

Product Brief

Development Kit

Embedded Computing



Intel® Core™2 Duo Processor E6400 and Intel® Q35 Express Chipset Development Kit

Product Overview

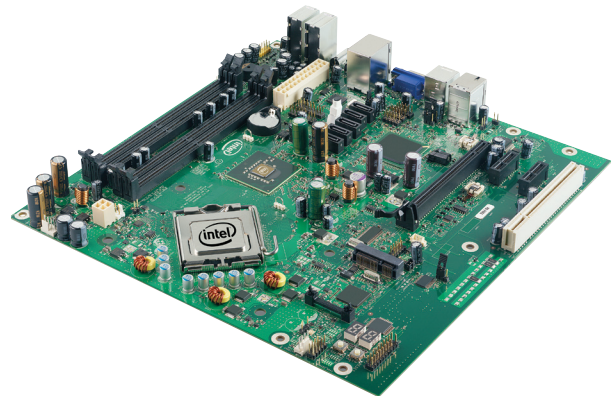
Innovative features of the Intel® Core™2 Duo processor E6400^Δ and Intel® Q35 Express chipset development kit help embedded equipment manufacturers deploy exceptionally responsive, high-performance, low-power systems for interactive clients (i.e., point-of-sale terminals and interactive PCs), industrial control and automation, gaming, print imaging and network security applications. The development kit board integrates Intel® Graphics Media Accelerator 3100 (Intel® GMA 3100) and PCI Express* x16 external graphics, and supports Intel® Active Management Technology¹ (Intel® AMT) 3.0 for advanced remote manageability.

The Intel® Q35 Express chipset provides a high-performance, dual-channel memory interface, while Intel® Virtualization Technology² for Directed I/O (Intel® VT-d) improves I/O virtualization, system reliability and security. With support for dual independent display, enhanced modes for widescreen flat panels, and optimized 3D, embedded platforms based on the Intel Q35 Express chipset development kit can deliver an intense, realistic visual experience without requiring a separate graphics card.

This and other development kits from Intel provide a working system with a range of performance options that can be modified or used immediately for product development. A validated board platform lets software vendors test BIOS and operating system software.

Product Highlights

- Supports the Intel® Core™2 Duo processor E6400 at 2.13 GHz³ with 1066 MHz front-side bus (FSB) and Intel® 64 architecture⁴ (Intel® 64) in the LGA-775 socket
- Features the Intel Q35 Express chipset consisting of the Intel® 82Q35 Graphics Memory Controller Hub (GMCH) and Intel® I/O Controller Hub 9 DO (ICH9 DO)



- Supports 800, 1066 or 1333 MHz FSB
- Dual-channel memory interface provides support for up to 8 GB of DDR2-667 or 800 MHz

Board Peripherals

- Intel GMA 3100 with VGA out and sDVO support
- Direct Media Interface for high-speed, chip-to-chip interconnect
- Intel® 82566DM Gigabit Ethernet Controller
- Dual independent display for high-resolution
- USB 2.0 host controller with six ports
- SATA host controller with six ports supporting up to 3 Gb/s
- Two PCI Express x1 slots
- One PCI Express x16 graphics slot
- Six audio jacks for Intel® High Definition Audio⁵ support
- Two S/PDIF optical digital audio connectors
- One eSATA port
- One Firewire port

Included in the Kit

- uBTX form factor development board
- Intel Core 2 Duo processor E6400 at 2.13 GHz³ with 1066 MHz FSB
- uBTX thermal heatsink with fan
- Two (2) 1 GB DDR2-800 DIMMs
- User manual
- Software driver CD

Software Overview

The following independent software vendors support the Intel Core 2 Duo processor and Intel Q35 Express chipset development kit. These include:

- Operating system vendors⁶:
 - Microsoft Windows*
 - Red Hat Linux*
 - SuSE Linux*
 - WindRiver VxWorks*

- BIOS vendors⁶:
 - American Megatrends AMIBIOS*
 - General Software Embedded BIOS*
 - Phoenix Technologies, Ltd.
 - VirtualLogix VLX*
 - Insyde Technology

The chipset is 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).

In order to provide customers with a complete development environment, Intel works to enable the development kit 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 Core 2 Duo processor E6400 and Intel Q35 Express chipset development kit, go to intel.com/design/intarch/devkits/index.htm.

Order Information

ECPDC2DQ35BLDVK

⁴Intel 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.

¹Intel® 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. For more information, see www.intel.com/technology/platform-technology/intel-amt/.

²Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain platform software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

³The following processors are also supported. Please contact your Intel sales representative for more information.

- Intel® Core™2 Duo Processor E8400⁴ at 3.0 GHz, 1333 MHz FSB
- Intel® Core™2 Duo Processor E4300⁴ at 1.80 GHz, 800 MHz FSB
- Intel® Pentium® Dual-Core Processor E2160⁴ at 1.80 GHz, 800 MHz FSB
- Intel® Celeron® Processor 440⁴ at 2.0 GHz, 800 MHz FSB

⁴64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Consult with your system vendor for more information.

⁵Intel® 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/>.

⁶For a full list of supported software vendors, please visit http://www.intel.com/products/chipsets/Q35_Q33/index.htm.

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