PRODUCT BRIEF
Intel® Q77 Express Chipset – Maximum Security and Manageability with Intel® vPro™ Technology
Intel® Q75 Express Chipset – Security and Manageability

Your Business Just Became More Manageable and Secure

Intel® Q77 and Q75 Express Chipsets and 3rd Generation Intel® Core™ vPro™ Processors

With industry-leading performance and responsiveness, the Intel® Q77 and Q75 Express Chipsets and 3rd generation Intel® Core™ vPro™ processor family delivers improved manageability and security for your most demanding business needs.

Enhanced Manageability and Security

With enhanced hardware-based Keyboard, Video, and Mouse (KVM) Remote Control,[1] IT administrators can now mange clients across multiple screens. Combined with secure data access via Intel® Identity Protection Technology (Intel® IPT),[2] the Intel® Q77 and Q75 Express Chipsets help your business stay secure in the digital world.

Smarter Performance

The combination of the Intel Q77 and Q75 Express Chipsets and 3rd generation Intel® Core™ vPro™ processors deliver increased desktop performance for an incredible PC experience. You'll get maximum power for whatever you do, thanks to the combination of smart features like Intel® Turbo Boost Technology 2.0[3] and Intel® Hyper-Threading Technology,[4] which together activate full processing power exactly where and when you need it.

Increased Responsiveness

Intel® Smart Connect Technology[5] enables instant access to your data by allowing your content to be refreshed in the standby power state—all while minimizing power consumption. In addition to faster boot and resume times, Intel® Rapid Start Technology[6] provides energy efficiency without sacrificing user experience. While providing SSD-like performance and large HDD capacity at lower costs, the Intel Q77 Express Chipset features Intel® Smart Response Technology[7] that delivers faster application loading for efficiency and better productivity.

Enrich Your IT Environment

Intelligent, hardware-assisted security management features help you quickly deploy security patches across PCs, preventing unauthorized disabling of installed security software. Not only can data encryption run up to four times faster due to Intel® Advanced Encryption Standard-New Instructions[8] (Intel® AES-NI), but you can remotely unlock encrypted drives that require pre-boot authentication and manage data security settings, even when the PC is off. You can also help protect your organization's sensitive data with optional Intel® Anti-Theft Technology.[9] When enabled, your Intel Core vPro processor-based PCs can be automatically and remotely disabled if they're lost or stolen. Once recovered, they can be reactivated to full functionality.

Protect your passwords and other credentials with Intel Identity Protection Technology. Intel IPT ensures your passwords are safe by presenting a PAVP-protected window for password authentication. With the use of the Public Key Infrastructure embedded in the platform, signing into your system and application is simpler and secure.

Remote management capabilities make PC upkeep easier and more cost effective, enabling you to keep your PCs running smoothly, without taking them out of the hands of users. Once activated, Intel® vPro™ Technology[10] allows you to remotely configure, diagnose, isolate, and repair an infected PC – even if it's unresponsive.

Hardware-based KVM Remote Control (keyboard, video, mouse) lets you fix more issues remotely by seeing what your users see with greater resolution than ever before. To reach you, users can even "call for help" through a wired or wireless protected tunnel to request assistance in managing or repairing their PC. For better manageability, users can also use their mouse across multiple client monitors.

Improved Built-In Visuals

With smart performance and built-in 3D visual and graphics support, the 3rd generation Intel Core vPro processor family will add a new dimension to your PC experience.[11] Intel® Quick Sync Video technology, our built-in hardware acceleration in all 3rd generation Intel Core vPro processors, delivers astonishing video transcoding performance, enabling your PC to edit, burn, and share your content faster—without the need for add-in hardware. Intel® InTru™ 3D Technology[12] delivers 3D movie playback without hesitation or interruption. The Intel® Q75 and Q77 Express Chipsets and 3rd generation Intel Core vPro processors now come with Intel® Wireless Display (Intel® WiDi),[13] allowing users to view content from their desktop PC to an Intel® WiDi-enabled TV screen. The Intel Q77 and Q75 Express Chipsets also support up to three displays.[14]

Intel® Stable Image Platform Program

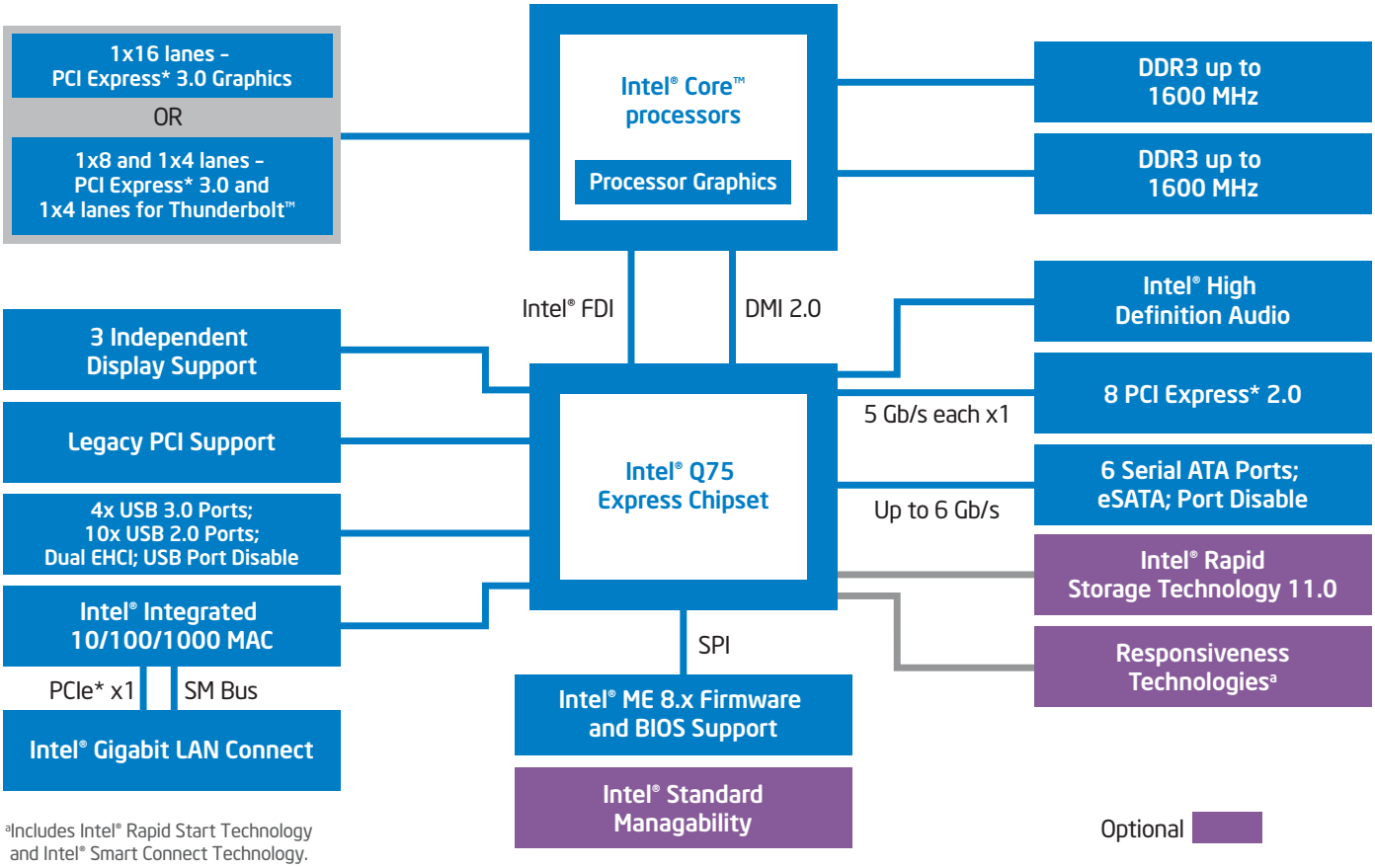
Reducing the variety of supported hardware platforms greatly simplifies enterprise PC management, which in turn lowers total cost of ownership. One critical element in reducing PC hardware variation involves deploying standardized PC configurations. The Intel® Stable Image Platform Program[15] (Intel® SIPP) can help your company identify and deploy standardized, stable image PC platforms for at least 15 months. The Intel Q77 and Q75 Express Chipsets support Intel SIPP.

The Intel® 7 Series Chipsets deliver the latest platform features for superb system performance

The Intel Q77 and Q75 Express Chipsets integrate several capabilities to provide flexibility for connecting I/O devices. Integrated USB 3.0 support provides faster device connectivity for faster data access. The latest Intel® Rapid Storage Technology[16] enables the full Serial ATA (SATA) interface speed of up to 6 Gb/s to support next-generation Solid State Drives (SSDs) and traditional Hard Disk Drives (HDDs). In addition, the Intel Q77 and Q75 Express Chipsets drive lower power through enhanced link power management of the Advanced Host Controller Interface (AHCI), enable easier expandability with support for native hot plug, and enhance boot and multitasking performance with Native Command Queuing (NCQ).

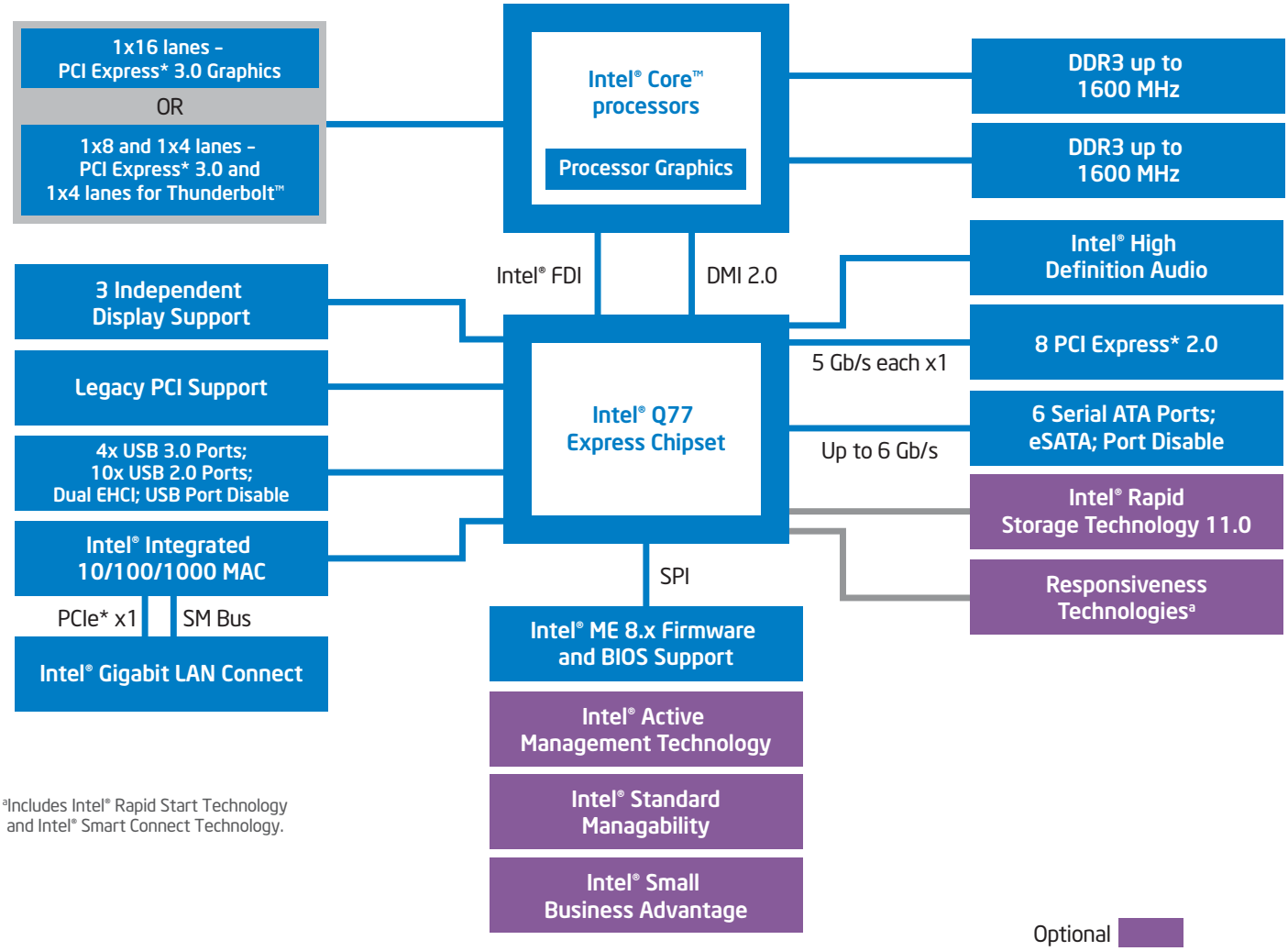
Intel® Rapid Recover Technology (part of the Intel Rapid Storage Technology suite) provides a fast, easy-to-use method for the end user to recover their data and return their system to an operational status.

Intel® Q75 Express Chipset Block Diagram



[a]Includes Intel® Rapid Start Technology and Intel® Smart Connect Technology.

Intel® Q77 Express Chipset Block Diagram



[a]Includes Intel® Rapid Start Technology and Intel® Smart Connect Technology.

Intel® Q77 and Q75 Express Chipset Features at a Glance

Features	Benefits
Support for 2nd and 3rd generation Intel® Core™ vPro™ processors	▪ Support for 2nd and 3rd generation Intel® Core™ vPro™ processors with Turbo Boost Technology 2.0;[3] Intel® Pentium® processor, and Intel® Celeron® processor.
Intel® Active Management Technology[17] (Intel® AMT)	▪ Using built-in platform capabilities and popular third-party management and security applications. Intel AMT allows IT to better discover, heal, and protect networked computing assets.
Intel® Rapid Storage Technology[16]	▪ With additional hard drives added, provides quicker access to digital photo, video and data files with RAID 0, 5, and 10, and greater data protection against a hard disk drive failure with RAID 1, 5, and 10. ▪ Support for external SATA (eSATA) enables the full SATA interface speed outside the chassis, up to 3 Gb/s.
Intel® Rapid Recover Technology	▪ Intel's latest data protection technology provides a recovery point that can be used to quickly recover a system should a hard drive fail or if there is data corruption. The clone can also be mounted as a read-only volume to allow a user to recover individual files.
Intel® High Definition Audio[18]	▪ Integrated audio support enables premium digital surround sound and delivers advanced features such as multiple audio streams and jack re-tasking.
Intel® Smart Response Technology[7]	▪ Implements storage I/O caching for faster response times of application startup and quicker access to user data.
Intel® Smart Connect Technology[5]	▪ Provides faster application refresh by allowing applications to be updated in a low-power state.
Intel® Rapid Start Technology[6]	▪ Allows quick system resumes from the hibernate state.
Universal Serial Bus 3.0	▪ Integrated USB 3.0 support, provides greater enhancement in performance with a design data rate of up to 5 gigabits per second (Gbps) with up to 4 USB 3.0 ports.

Intel® Q77 and Q75 Express Chipset Features at a Glance (continued)	
Universal Serial Bus 2.0	▪ Hi-Speed USB 2.0 support with a design data rate of up to 480 megabits per second (Mbps) with up to 14 USB 2.0 ports.
USB 2.0 Rate Matching Hub	▪ Enables lower power requirements and manages the transition of the communication data rate from the high speed of the host controller to the lower speed of USB full-speed /low-speed devices.
Serial ATA (SATA) 6 Gb/s	▪ Next-generation high-speed storage interface supporting up to 6 Gb/s transfer rates for optimal data access with up to 2 SATA ports.
Serial ATA (SATA) 3 Gb/s	▪ High-speed storage interface supporting up to 4 SATA ports.
eSATA	▪ SATA interface designed for use with external SATA devices. Provides a link for 3 Gb/s data speeds to eliminate bottlenecks found with current external storage solutions.
SATA Port Disable	▪ Enables individual SATA ports to be enabled or disabled as needed. This feature provides added protection of data by preventing malicious removal or insertion of data through SATA ports. Especially targeted for eSATA ports.
PCI Express* 2.0 Interface	▪ Offers up to 5 GT/s for fast access to peripheral devices and networking with up to 8 PCI Express 2.0 x1 ports, configurable as x2 and x4 depending on motherboard designs.
USB Port Disable	▪ Enables individual USB ports to be enabled or disabled as needed. This feature provides added protection of data by preventing malicious removal or insertion of data through USB ports.
Intel® Integrated 10/100/1000 MAC	▪ Support for the Intel® 82579LM Gigabit Network Connection.
Green Technology	▪ Manufactured with lead-free and halogen-free component packages.

For more information, visit the Intel Web site: **www.intel.com/content/www/us/en/chipsets/business-chipsets/laptop-desktop-business-chipsets.html**

[1] KVM Remote Control (Keyboard, Video, Mouse) is only available with Intel® Core™ i5 vPro™ and Core™ i7 vPro™ processors with Intel® Active Management technology activated and configured and with integrated graphics active. Discrete graphics are not supported.

[2] 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://ipt.intel.com. Intel® Identity Protection Technology is not available on the Intel® Q75 Express Chipset.

[3] 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.

[4] 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.

[5] Requires a select Intel® processor, Intel® software and BIOS update, Intel® wireless adapter, and Internet connectivity. Solid state memory or drive equivalent may be required. Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

[6] Requires a select Intel® processor, Intel® software and BIOS update, and Intel® Solid-State Drive (SSD). Depending on system configuration, your results may vary. Contact your system manufacturer for more information.

[7] Requires a select Intel® processor, enabled chipset, Intel Rapid Storage Technology software, and a properly configured hybrid drive (HDD + small SSD). Depending on system configuration, your results may vary. Contact your system manufacturer for more information. Intel® Smart Response Technology is not available on the Intel® Q75 Express Chipset.

[8] 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://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni/.

[9] 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.

[10] 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.

[11] Built-in visual features are not enabled on all PCs and optimized software may be required. Check with your system manufacturer. Learn more at http://www.intel.com/go/biv.

[12] Viewing stereo 3D content requires 3D glasses and a 3D-capable display. Physical risk factors may be present when viewing 3D material.

[13] Requires an Intel® Wireless Display-enabled system, compatible adapter, and TV. 1080p and Blu ray* or other protected content playback only available on 2nd or 3rd gen Intel® Core™ processor-based PCs with built-in visuals enabled, a compatible adapter and media player, and supporting Intel WiDi software and graphics driver installed. Consult your PC manufacturer. For more information, see www.intel.com/go/widi.

[14] Requires the use of a 3rd Generation Intel® Core™ processor. This feature is dependent on your system configuration.

[15] Consult your PC manufacturer for availability of systems that meet Intel SIPP guidelines. Intel SIPP is a client program only and does not apply to servers or Intel-based handhelds and/or handsets. For more information, visit http://www.intel.com/itcenter/topics/refresh/sipp.htm.

[16] Intel® Rapid Storage Technology 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.

[17] 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.

[18] Requires an Intel® HD Audio enabled system. Consult your PC manufacturer for more information. Sound quality will depend on equipment and actual implementation. For more information about Intel® HD Audio, refer to http://www.intel.com/design/chipsets/hdaudio.htm.

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