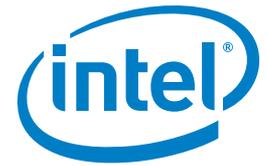


PRODUCT BRIEF

Intel® Z68 Express Chipset

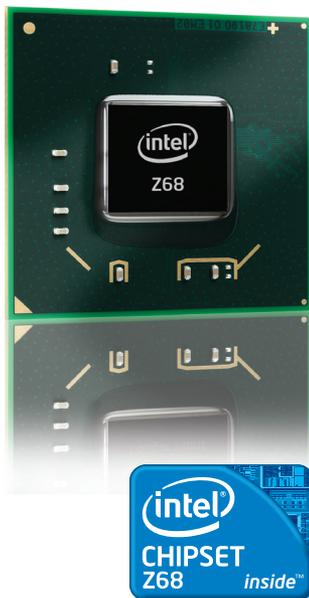
Performance and Mainstream Desktop



Take Control

Master your experience with the Intel® Z68 Express Chipset and 2nd Generation Intel® Core™ Processors

Take control and master your experience with the Intel® Z68 Express Chipset and 2nd generation Intel® Core™ processor-based PCs. This platform delivers the most flexibility and performance for the LGA 1155 socket, providing all the tools necessary to customize your PC experience.



Unlocked Performance and Flexibility

The Intel Z68 Express Chipset enables the performance tuning features of unlocked 2nd generation Intel Core processors, allowing the user to change the processor core ratios, graphics clock speeds and DDR3 memory ratios to customize the performance experience of the platform. Combined with the latest Intel® Extreme Tuning Utility, performance tuning is now easier than ever. Get smart performance at its best with the flexibility to set your system specs just the way you like.

Built-In PC Visuals Maximized

The Intel Z68 Express Chipset is the first product to enable performance tuning with access to the built-in visual features of 2nd generation Intel Core processors. These new visual features add a new dimension to your PC experience. Intel® Quick Sync Video, Intel's built-in hardware acceleration in all 2nd generation Intel Core processors, delivers astonishing video transcoding performance, enabling your PC to edit, burn, and share your content faster—without the need for add-in hardware. In addition, Intel® InTru™ 3D delivers 3D movie playback without hesitation or interruption.

Intel Z68 Express Chipset-based platforms provide support for third-party switchable graphics solutions, allowing end users to take advantage of the world-class media features delivered by 2nd generation Intel Core processors along with the gaming capabilities of discrete graphics products for the most demanding games.

The Intel Z68 Express Chipset delivers the latest platform features for the best in socket, LGA 1155, system performance

The latest Intel® Rapid Storage Technology¹ 10.5 enables Intel® Smart Response Technology and full Serial ATA (SATA) interface speed up to 6 Gb/s to support next-generation Solid State Drives (SSDs) or traditional Hard Disk Drives (HDDs). Intel Rapid Storage Technology 10.5 also adds support for greater than 2.2 TB HDDs in a RAID configuration.

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® Smart Response Technology

As part of the Intel Rapid Storage Technology 10.5 feature set, Intel® Smart Response Technology implements storage I/O caching to provide users with faster response times for things like system boot and application startup. Intel Smart Response Technology accelerates the system response experience by moving frequently used blocks of disk data to an SSD, providing dramatically faster access to user data than the hard disk alone can provide. The user sees the full capacity of the hard drive with overall system responsiveness similar to what an SSD-only system provides. To utilize Intel Smart Response Technology, the system requires the Intel

Z68 Express Chipset with a 2nd generation Intel® Core™ i3, i5 or i7 processor, a BIOS that includes the Intel option ROM, the Intel Rapid Storage Technology 10.5 storage class driver, a hard disk drive and a solid state drive (SSD).

Intel® Identity Protection Technology

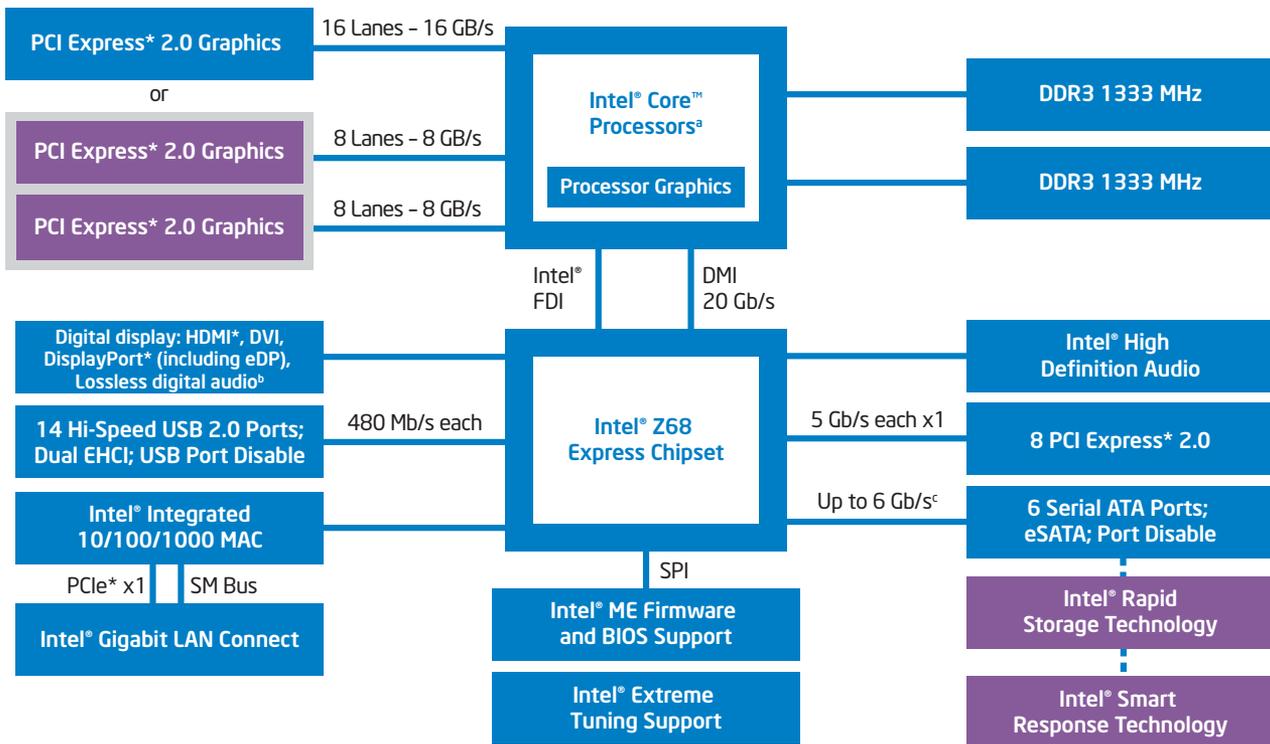
Intel Identity Protection (Intel® IPT) provides a simple way for websites and organizations to validate that a user is logging in from a trusted PC, protecting your account against remote takeover even if your username and password have been phished.

- Identity protection for consumers doing online operations (e-banking, e-gaming, e-finance, etc.)

- Strong authentication for small business applications – remote access VPN, SaaS, etc.
- Existing eco-system of 800+ consumer-facing websites and businesses supporting Intel IPT worldwide already today (e.g., PayPal, eBay, etc.)

Intel IPT is available exclusively on platforms powered by 2nd generation Intel Core processors and Intel® Manageability Engine firmware version 7.1.x.

Intel® Z68 Express Chipset Block Diagram



^a2nd generation Intel® Core™ processor family.

^bAvailable with Intel processor graphics only.

^cAll SATA ports capable of 3 Gb/s. 2 ports capable of 6 Gb/s.

Optional

Intel® Z68 Express Chipset Features at a Glance

Features	Benefits
Support for 2nd Generation Intel® Core™ processors	<ul style="list-style-type: none"> Supports the 2nd generation Intel® Core™ processors with Intel® Turbo Boost Technology⁴ 2.0, Intel® Pentium® processor, and Intel® Celeron® processor. Intel Z68 Express Chipset also enables overclocking features of unlocked 2nd generation Intel Core processors.
Support for HDMI, DisplayPort, eDP and DVI 2	<ul style="list-style-type: none"> 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.
Multi-Monitor support	<ul style="list-style-type: none"> Multi-monitor support with Windows 7.*
Intel® Rapid Storage Technology ¹ 10.5	<ul style="list-style-type: none"> 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 greater than 2.2 TB HDD RAID configurations. Support for external SATA (eSATA) enables the full SATA interface speed outside the chassis, up to 3 Gb/s.
Intel® Smart Response Technology	<ul style="list-style-type: none"> Improves PC performance when adding a Solid-State Drive to automatically cache frequently used applications stored on a large-capacity HDD.
Intel® Rapid Recover Technology	<ul style="list-style-type: none"> 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 ²	<ul style="list-style-type: none"> Integrated audio support enables premium digital surround sound and delivers advanced features such as multiple audio streams and jack re-tasking.
Universal Serial Bus (USB) ³	<ul style="list-style-type: none"> Hi-Speed USB 2.0 provides greater enhancement in performance 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	<ul style="list-style-type: none"> 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) 6Gb/s ³	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> High-speed storage interface supporting up to 4 SATA ports.
eSATA ³	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Support for the Intel® Gigabit Network Connection.
Green Technology	<ul style="list-style-type: none"> Manufactured with lead-free and halogen-free component packages.

For more information, visit the Intel Web site: www.intel.com/products/desktop/chipsets

¹ 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® High Definition 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 <http://www.intel.com>.

³ Performance based on interface speed and data transfer rate specifications for eSATA, USB 2.0 and IEEE 1394.

⁴ 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>

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