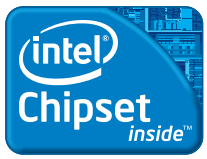
PRODUCT BRIEF
Intel® H57 and H55 Express Chipsets
Performance and Mainstream Desktop

Intel® H57 and H55 Express Chipsets

A revolutionary transformation in Intel chipset architecture

Intel® H57 and H55 Express Chipsets continue to push innovation with a new architecture designed to deliver quality, performance, and industry-leading I/O technologies on platforms powered by the Intel® Core™ i7-800, Core™ i5, or Core™ i3 processors.



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The Intel H57 and H55 Express Chipsets deliver new technologies and innovative capabilities for digital home and small office/home office consumers. The technologies featured in these chipsets include integrated Intel® HD Graphics, Intel® Remote PC Assist Technology, and the new Intel® Rapid Storage Technology (Intel® RST).[1]

Revolutionary Single-Chip Architecture with Enhanced Chipset Capabilities

The Intel H57 and H55 Express Chipsets are part of Intel® 5 Series Chipsets – a new generation of chipsets with a single chip replacing the traditional two-chip approach. The repartition of the processor and chipset into two devices enables performance and system improvements over previous generations.

- PC platforms based on Intel 5 Series Chipsets use up to 50 percent less power than Intel® 4 Series-based platforms.
- Smaller form factors are possible because the footprint of Intel 5 Series Chipsets is 65 percent smaller than that of the Intel 4 Series chipset family with Intel® ICH10.
- To take advantage of modern peripheral devices, Intel 5 Series Chipsets provide expanded I/O device ports for advanced usage models.

Integrated Intel HD Graphics

The Intel H57 and H55 Express Chipsets, when combined with an Intel Core i5 or Core i3 processor, brings built-in Intel HD Graphics and audio to the corporate user.

- **Premium Video.** Receive smooth, sharp, more colorful playback of Blu-ray,* DVD, and HD in up to a dual-stream Picture-in Picture.
- **Premium Display.** View video through up to two monitors with built-in dual HDMI* or DisplayPort* connectivity.
- **Premium Audio.** Listen to professional-grade audio through Dolby TrueHD,* DTS-HD* with support of Blu-ray* titles, and 7.1 surround sound.

Intel Rapid Storage Technology (Intel RST)[2]

Intel® RST 9.5 introduces an all-new, completely redesigned UI with a focus on making it easy and intuitive for users to configure their systems for data protection or performance. Intel RST 9.5 has also been optimized to bring additional storage performance to Intel 5 Series Chipsets. When using one or more hard drives, users can take advantage of enhanced performance and lower power consumption. When using more than one drive, users have additional protection against data loss caused by hard-drive failures.

Valuable digital memories are protected against a hard-drive failure when the Intel H57 system is configured for any one of three fault-tolerant RAID levels: RAID 1, RAID 5, or RAID 10. By seamlessly storing copies of data on one or more

additional hard drives, any hard drive can fail without data loss or system downtime. When the failed drive is removed and a replacement installed, data fault tolerance is easily restored. The fault tolerance also allows businesses to minimize downtime that may occur due to mechanical failures of hard drives.

Intel RST also provides benefits to Intel H55 users with a single hard drive. Using Advanced Host Controller Interface (AHCI), storage performance is improved through Native Command Queuing (NCQ).

Intel® Rapid Recovery Technology[2]

With the ability on the Intel H57 to instantly boot from a clone hard drive, Intel® Rapid Recovery Technology provides a fast, easy-to-use method for data recovery and return to operation. Native support for external SATA* ports (eSATA), combined with Intel RST, provides the flexibility to add an external drive for increased data storage with up to six times faster performance than USB* 2.0 or IEEE 1394 400. Support for SATA also enables the full SATA interface speed of up to 3 Gb/s outside the chassis.

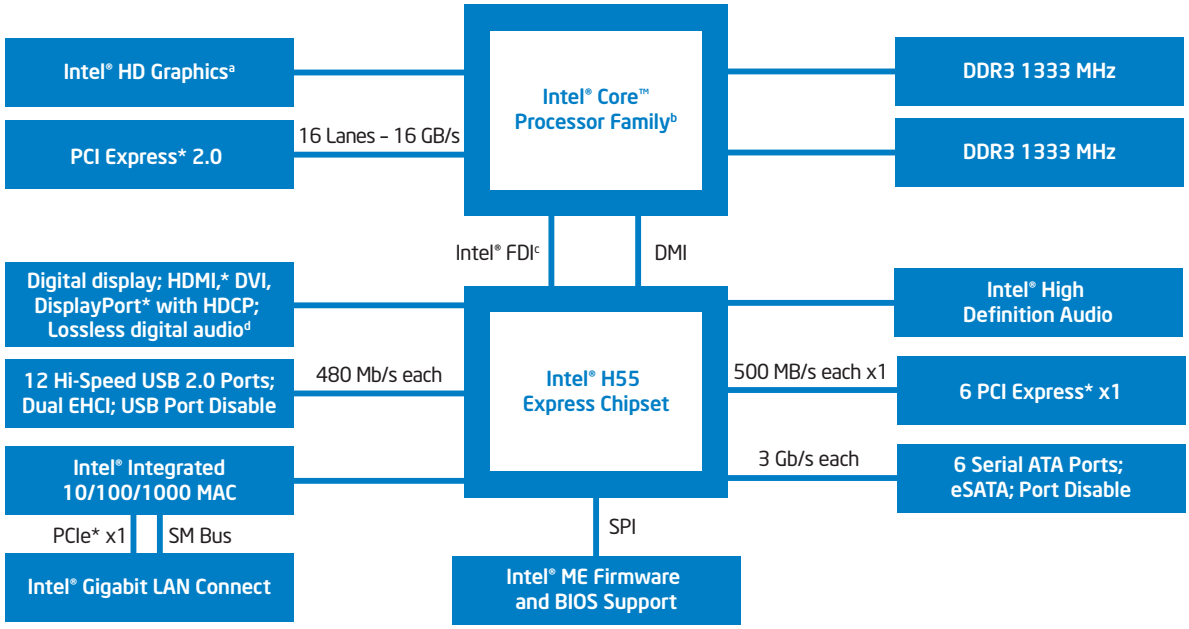
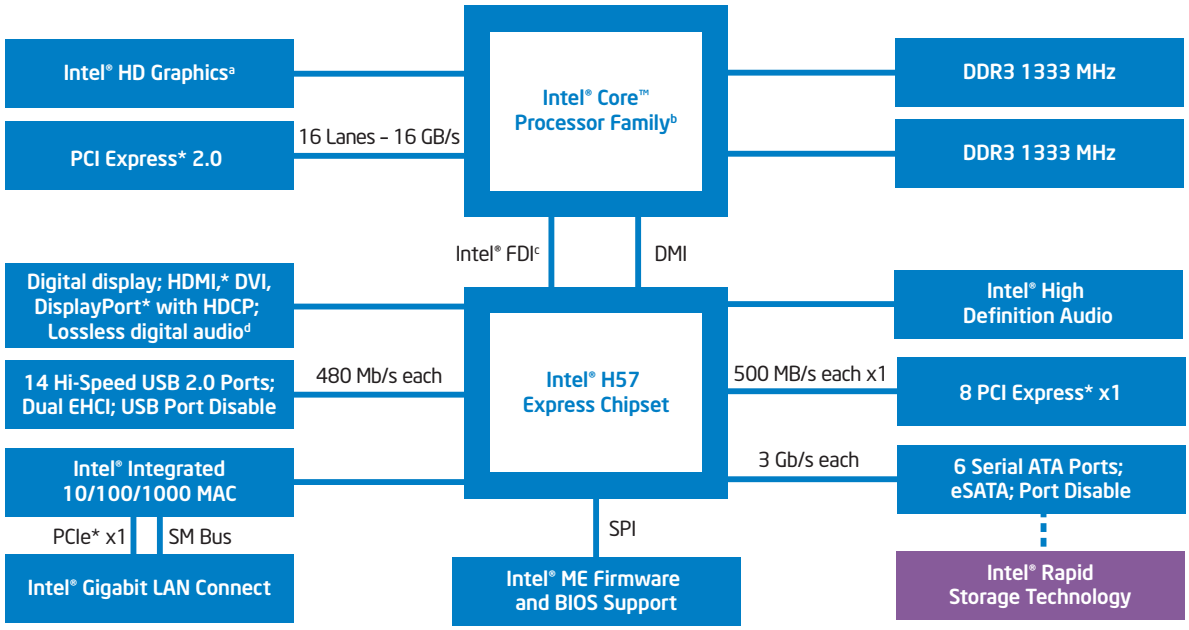


Figure 1. Intel® H55 Express Chipset Platform Block Diagram



[a]Not available on all processors.
[b]Compatible with Intel® Core™ i7-800 processor series, Intel® Core™ i5, and Intel® Core™ i3 processor families.
[c]Intel Flexible Display Interface.
[d]Available with Intel HD Graphics only.

Figure 2. Intel® H57 Express Chipset Platform Block Diagram

Intel® H55 and H57 Express Chipset Features at a Glance

Features	Benefits
Intel® Flexible Display Interface[3]	▪ Intel Flexible Display Interface provides an innovative path for two independently controlled channels of integrated graphics display data to be transported to the Intel 5 Series Chipset.
Support for HDMI, DisplayPort and DVI[4]	▪ High Definition Multimedia Interface (HDMI) delivers uncompressed HD video and uncompressed multi-channel audio in a single cable, supporting all HD formats including 720p, 1080i and 1080p. Dual Independent Display expands the viewable workspace to two monitors.
Intel Rapid Storage Technology[2]	▪ With additional hard drives added, Intel RST provides quicker access to digital photo, video and data files on single-drive or multi-drive systems 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 Recovery Technology[2]	▪ Intel's latest data protection technology provides a recovery point on the Intel H57 that can be used to quickly recover a system if a hard drive fails 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® Remote PC Assist Technology	▪ This technology enables you to make a fast call for help and request remote technical assistance if you encounter a problem with your PC, even when the OS, network software or applications are not functioning.
Intel® High Definition Audio[4]	▪ Integrated audio support enables premium digital surround sound and delivers advanced features such as multiple audio streams and jack re-tasking.
Intel® Quiet System Technology	▪ Intelligent fan-speed control algorithms use operating temperature ranges more efficiently to reduce system noise by minimizing fan speed changes.
Universal Serial Bus (USB)	▪ Hi-Speed USB 2.0 provides performance enhancements including a design data rate of up to 480 megabits per second (Mbps) with up to 14 USB 2.0 Ports on the Intel H57 Express Chipset and up to 12 USB 2.0 Ports on the Intel H55 Express Chipset.
USB 2.0 rate matching hub	▪ The 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) 3 Gb/s	▪ High-speed storage interface supports faster transfer rate for improved data access with up to 6 SATA ports.
eSATA	▪ This SATA interface is designed for use with external SATA devices. It provides a link for 3 Gb/s data speeds to eliminate bottlenecks found with current external storage solutions.
SATA port disable	▪ SATA port disable allows 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	▪ The PCI Express 2.0 interface offers up to 2.5 GT/s for fast access to peripheral devices and networking with up to 8 PCI Express* 2.0 x1 ports on the Intel H57 Express Chipset and up to 6 ports on the Intel H55 Express Chipset.
USB port disable	▪ 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	▪ Provides support for the Intel® 82578DC Gigabit Network Connection.
Green technology	▪ Manufactured lead-free and halogen-free.

For more information, visit **www.intel.com/products/desktop/chipsets**

[Δ] Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See www.intel.com/products/processor_number for details.

[1] All Intel Rapid Storage Technologies are not supported on every chipset.

[2] 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.

[2] Intel® vPro™ technology includes powerful Intel® Active Management Technology. Intel Active Management Technology (Intel® AMT) requires the computer system to have an Intel AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. Setup requires configuration by the purchaser and may require scripting with the management console or further integration into existing security frameworks to enable certain functionality. It may also require modifications of implementation of new business processes. With regard 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 www.intel.com/technology/platform-technology/intel-amt.

[3] 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.

[4] Intel® High Definition Audio (Intel® HD 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 www.intel.com/design/chipsets/hdaudio.htm.

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