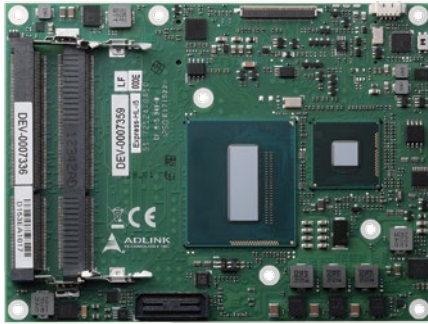


NEW



Features

- 4th Generation Intel® Core™ with Intel® QM87 Express Chipset and Intel® Celeron® Processors with Intel® HM86 Express Chipset
- Up to 16GB Dual Channel DDR3L at 1600MHz
- Three DDI ports support 3 independent displays
- Seven PCIe x1, one PCIe x16
- GbE, four SATA 6 Gb/s, four USB 3.0 and four USB 2.0
- Supports Smart Embedded Management Agent (SEMA) functions
- Extreme Rugged™ operating temperature: -40°C to +85°C (optional)

Specifications

Core System

| | |
|-----------------------|---|
| CPU | 4th Generation Intel® Core™ and Celeron® Processors (Mobile) - 22nm (also known as "Haswell Platform") i7-4860EQ 1.8 GHz (3.2 GHz Turbo), 47W (4C/GT3) i7-4700EQ 2.4 GHz (3.4 GHz Turbo), 47W (4C/GT2) i5-4400E 2.7 GHz (3.3 GHz Turbo), 37W (2C/GT2) i5-4402E 1.6 GHz (2.7 GHz Turbo), 25W (2C/GT2) i3-4100E 2.4 GHz (no Turbo) 3MB, 37W (2C/GT2) i3-4102E 1.6 GHz (no Turbo) 3MB, 25W (2C/GT2) Celeron® 2000E 2.2 GHz (no Turbo) 35W (2C/GT1) Celeron® 2002E 1.5 GHz (no Turbo) 25W (2C/GT1) Supports: Intel® VT, Intel® TXT, Intel® SSE4.2, Intel® HT Technology, Intel® 64 Architecture, Execute Disable Bit, Intel® Turbo Boost Technology 2.0, Intel® AVX2, Intel® AES-NI, PCLMULQDQ Instruction, Intel® Secure Key and Intel® TSX. Note: Availability of the features may vary between processor SKUs. |
| Memory | Dual channel non-ECC 1600/1333 MHz DDR3L memory up to 16GB in dual SODIMM socket |
| Embedded BIOS | AMI EFI with CMOS backup in 8MB SPI BIOS with Intel® AMT 9.0 support |
| L3 Cache | 6MB for i7-4700EQ, 3MB for i5-4400E, i5-4402E, i3-4100E and i3-4102E |
| Expansion Busses | PCI Express x16 (Gen3) or PCI Express (2 x8 or 1 x8 with 2 x4) 6 PCI Express x1 (AB): Lanes 0/1/2/3/4/5 1 PCI Express x1 (CD): Lane 6 LPC bus, SMBus (system), I ² C (user) |
| SEMA Board Controller | Supports: Voltage/Current monitoring, Power sequence debug support, AT/ATX mode control, Logistics and Forensic information, Flat Panel Control, General Purpose I ² C, Failsafe BIOS (dual BIOS), Watchdog Timer and Fan Control |
| Debug Headers | 40-pin multipurpose flat cable connector Use in combination with DB-40 debug module Providing BIOS POST code LED, BMC access, SPI BIOS flashing, Power Testpoints, Debug LEDs 60-pin XDP header for ICE debug of CPU/Chipset |

Video

| | |
|---------------------------|--|
| GPU Feature Support | Generation 7.5 graphics core architecture, supporting 3 independent and simultaneous display combinations of DisplayPort / HDMI / LVDS monitors Encode/transcode HD content Playback of high definition content including Blu-ray Disc |
| Digital Display Interface | DDI1 supporting DisplayPort / HDMI / DVI DDI2 supporting DisplayPort / HDMI / DVI DDI3 supporting DisplayPort / HDMI / DVI |
| VGA | Analog VGA support with 300 MHz DAC |
| LVDS | Analog monitor support up to QXGA (2048 x 1536) Single/dual channel 18/24-bit LVDS from eDP (two lanes) |

Audio

| | |
|-------------|--|
| Chipset | Intel® HD Audio integrated in SOC |
| Audio Codec | Located on carrier Express-BASE6 (ALC886 standard supported) |

Ethernet

| | |
|----------------|--|
| Intel® MAC/PHY | I217LM (Enterprise SKU) with AMT 9.0 support |
| Interface | 10/100/1000 GbE connection |

I/O Interfaces

| | |
|--------|--|
| USB | 4x USB 3.0 (USB 0,1,2,3) 4x USB 2.0 (USB 4,5,6,7) |
| SATA | Four ports SATA 6Gb/s (SATA0, SATA1, SATA2, SATA3) |
| Serial | 2 UART ports COM1/2 with console redirection |
| GPIO | 4 GPO and 4 GPI with interrupt |

Super I/O

Supported on carrier if needed (standard support for W83627DHG-P)

TPM

| | |
|---------|------------------|
| Chipset | Atmel AT97SC3204 |
| Type | TPM 1.2 |

Power

| | |
|----------------|--|
| Standard Input | ATX = 12V±5% / 5Vsb ±5% or AT = 12V ±5% |
| Wide Input | ATX = 8.5~20 V / 5Vsb ±5% or AT = 8.5~20V |
| Management | ACPI 4.0 compliant, Smart Battery support |
| Power States | C1-C6, S0, S1, S4, S3, S5, S5 ECO mode (Wake on USB S3/S4, WOL S3/S4/S5) |
| ECO mode | Supports deep S5 mode for power saving |

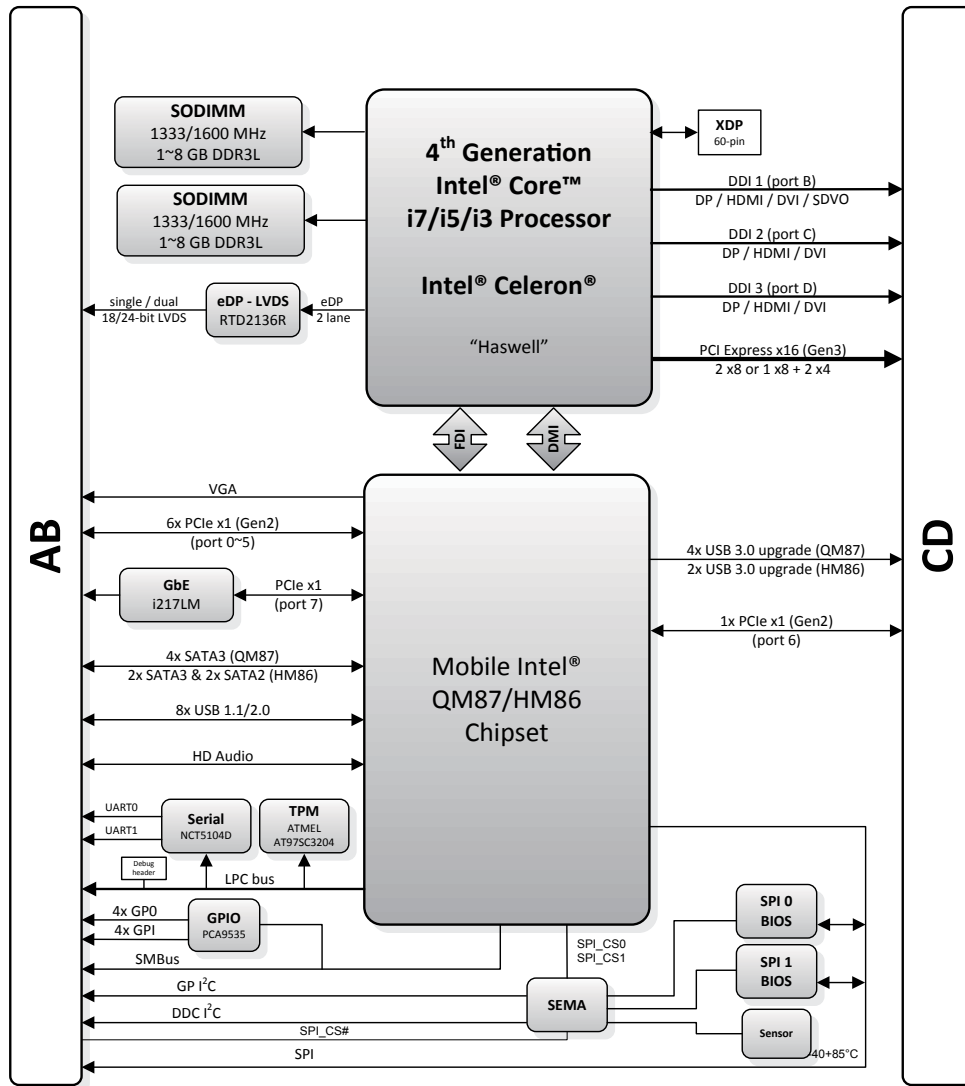
Mechanical and Environmental

| | |
|-----------------------|--|
| Form Factor | PICMG COM.0: Rev 2.1 Type 6 |
| Dimension | Basic size: 125 mm x 95 mm |
| Operating Temperature | Standard: 0°C to +60°C Extreme Rugged™: -40°C to +85°C (optional) |
| Humidity | 5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating) |
| Shock and Vibration | IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D |
| HALT tested | Thermal Stress, Vibration Stress, Thermal Shock and Combined Test |

Operating Systems

| | |
|------------------------|--|
| Standard Support | Windows 7/8 32/64-bit, Linux 32/64-bit |
| Extended Support (BSP) | WES7/8, Linux, VxWorks, QNX |

Functional Diagram



Ordering Information

Modules

| Model Number | Description/Configuration |
|----------------------|--|
| Express-HL-i7-4860EQ | COM Express® Basic Size Type 6 Module with Intel® Core™ i7-4860EQ at 1.8 GHz with GT3 level graphics |
| Express-HL-i7-4700EQ | COM Express® Basic Size Type 6 Module with Intel® Core™ i7-4700EQ at 2.4/1.7 GHz with GT2 level graphics |
| Express-HL-i5-4400E | COM Express® Basic Size Type 6 Module with Intel® Core™ i5-4400E at 2.7 GHz with GT2 level graphics |
| Express-HL-i3-4100E | COM Express® Basic Size Type 6 Module with Intel® Core™ i3-4100E at 2.4 GHz with GT2 level graphics |
| Express-HL-i5-4402E | COM Express® Basic Size Type 6 Module with Intel® Core™ i5-4402E at 1.6 GHz with GT2 level graphics |
| Express-HL-i3-4102E | COM Express® Basic Size Type 6 Module with Intel® Core™ i3-4102E at 1.6 GHz with GT2 level graphics |
| Express-HL-2000E | COM Express® Basic Size Type 6 Module with Celeron® 2000E 2.2 GHz (no Turbo) 35W (2C/GT1) |
| Express-HL-2002E | COM Express® Basic Size Type 6 Module with Celeron® 2002E 1.5 GHz (no Turbo) 25W (2C/GT1) |

Accessories

| Model Number | Description/Configuration |
|--------------------------|---|
| Heat Spreaders | |
| HTS-HL-B | Heatspreader for Express-HL with threaded standoffs for bottom mounting |
| HTS-HL-BT | Heatspreader for Express-HL with through hole standoffs for top mounting |
| Passive Heatsinks | |
| THS-HL-BL | Low profile heatsink for Express-HL with threaded standoffs for bottom mounting |
| THS-HL-BT | Low profile heatsink for Express-HL with through hole standoffs for top mounting |
| THSH-HL-BL | High profile heatsink for Express-HL with threaded standoffs for bottom mounting |
| Active Heatsink | |
| THSF-HL-BL | High profile heatsink with Fan for Express-HL with threaded standoffs for bottom mounting |



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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