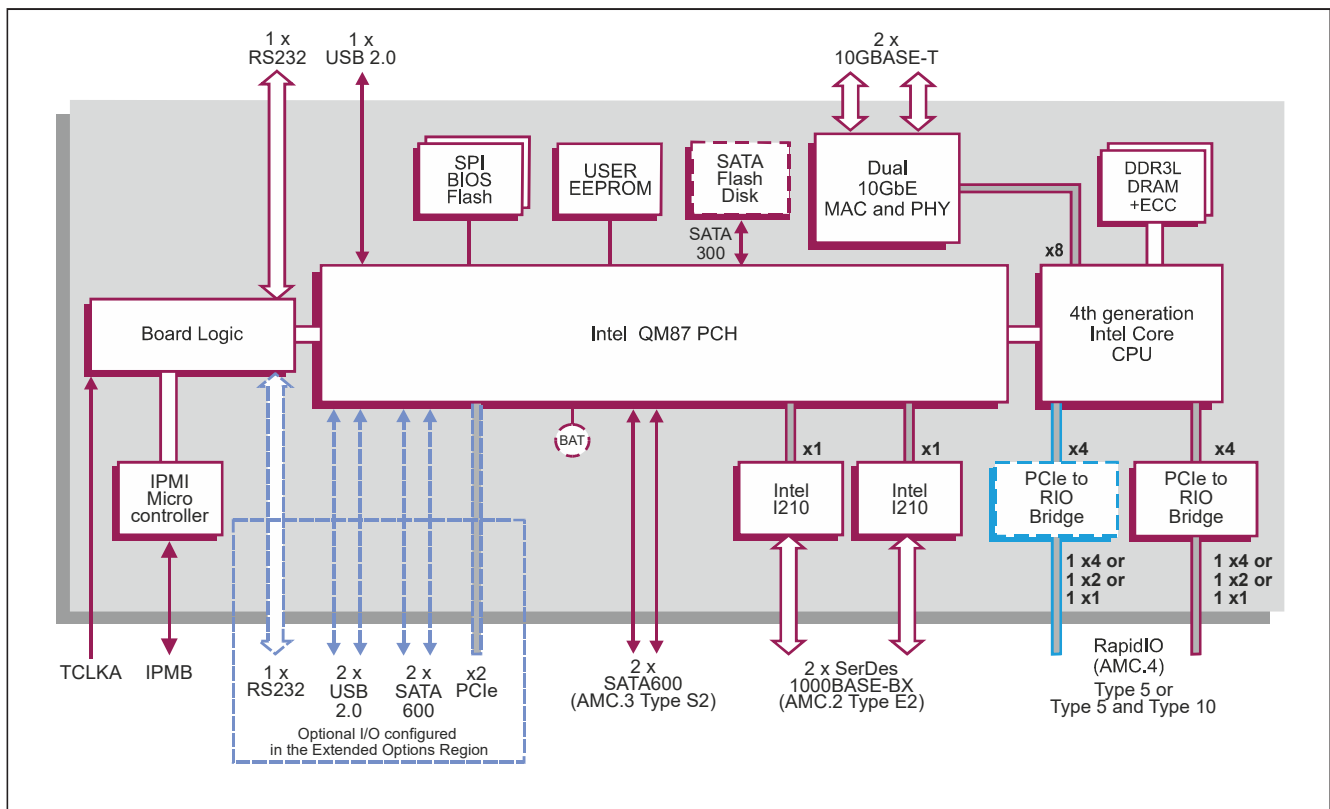
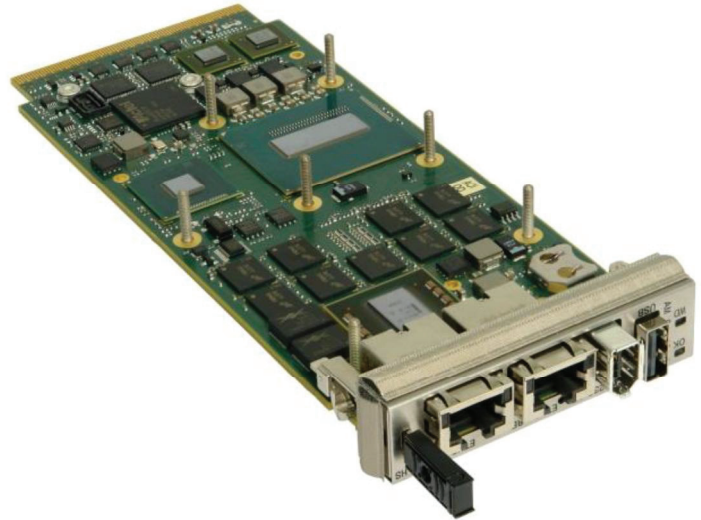


4th Generation Intel® Core™ Processor AdvancedMC™ Module, with RapidIO®

Key Features

AM C1x/msd is a high performance Single-Module, Full or Mid-size AdvancedMC™ processor module, supporting the 4th Generation Intel® Core™ Processor with 2 or 4 cores.

- Dual 10 Gigabit Ethernet for high speed networking interfaces:
- Designed for use in a wide range of MicroTCA™ or AdvancedTCA® applications
- Utilizes RapidIO® fabric interface
- Optional on-board Flash Drive, up to 128 Gbytes
- Highly reliable performance with up to 16 Gbytes of Error Correcting Code memory
- Interfaces include:
 - USB 2.0, RS232, SATA and PCI Express (PCIe) Gen 2



Specification

Central Processor

- 4th generation Intel Core™ processor:
 - 4-core Intel® Core™ i7-4700EQ processor up to 3.4 GHz, 6M Last Level cache
 - 2-core Intel Core™ i5-4410E processor 2.9 GHz, 3M Last Level cache
 - Intel Advanced Vector Extensions 2 (AVX2)
 - Intel AES New Instructions (AES-NI)
- utilizes the Intel QM87 Platform Controller Hub

DRAM

- up to 16 Gbytes soldered DDR3L-1600 ECC DRAM:
 - single bit error correction
 - peak bandwidth of 25 Gbytes/s
 - dual channel architecture

- accessible from processor and AMC connector

PICMG® AdvancedMC™ Interfaces

- single or dual x4 RapidIO (Gen 1 and Gen 2) fabric interface (build option):
 - AMC.4 Type 5 or AMC.4 Type 5 and Type 10
- hot swap compliant to AMC.0
- rear I/O compliant to AMC.4 specification
- can be configured for compliance with the requirements of the SCOPE Alliance

Storage Interfaces

- up to 4 x SATA600 interfaces:
 - AMC.3 Type S2 (2 x SATA)
 - 2 x SATA in AMC connector extended options region (build option)
- optional SATA300 Flash Drive Module

Ethernet Interfaces

- dual SerDes interfaces via AMC connector:
 - AMC.2 Type E2 (2 x 1000BASE-BX)
 - implemented using two Intel Ethernet Controller I210-IS devices
- 2 x front panel 10 Gigabit Ethernet interfaces via RJ45 connectors:
 - 10GBASE-T
 - 1000BASE-T
 - 100BASE-TX full-duplex
 - implemented using an Intel Ethernet Controller X540-AT2 device

Serial Interfaces

- 1 x RS232 interface via front panel IEEE1394 connector (adapter cable available):
 - supports TxD, RxD, CTS and RTS
- 1 x RS232 interface in AMC connector extended options region (build option):
 - TxD, RxD, RTS and CTS
- 16550 compatible UARTs

Other Peripheral Interfaces

- PC-compatible Real Time Clock
- watchdog timer
- 1 x 32-bit Long Duration Timer with processor interrupt capability
- CPU temperature monitor; voltages monitor:
 - all accessible via IPMI
- up to 3 x USB 2.0 ports:
 - 1 USB via front panel
 - 2 x USB in AMC connector extended options region (build option)
- x2 PCI Express (Gen 2) port option in AMC connector extended options region (build option)

Software Support

- support for Linux and VxWorks

Firmware Support

- Insyde Software InsydeH20™ BIOS:
 - includes Compatibility Support Module
- Intel Platform Innovation Framework for EFI
- LAN boot firmware included

Flash EPROM

- dual 8 Mbytes of BIOS SPI Flash EPROM

User EEPROM

- 8 Kbytes Flash memory primarily for User data
- storage of OS boot parameters

Telecoms Clock

- TCLKA clock input to board logic
- increments 64-bit counter in board logic

IPMI

- IPMI Version 1.5 according to AMC.0
- on-board BMC (Baseboard Management Controller)
- supports 8 Kbytes of non-volatile memory

Safety

- PCB (PWB) manufactured with flammability rating of UL94V-0

Electrical Specification

- typical current figure with 4-core Intel Core i7-4700EQ processor operating at 2.4 GHz, 8 Gbytes DRAM, single RapidIO:
 - +12V @ 3.3A, voltage 2V
- +3.3V @ less than 0.15A, voltage 5%

Environmental Specification

- operating temperature:
 - 0 C to +55 C (N-Series)
 - all processors for Full-size AMC
 - selected processor for Mid-size AMC
- non-operating temperature: -40 C to +85 C
- 5% to 95% Relative Humidity

Mechanical Specification

- AMC.0 Single Module form-factor
- 180.6mm x 73.5mm (7.1 inches x 2.9 inches)
- Full-size panel: 29mm (1.1 inches):
 - Mid-size variants available, contact sales