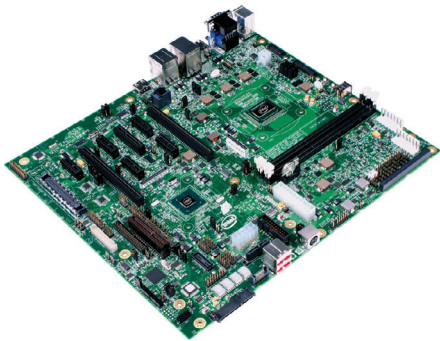(intel)

2nd Generation Intel® Core™ i7 Processor Series and Intel® Celeron® Processor with Intel® QM67 Express Chipset Development Kits

Product Overview

With advanced features for remote management capabilities and reliability, these development kits meet the requirements of a broad range of embedded applications, including retail and transaction solutions, signage, gaming platforms, industrial automation and medical equipment. Processors are based on the 2nd generation Intel® Core™ microarchitecture on 32nm process technology, featuring new levels of performance for embedded, compute-intensive applications. Paired with the Intel® QM67 Express chipset, these platforms provide excellent media, graphics and I/O flexibility, stunning and seamless visual experiences, and error correcting code (ECC) memory.

The next-generation graphics engine, Intel® HD Graphics 3000[1], doubles graphics performance compared with previous Intel® Core™ processor-based platforms. Full integration of the CPU, media/graphics capabilities and memory controller reduces overall platform footprint and provides faster performance as well as board real estate savings. Additionally, developers can create one board design and scale a product line between quad-, dual- and single-core processors using the same socket. Thermal design power (TDP) options include 17W, 25W and 45W.

This platform is part of Intel's comprehensive validation process, enabling rapid deployment of next-generation platforms to help developers maximize competitive advantage and minimize development risks. 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, and allow software vendors to test BIOS and operating system software.

Product Highlights

- Four different processor options are available:

  - Intel® Core™ i7-2715QE^Δ processor: quad-core at 2.1 GHz base frequency and 45 W TDP

  - Intel® Core™ i7-2655LE^Δ processor: dual-core at 2.2 GHz base frequency and 25 W TDP

  - Intel® Core™ i7-2610EU^Δ processor: dual-core at 1.5 GHz base frequency and 17 W TDP

  - Intel® Celeron® processor 827E^Δ: single-core at 1.4 GHz base frequency and 17 W TDP[1]

- Intel HD Graphics 3000 supports high-end enhanced media/graphics capabilities and performance while reducing overall platform power requirements.

- Intel® Advanced Vector Extensions accelerates floating-point compute performance for signal and image processing applications.

- Intel® Quick Sync Video[2] improves media/video performance and frees up the CPU for other tasks.

- ECC provides a high level of data integrity, reliability, and system uptime.

- Intel® Turbo Boost Technology[3] 2.0 runs applications faster by using available thermal headroom to run at a higher frequency.

- Intel® vPro™ technology[4] delivers unprecedented hardware support for vital security and management functions utilizing Intel® Virtualization Technology,[5] Intel® Active Management Technology,[6] and Intel® Trusted Execution Technology.[7]

Board and Peripheral Features

- Two (2) slots for DDR3 memory support for dual ranks, 1066 MHz/1333 MHz
- One (1) PCI Express* x16 bus add-in card slot, four (4) PCI Express x1 slots, and one (1) PCI Express x4 slot supporting Gen2 5 GT/s speeds
- On-board PHY (Intel® 82579LM Gigabit Ethernet PHY) and LAN connector
- PS/2 keyboard and mouse ports
- CRT, eDP, LVDS, HDMI,[8] DP and display mini-PCIe connectors on-board

- Six (6) on-board USB connectors
- Six (6) SATA ports
- One (1) serial port
- One (1) TPM header
- Two (2) 8 MB SPI flash devices
- XDP connectors for processor and PCH debug support

Included in the Kit

- Development board
- Memory: 1 GB, DDR3, UDIMM, 1333 MT/s, 240P, ECC, MT

- User's guide and software CD with reference design materials, drivers and utilities
- SPI flash, mounted and flashed with reference BIOS
- 16 Mbit SPI flash with BIOS
- ATX chassis and power supply
- SATA 80 GB hard drive
- Drives: DVD-ROM drive, USB floppy drive, and SATA Gen2 HDD (preloaded with Windows* Embedded Standard 7 64-bit operating system), pre-installed jumpers and associated cables

Software Overview

The following independent operating systems and BIOS vendors provide support for these platforms:

OPERATING SYSTEM	CONTACT	BIOS
Microsoft Windows* 7	Intel provides drivers[9]	American Megatrends
Microsoft Windows* XP SP3	Intel provides drivers[9]	Insyde Software
Microsoft Windows Embedded Standard 7	Intel provides drivers[9]	Phoenix Technologies
Microsoft Windows Embedded Standard 2009	Intel provides drivers[9]	Byosoft
Microsoft Windows Embedded POS Ready (WEPOS)	Intel provides drivers[9]	
Red Hat Enterprise Linux* 6.1	Red Hat	
SUSE SLE* 11 SP1	Novell	
Wind River Linux* 3.0	Wind River	
Wind River VxWorks* 6.8	Wind River	

Intel strives to provide customers with a complete development environment supporting customer applications and operating systems. Any software provided in these development kits is subject to change without notice. Please check for software updates at **intel.com/design/intarch/devkits/index.htm**.

Order Information

PRODUCT NAME[Δ]	PRODUCT CODE
Intel® Core™ i7-2715QE processor with Intel® QM67 Express chipset development kit	EBSBI7SVCPCCDK
Intel® Core™ i7-2655LE processor with Intel® QM67 Express chipset development kit	EBSBI7LVCPCCDK
Intel® Core™ i7-2610UE processor with Intel® QM67 Express chipset development kit	EBSBI7UVCPCCDK
Intel® Celeron® processor 827E with Intel® QM67 Express chipset development kit	EBSBCLCPCCDK

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