Intel® 945G Express Chipset Development Kit

Product Overview

The Intel® 945G Express Chipset Development Kit delivers outstanding next-generation graphics performance with innovative features for interactive client and embedded computing solutions. It integrates Intel® Graphics Media Accelerator 950 (Intel® GMA 950) and PCI Express* x16 external graphics, and supports Intel® Active Management Technology[1] (Intel® AMT), ADD2, and Media Expansion Card capabilities for this LGA-775 socket platform.

The Intel 945G Express chipset platform provides scalable performance and an ideal price/performance solution for embedded computing applications. The Intel® Pentium® 4 processor with Hyper-Threading[†] (HT Technology), included in the development kit, enhances the microarchitecture with Intel® Extended Memory 64 Technology[§] (Intel® EM64T) to support 64-bit computing needs. It meets the current and future demands of high-performance, embedded computing while remaining software-compatible with previous members of the Intel® microprocessor family.

With the Intel 945G Express chipset, this development kit provides a high-performance dual-channel memory interface that can deliver significant graphics performance over previous Intel platforms. With support for dual independent display, enhanced modes for widescreen flat panels, and optimized 3D, embedded platforms based on the Intel 945G Express Chipset Development Kit can deliver an intense, realistic visual experience without requiring a separate graphics card.

Product Highlights

- Evaluation board supports:
  - Intel Pentium 4 processor with HT Technology or Intel® Celeron® D processor — both with Intel EM64T in the LGA-775 socket
  - Intel® 82945G Graphics Memory Controller Hub (GMCH) for a 533/800 MHz front-side bus

  - Dual-channel memory interface supporting up to 4 GB of DDR2-400/533/667
  - Intel GMA 950 with VGA out and sDVO
  - Direct Media Interface for high-speed chip-to-chip interconnect
  - Intel® ICH7 I/O Controller Hub
  - Intel® PRO/1000 LAN 82573E Gigabit Ethernet Controller
- Super I/O provides legacy floppy, serial and parallel ports, PS/2 mouse and keyboard support
- Intel AMT enables remote, down-the-wire management of out-of-band networked systems, regardless of system state
- User-accessible on-board connectors:
  - PS/2 mouse and keyboard
  - Parallel port
  - Serial port header
  - Eight (8) Hi-Speed USB 2.0 ports, including two (2) via front-panel header
  - One (1) Parallel ATA IDE interface with UDMA 33, ATA-66/100
  - Four (4) SATA II connectors
  - One (1) floppy connector
  - Two (2) conventional PCI* bus connectors
  - One (1) PCI Express x1 slot
  - One (1) PCI Express x16 slot
  - Four (4) DDR2 DIMM slots
  - One (1) Gigabit (10/100/1000 Mbps) Ethernet connector
  - VGA connector
  - Six (6) audio jacks for Intel® High Definition Audio support
  - Two (2) S/PDIF optical digital audio connectors
- Along with a strong ecosystem of hardware and software vendors, including members of the Intel® Communications Alliance (intel.com/go/ica), Intel helps cost-effectively meet development challenges and speed time-to-market

intel.com/design/intarch

Included in the kit:

- Development board
- Intel Pentium 4 processor 551[Δ] with HT Technology and Intel EM64T (LGA-775), 3.4 GHz with 800 MHz FSB
- CPU thermal solution
- Two (2) 256 MB, DDR2-533 DIMM
- User's manual
- CD including drivers developed by Intel, enabling Windows XP,* Windows XP Embedded, Windows 2000,* and Red Hat Enterprise Linux* v3 WS

Product Benefits

The Intel 945G Express Chipset Development Kit is an evaluation kit, complete with hardware and supporting documentation, designed to evaluate the performance of embedded computing applications. This and other development kits from Intel provide a fully working product with a range of performance options that can be modified or used immediately for product development.

Intel development kits provide a platform with a validated processor/chipset combination, allowing software vendors to test BIOS and operating system software. With the Intel 945G Express Development Kit, developers can design on a single board to provide a range of performance options. This kit can help reduce design and validation efforts, lower total cost-of-ownership by reducing inventory and manufacturing costs, and facilitate faster time-to-market.

Software Overview

In order to provide customers with a complete development environment in the development kit, Intel works to enable the platform to integrate with customer applications and operating systems. Any software/firmware provided in the kit is subject to change without notice. For the most recent updates and more information about the Intel® 945G Express Chipset Development Kit, go to developer.intel.com/design/intarch/devkits/index.htm.

Development Kit Ordering Information

IPDP4945GDEVKT

[1] Intel® Active Management Technology requires a system with an Intel® 945G 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.

[†] Hyper-Threading Technology requires a computer system with an Intel® Pentium® 4 processor supporting Hyper-Threading Technology and an HT Technology-enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software used. See http://www.intel.com/info/hyperthreading for more information, including details on which processors support HT Technology.

[§] Intel® EM64T requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. Performance will vary depending on your hardware and software configurations. See www.intel.com/info/em64t for more information including details on which processors support Intel EM64T or consult with your system vendor for more information.

[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.

Intel Access

Embedded Intel® Architecture Home Page:	intel.com/design/intarch
Developer's Site:	developer.intel.com
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General Information Hotline:	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST
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