



## The Intel® 955X Express Chipset with PCI Express\* graphics and Intel advanced performance architecture

Platforms based on the Intel® 955X Express Chipset and Intel® Pentium® processor Extreme Edition deliver incredible digital entertainment experiences and meet the most demanding business applications of today and tomorrow. The Intel 955X Express Chipset enables Intel's highest performance platforms, with support for the new Intel dual-core processors with HT Technology<sup>1</sup>, adding intelligence to help manage and prioritize four software threads simultaneously on desktop PCs.



In addition to multiple thread support, the Intel 955X Express Chipset also supports key performance-optimized capabilities such as Intel® Memory Pipeline Technology (Intel® MPT), 8 GB memory addressability to enable 64-bit computing, and ECC memory.

### PCI Express\*

PCI Express\* architecture enables increased bi-directional bandwidth to the graphics and I/O interfaces. With theoretical bandwidth up to 4 GB/s per direction, the PCI Express x16 graphics port and PCI Express x1 I/O ports can provide more than three and a half times the bandwidth over previous generation architectures, to support high-performance discrete graphics solutions and advanced I/O devices.

### Memory Architecture

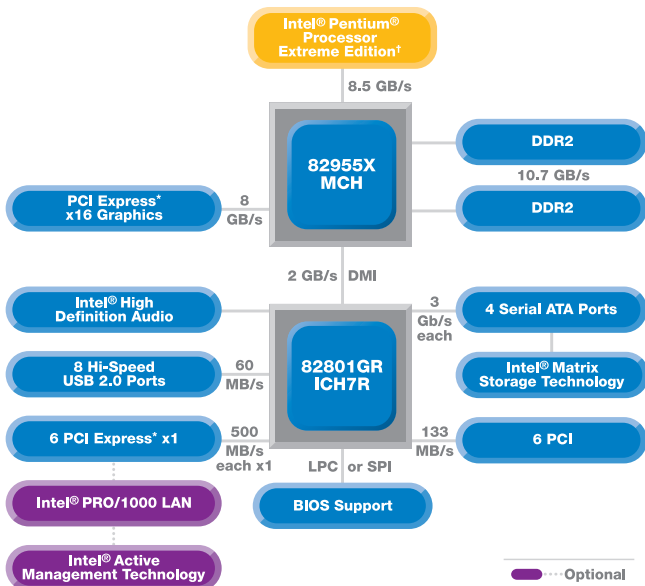
The high-performance architecture in the Intel 955X Express Chipset delivers additional system-level performance via Intel Memory Pipeline Technology. Intel MPT delivers enhanced memory pipelining to enable a higher utilization of each memory channel resulting in higher system performance through accelerated transfers between the processor and system memory.

The new architecture also supports both asynchronous and isochronous data traffic, with dedicated internal pipelines and specialized arbitration. This chipset has improved electricals with optimized ball-out for better latency. These enhancements allow the Intel 955X Express Chipset to take full advantage of the performance of these new high-speed interfaces.

To support faster memory, increased graphics requirements, and I/O bandwidth, the Intel 955X Express Chipset incorporates a new Memory Controller Hub (MCH) backbone architecture. This design includes wider internal data buses that support dual-channel DDR2 memory technology at 667 MHz (up to 10.7 GB/s of peak memory bandwidth) for greater platform performance and flexible memory support. Intel® Flex Memory Technology offers easier upgrades by allowing different memory sizes to be populated and remain in dual-channel mode.

### Intel® I/O Controller Hub (Intel® ICH7/R)

The Intel 955X Express Chipset integrates Intel® High Definition Audio<sup>2</sup> (Intel® HD Audio) to provide premium home theater sound while delivering advanced features such as multiple audio streams and jack re-tasking.



† The Intel® 955X Express Chipset supports Intel® Pentium® processor Extreme Edition, Intel® Pentium® D processor, and all other Intel® Pentium® processors in the LGA775 socket, with scalability for future processor innovations.

The Intel 955X Express Chipset elevates storage performance with next-generation Serial ATA (SATA) and enhancements to Intel® Matrix Storage Technology<sup>3</sup>. This chipset has four integrated SATA ports for transfer rates up to 3 Gb/s (300 MB/s) to SATA hard drives or optical devices. Support for RAID 0, 1, 5 and 10 allows different RAID usages to address specific needs and usages. For example, critical data can be stored on one array designed for high reliability, while performance-intensive applications like games can reside on a separate array designed for maximum performance. The Advanced Host Controller Interface (AHCI) provides native hot plug capability and boosts performance with Native Command Queuing (NCQ) for faster boot times and file transfers.

## Features

## Benefits

<b>1066/800 MHz System Bus</b>	Supports Intel® Pentium® processor Extreme Edition, Intel® Pentium® D processor and all other Intel Pentium processors in the LGA775 socket, with scalability for future processor innovations.
<b>Intel® Memory Pipeline Technology</b>	Enhanced memory pipelining enables a higher utilization of each memory channel, accelerating data transfers between the processor and system memory.
<b>PCI Express* x16 Interface</b>	Delivers greater than 3.5 times the bandwidth over the traditional AGP 8X interface. It supports the latest graphics cards for demanding games and applications.
<b>PCI Express x1 Interface</b>	Offers 3.5 times the bandwidth over traditional PCI architecture. It enables smoother video recording and playback, and professional grade, high-definition content editing capability through the PC.
<b>Intel® High Definition Audio</b>	Integrated audio support delivers premium home theater sound and advanced features such as multiple audio streams and jack re-tasking.
<b>Intel® Matrix Storage Technology</b>	Provides quicker access to digital photo, video and data files with RAID 0, 5, and 10, and data protection against a hard disk drive failure with RAID 1, 5, and 10.
<b>Intel® Active Management Technology<sup>4</sup></b>	Enables remote, down-the-wire management of out-of-band networked systems regardless of system state. Helps improve IT efficiency, asset management and system security and availability.
<b>Serial ATA (SATA) 3 Gb/s</b>	High-speed storage interface supports faster transfer rate for improved data access.
<b>Dual-Channel DDR2 Memory Support</b>	Up to 10.7 GB/s of bandwidth and 8 GB memory addressability delivers faster system responsiveness and support of 64-bit computing.
<b>Intel® Flex Memory Technology</b>	Facilitates easier upgrades by allowing different memory sizes to be populated and remain in dual-channel mode.

**For more information, visit the Intel Web site:  
[www.intel.com/products/desktop/chipsets](http://www.intel.com/products/desktop/chipsets)**

<sup>1</sup> Look for systems with the Intel® Pentium® 4 processor with HT Technology and also including an Intel® 955, 945, 925, 915 or 910 Express Chipset (see the product spec sheet or ask your salesperson). Performance and functionality will vary depending on (i) the specific hardware and software you use and (ii) the feature enabling/system configuration by your system vendor. See [www.intel.com/product/ht/hyperthreading\\_more.htm](http://www.intel.com/product/ht/hyperthreading_more.htm) for information on HT Technology or consult your system vendor for more information.

<sup>2</sup> The Dolby® PC Entertainment Experience Initiative is only available on systems based on the Intel® 955, 945, 925, 915 or 910 Express Chipset. Only boards with either Dolby PC Sound Room Ready or Dolby Home Theater Ready or Dolby Master Studio Ready logo and, systems with either the Dolby Sound Room, Dolby Home Theater or Dolby Master Studio logos are capable of supporting the Dolby PC Entertainment Initiative.

<sup>3</sup> Intel® Matrix Storage Technology requires a motherboard with the Intel® 82801FR (ICH6R) or Intel 82801GR (ICH7R) I/O Controller Hub System. The system must also have the RAID controller in the BIOS enabled and the Intel Matrix Storage Technology software driver installed. Please consult your system vendor for more information.

<sup>4</sup> Intel® Active Management Technology requires a system with an Intel® 955X, 945G, or 945P Express Chipset, Intel® PRO/1000 PM network connection and appropriate third party software. The system must be plugged into a power source and connected to a LAN.

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