Product Brief

Mobile Intel® 945GSE Express Chipset

Embedded Computing

Mobile Intel® 945GSE Express Chipset for Embedded Computing

Product Overview

The Mobile Intel® 945GSE Express chipset provides power-efficient graphics and rich I/O capabilities for cost-effective embedded solutions. It features an integrated 32-bit 3D graphics engine based on Intel® Graphics Media Accelerator 950 (Intel® GMA 950) architecture, a 533 MHz front-side bus (FSB), single-channel 400/533 MHz DDR2 system memory (SODIMM and/or memory down), and Intel® High Definition Audio[1] interface.

The chipset consists of the Intel® 82945GSE Graphics Memory Controller Hub (GMCH) and Intel® I/O Controller Hub 7-M (ICH7-M). It delivers outstanding system performance and flexibility through high-bandwidth interfaces such as PCI Express,* PCI, Serial ATA, and Hi-Speed USB 2.0 connectivity.

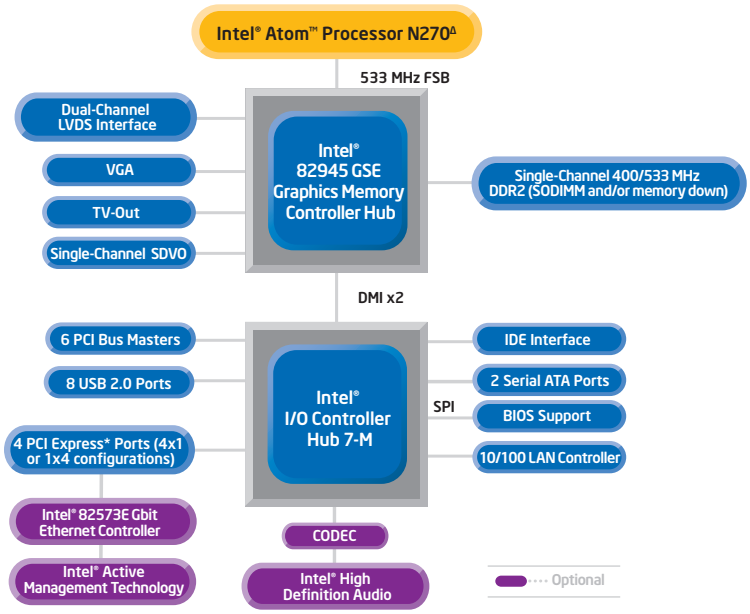
Designed for and validated with the Intel® Atom™ processor N270[Δ] on 45nm process technology, this platform offers an excellent solution for embedded market segments such as digital signage, interactive clients (kiosks, point-of-sale terminals), thin clients, digital security, residential gateways, print imaging, and commercial and industrial control. It is part of Intel's comprehensive validation process, enabling fast deployment of next-generation platforms to help developers maximize competitive advantage while minimizing development risks.

Product Highlights

- 533 MHz FSB delivers high-bandwidth connection between the processor and chipset
- Single-channel non-ECC 400/533 MHz DDR2 provides up to 2 GB (using a combination of SODIMM and memory down) of high-speed system memory for greater platform performance
- Integrated 3D graphics engine, based on Intel® GMA 950 architecture, delivers sophisticated graphics for large display applications
- Dual independent display support, at graphics core speeds up to 166 MHz, provides a wealth of options for high-resolution displays
- Graphics interfaces such as single-channel SDVO, VGA, dual-channel LVDS and analog TV-out, support multiple graphics display options
- Direct Media Interface (DMI) chip interconnect can be implemented at x2 width and provides up to 500 MB/s in each direction in full duplex
- Four UHCI host controllers and one EHCI host controller enable support for up to eight USB 2.0 ports, providing high-performance peripherals with 480 Mb/s of bandwidth per port
- Up to four PCI Express ports, configurable as one single x4 or four single x1 ports
- Up to six PCI bus masters provide support for legacy devices
- Intel High Definition Audio interface for full surround sound
- LAN Connect Interface (LCI) enables flexible network solutions such as 10/100 Mb/s Ethernet and 10/100 Mb/s Ethernet with LAN manageability
- Integrated Serial ATA host controller supports two ports and data transfers up to 150 MB/s
- Intel® Active Management Technology,[2] when used with the Intel® 82573E Gigabit Ethernet Controller, supports high-quality asset management capabilities such as remote management of unmanned sites
- Supported by the Intel® Embedded Graphics Drivers and video BIOS developed specifically for embedded products and applications (developer.intel.com/design/intarch/SWsup/graphics_drivers.htm)

Product Highlights (continued)

- Advanced packaging technology and industry-leading electrical design innovations deliver long-term system reliability over a broad spectrum of operating conditions
- Embedded lifecycle support enables extended product availability for embedded and communications customers, protecting system investment
- Along with a strong ecosystem of hardware and software vendors, including members of the Intel® Embedded and Communications Alliance (intel.com/go/eca), Intel helps developers cost-effectively meet design challenges and speed time-to-market



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Product	Product Code	Package	Features
Intel® 82945GSE Graphics Memory Controller Hub	QG82945GSE	998 µFC-BGA	533 MHz front-side bus; Up to 2 GB of 400/533 MHz DDR2 system memory (SODIMM and/or memory down); Intel® GMA 950
Intel® I/O Controller Hub 7-M (ICH7-M)	NH82801GBM	652 µ-BGA	Direct connection to GMCH via Direct Media Interface; Four PCI Express root ports; Two-port Serial ATA controller; Up to eight USB 2.0 ports; Intel® High Definition Audio[1] interface; PCI; IDE; LCI

Intel in Embedded and Communications: intel.com/go/embedded

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

[1] 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/.

[2] Intel® Active Management Technology 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 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 http://www.intel.com/technology/iamt.

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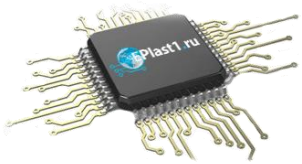
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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