, cut downtime and reduce the average in-person IT support time by up to 95%.<sup>Δ</sup> You can even access equipment when the OS is inoperable. This functionality and the ability to store asset information in the computer's secure, non-volatile memory can help reduce manual inventories of hardware and software assets by up to 90%.<sup>◊</sup> For desktop PCs, it has been shown to reduce the incidence of inventory failures or errors, eliminating up to 91% of remedial work.<sup>Λ</sup>

You can also perform remote asset tracking and check the presence of management agents. And readily-available access to a secure, hardware-based communication channel also facilitates superior off-site management by an IT service provider.

PCs with Intel Centrino Pro and Intel vPro processor technology are part of the Intel® Stable Image Platform Program (Intel® SIPP), so you can avoid unexpected changes that might force software image revisions or hardware re-qualifications. This helps your team more effectively plan replacement cycles and reduce the number of deployed client configurations.



## INTEL® ACTIVE MANAGEMENT TECHNOLOGY (INTEL® AMT)

An important element for delivering built-in security and manageability, Intel® Active Management Technology (Intel® AMT) is based on standards, including XML, ASF, SOAP, HTTP and Kerberos supported by leading hardware and software vendors. Built into the hardware, Intel AMT enables:<sup>1</sup>

- A protected, persistent non-volatile memory for storing and securing system information out of reach of users, intruders, viruses and worms.
- An encrypted communications channel that runs independent of the OS to allow remote communication with the PC.
- Hardware-based isolation and recovery capabilities that can disconnect a PC's network access to protect against viruses or other attacks.

<sup>Δ</sup>Improving IT Services and Increasing User Uptime with Intel® vPro™ Technology – Atos Origin Lab Evaluation, April 2006

<sup>◊</sup>Improving Asset Inventories and Reducing IT Costs with Intel® vPro™ Technology – EDS Lab Evaluation, April 2006

<sup>Λ</sup>Measuring the Value of Intel® vPro™ Technology in the Enterprise – Wipro Technologies, August 2006

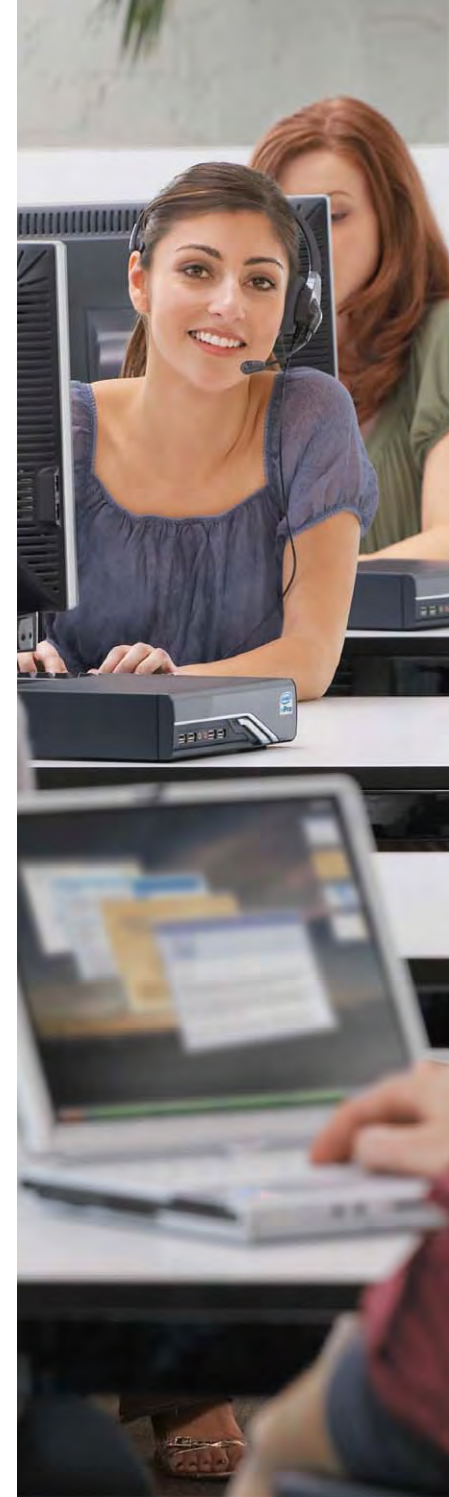
## Setting new standards in energy-efficient performance.



Intel® Core™2 Duo processors are at the heart of Intel's most advanced computing processor technologies.

Great business computing starts with Intel inside. PCs with Intel® Centrino® Pro and Intel® vPro™ processor technology are powered by the Intel® Core™2 Duo processor for more computing power and better energy efficiency.

The industry-leading performance of Intel Core 2 Duo processors enable you to multi-task or run background management applications for manageability, security or communications while maintaining superior responsiveness for foreground applications. At the same time, their reduced power consumption enables smaller, quieter systems and delivers great battery life for mobile PCs. These 64-bit PCs<sup>9</sup> offer full support for Windows Vista, including the premium Windows Vista Aero interface, Microsoft Office 2007 and other next generation software.



# Security and manageability for superior business performance.

*Intel® Centrino® Pro and Intel® vPro™ processor technology can help cut average user downtime and reduce the average in-person IT support time up to 95%.<sup>Δ</sup>*

Take your business computing to the next level with Intel Centrino Pro and Intel vPro processor technology. Now you can minimize the time and money spent on PC management and focus on IT innovation, thanks to this unified approach for more efficiently managing your notebook and desktop computers. The proactive security, built-in manageability, and energy efficient performance of notebook computers with Intel Centrino Pro processor technology and desktop computers with Intel vPro processor technology will directly benefit your business. With broad support from leading PC

manufacturers, ISVs, and IT service providers, these notebook and desktop PCs deliver a complete solution for a wide range of business environments and a superior foundation for your transition to Windows Vista.

Leap forward with the latest advances from Intel and focus on accelerating your overall business success. Make the move to Intel Centrino Pro processor technology and Intel vPro processor technology today.

**Visit [www.intel.com/go/businesspc](http://www.intel.com/go/businesspc)**

<sup>Δ</sup>Improving IT Services and Increasing User Uptime with Intel® vPro™ Technology – Atos Origin Lab Evaluation, April 2006



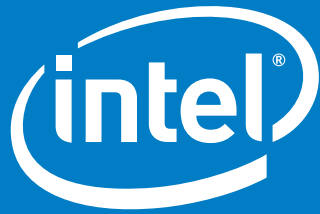
< Ensure all your PCs always have the most up-to-date security. >

< Increase efficiency and accuracy of asset inventories. >

< Prevent end-user system tampering from making your PCs more vulnerable. >

< Protect your network from intrusion and malicious attacks. >

< Minimize the need for desktside visits. >



[www.intel.com/go/businesspc](http://www.intel.com/go/businesspc)

<sup>1</sup>Intel® Centrino® Pro and Intel® vPro™ processor technology includes powerful Intel® Active Management Technology (Intel® AMT). Intel AMT requires the platform to have an Intel® AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. With regards to notebooks, Intel AMT may not be available or certain capabilities may be limited over a host OS-based VPN or when connecting wirelessly, on battery power, sleeping, hibernating or powered off. For more information, see <http://www.intel.com/technology/manage/amt>.

<sup>2</sup>Contact your ISV for specific implementation schedules and support for both desktop and notebook PCs.

<sup>3</sup>As measured by SPEC® CPU2006 comparing latest generation Intel® Core™2 Duo Processor T7700 & T7100 with a comparable frequency single core Intel® Pentium® M Processor. Actual performance may vary. See <http://www.intel.com/performance/mobile/benchmarks.htm> for important additional information.

<sup>4</sup>Up to 2x greater range and up to 5x better performance with optional Intel® Next-Gen Wireless N technology enabled by 2x3 Draft N implementations with 2 spatial streams. Actual results may vary based on your specific hardware, connection rate, site conditions, and software configurations. See <http://www.intel.com/performance/mobile/index.htm> for more information. Also requires a Connect with Intel® Centrino® processor technology certified wireless n access point. Wireless n access points without the Connect with Intel Centrino processor technology identifier may require additional firmware for increased performance results. Check with your PC and access point manufacturer for details.

<sup>5</sup>As measured by 3DMark®06 comparing latest generation Intel® Centrino® processor technology-based notebooks including Intel integrated graphics with previous generations of Intel Centrino processor technology. Actual performance may vary. See <http://www.intel.com/performance/mobile/benchmarks.htm> for important additional information.

<sup>6</sup>Tests run on customer reference boards and preproduction latest generation Intel® Centrino® processor technology with optional Intel® Turbo Memory enabled against like systems without Intel® Turbo Memory. Results may vary based on hardware, software and overall system configuration. All tests and ratings reflect the approximate performance of Intel products as measured by those tests. All testing was done on Microsoft® Vista® Ultimate (build 6000). Application load and runtime acceleration depend on Vista®'s preference to pre-load those applications into the Microsoft® Ready-Boost® cache. See <http://www.intel.com/performance/mobile/benchmarks.htm> for more information.

<sup>7</sup>Enabling Execute Disable Bit functionality requires a PC with a processor with Execute Disable Bit capability and a supporting operating system. Check with your PC manufacturer on whether your system delivers Execute Disable Bit functionality.

<sup>8</sup>Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain platform software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

<sup>9</sup>64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Consult with your system vendor for more information.

<sup>10</sup>Comparison based on Intel Core™2 Duo processor E6700 with Intel® Q965 Chipset versus Intel® Pentium® D processor 930 3.0 GHz with Intel® D945GTP motherboard. Testing commissioned by Intel in November, 2006 and performed by Principled Technologies. Performance dependent on software, hardware, OS, and system configurations.

Actual performance may vary. For test system configuration, see these results:  
<http://principledtechnologies.com/clients/reports/Intel/vProVistaComp.pdf>  
<http://principledtechnologies.com/clients/reports/Intel/vProVistaEmp.pdf>  
<http://principledtechnologies.com/clients/reports/Intel/vProVistaPred.pdf>  
<http://principledtechnologies.com/clients/reports/Intel/vProVistaAero.pdf>

<sup>11</sup>Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Comparison of system based on dual-core Intel® Core™2 Duo processor E6700 (2.66GHz, 1066MHz FSB, 4MB L2 Cache) versus with Intel Pentium D processor 945 (3.4GHz, 800MHz FSB, 2x2MB L2 Cache). Both systems tested with Intel Q965 Chipset on DG965SS board, Intel Chipset Software Installation File 8.0.1.1002, Dual Channel Micron® PC2-5300U 2x512MB of DDR2 667 5-5-5-15, Maxtor® Diamond Max 10 NCQ Serial ATA (300GB, 7200RPM), Intel® Graphics Media Accelerator X3000, Windows® XP Professional 2600 SP2 NTFS, DirectX 9.0c. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit <http://www.intel.com/performance/resources/limits.htm>

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