



Features

- Intel® Core™ i7/i5/i3 Processor
- Intel® QM57 chipset
- Up to 8 GB Dual Channel DDR3 SDRAM at 1066 MHz (optional ECC)
- Six PCIe x1, one PCIe x16 for graphics (or general purpose x8/4/1)
- 18/24-bit LVDS and Embedded DisplayPort
- SATA 3 Gb/s IDE (PATA), Gigabit Ethernet, USB 2.0

Specifications

Core System

CPU
 1st Generation Intel® Core™ i7/i5/i3, 35nm process, BGA type
 Intel® Core™ i7-610E Processor (4M Cache, 2.53 GHz) 35 W
 Intel® Core™ i5-520E Processor (3M Cache, 2.40 GHz) 35 W
 Intel® Core™ i7-620LE Processor (4M Cache, 2.00 GHz) 25 W
 Intel® Core™ i7-620UE Processor (4M Cache, 1.06 GHz) 18 W
 Intel® Core™ i3-330E Processor (3M Cache, 2.13 GHz) 35W
 Intel® Celeron® Processor P4505 (2M Cache, 1.86 GHz) 35 W
 Intel® Celeron® Processor U3405 (2M Cache, 1.06GHz) 18W

Memory
 Dual channel 800/1066 MHz DDR3 memory up to 8 GB in dual stacked SODIMM socket; ECC memory for CBE series only

Chipset Intel® Mobile QM57
L2 Cache 2 MB (Celeron® M), 4/3 MB (Intel® Core™ i7 / i5)
BIOS AMI EFI with CMOS backup in 16 Mbit SPI flash
Hardware Monitor Supply voltages and CPU temperature
Watchdog Timer Programmable timer ranges to generate RESET
Expansion Busses PCI Express x16 bus for discrete graphics solution or general purpose PCI Express (2 x8 or 2 x4 or 2 x1) or Embedded Display Port (eDP)
 7 PCI Express x1: Lanes 0/1/2/3/4/5 are free, lane 6 is occupied by GbE; can be optionally configured as 1 x4 (on 0/1/2/3) and 2 x1 (4/5)
 32-bit PCI: PCI Rev. 2.3 at 33MHz, supporting 4 bus masters
 LPC bus, SMBus (system) , I²C (user)

Video

Integrated in Processor Gen 5.75 with 12 execution units
Integrated Video Feature Support DirectX 10 and OpenGL 2.1
 Intel® Dynamic Video Memory Technology (Intel® DVM T 5.0)
 Video capture via x1 concurrent PCI Express port
 PAVP (Protected Audio-Video Path) support for Protected Intel HD Audio Playback
 High performance MPEG-2 decoding
 WMV9 (VC-1) and H.264 (AVC) support
 Hardware acceleration for MPEG2 VLD/iDCT
 Microsoft DirectX 10 support
 OpenGL 2.1 support
 Blu-ray support @ 40 Mb/s
 Hardware motion compensation
 Intermediate Z in classic rendering
VGA Analog VGA support by 300 MHz DAC
 Analog monitor support up to QXGA (2048 X 1536)
LVDS Single / Dual channel 18- or 24-bit panels

Audio

Chipset Integrated on Intel® PCH QM57
Audio Codec On Express-BASE carrier (ALC886)

Ethernet

Chipset Integrated on QM57 with 82577LM PHY
Interface 10/100/1000 Mbps Ethernet

Multi I/O and Storage

Chipset Integrated on Intel® PCH QM57
USB Supports up to eight ports USB v. 2.0
SATA Four ports SATA 3 Gb/s with optional support for RAID 0,1,5,10
PATA SATA to PATA bridge on SATA channel 1, Master only

Super I/O

Connected to LPC bus on carrier if needed

TPM (optional)

Chipset Infineon SLB9635TT1.2
Type TPM 1.2

Power

Input Power AT mode (12 V +/- 5%) and ATX mode (12 V and 5 Vsb +/- 5%)
Power States Supports S0, S1, S3, S4, S5
Power Consumption 21 W with Core™ i7-620UE at 1.2 GHz and 2 GB memory typical
Smart Battery Support Yes

Mechanical and Environmental

Operating Temperature 0°C to 60°C
Storage Temperature -20°C to 80°C
Humidity 90% at 60°C
Shock 15G peak-to-peak, 11ms duration, non-operation
Vibration Non-operating: 1.88 Grms, 5-500 Hz, each axis
 Operating: 0.5 Grms, 5-500 Hz, each axis
Compatibility COM Express® Type 2, Basic form factor 125 mm x 95 mm
Certification CE, FCC

Operating Systems

Standard Support Windows XP(e) / Vista / Windows 7
 Linux
Extended Support (BSP) Embedded XP support package
 Linux 2.6.x BSP
 VxWorks 6.x BSP
 AIDI Library for Windows and Linux

