**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
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 I210-1S devices
- 2 x front panel 10 Gigabit Ethernet interfaces via RJ45 connectors:
  - 1GBASE-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 IEEEl394 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)
  - for 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

Please contact your local Concurrent Technologies sales office for further details on board build options and accessories.