PrAMC-7220

AdvancedMC Modules

Embedded Computing for Business-Critical Continuity™

PRELIMINARY DATA SHEET

Second generation Intel® Core™2 Duo based AdvancedMC module

- PICMG AMC.0 R2.0 full-size and mid-size AdvancedMC module
- Intel® high performance Core™2 Duo mobile dual core processor
- Intel® 3100 server class chipset with 667 MHz FSB to processor
- 4GB DDR2-400 SDRAM w/ ECC, 4GB user NAND flash, and microSD socket
- 2x Gigabit Ethernet, 2x SATA-150 and x8 PCI Express to carrier
- Dual 1000BASE-T, USB 2.0, and console interfaces on front bezel
- Hot-swappable field replaceable unit
- IPMI based module management controller
- Designed for NEBS/ETSI environment
- BIOS flash with boot failover support
- Carrier Grade Linux support

The Advanced Mezzanine Card (AdvancedMC™) standard is a collaboration by major telecom OEMs and suppliers to create an optimal expansion platform for AdvancedTCA® (ATCA®), MicroTCA™, or proprietary baseboards and systems that addresses major bandwidth, availability, field upgradeability, cost, scalability, management and interoperability issues.

The Emerson Network Power PrAMC-7220 AdvancedMC general purpose processor module is based on the Intel Core™2 Duo dual core processor with two IA-64/32 architecture cores. High performance integer and floating point performance allow the PrAMC-7220 to address application requirements within a variety of embedded applications for wired and wireless networking, security/surveillance, medical imaging, industrial control, and mil/aerospace markets.

Available front panel options include support for both full-size and mid-size AdvancedMC (AMC) modules. The modules are PICMG® AMC.0 rev 2.0 compliant and utilize serial Ethernet, PCI Express, and SATA signaling as defined in AMC.1, AMC.2, and AMC.3.

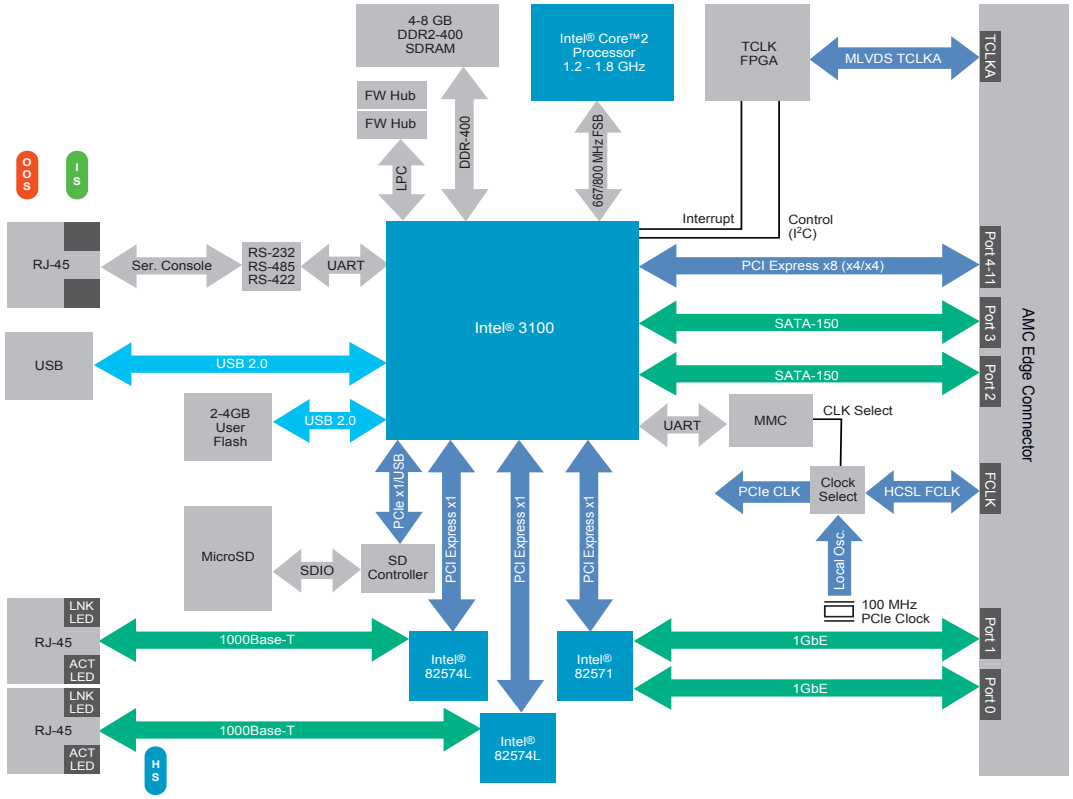
The PrAMC-7220 is hot-swappable, which allows modules to be replaced by operators or service personnel in the field without bringing down an entire ATCA blade or system. This feature reduces sparing costs and mean time to repair (MTTR) and enables scalability, lowering both CapEx and OpEx. PrAMC-7220 also provides an IPMI-based management interface, which enables operators to pinpoint and fix problems at the module level with a reduced fault group size, also lowering MTTR and OpEx.

RoHS 6/6 COMPLIANT

AdvancedMC™

EMERSON™ Network Power

Block Diagram



Specifications

INTEL CORE 2 DUO PROCESSOR

- Intel Core 2 Duo (SU9300/SL9380) @ 1.2 GHz (mid-/full-size) or 1.8 GHz (full-size only)
- Dual Core Symmetric Multiprocessing
- Intel 3100 Server Class Chipset w/FSB @ 667/800 MHz
- Intel 64/IA-32 Architecture
- SIMD (SSE2/SSE3/SSSE3/SSE4)

MEMORY

L1 Cache

- 32KB Instruction/32KB write-back Data (each core)

L2 Cache

- 3MB 1.2 GHz w/Advanced Transfer Cache Architecture (SU9300)
- 6MB 1.8 GHz w/Advanced Transfer Cache Architecture (SL9380)

SDRAM

- 4GB (8GB possible) DDR2-400 SDRAM (two banks of 72-bit wide) with Error Checking and Correction (ECC)

Boot Flash

- 2MB BIOS flash with fail-over support

User Flash

- 4GB NAND USB flash for nonvolatile user storage and flash file system
- microSD socket for flash expansion

MODULE I/O (FRONT BEZEL)

Gigabit Ethernet

- Dual Gigabit Ethernet 1000BASE-T

Serial Interfaces

- Single USB 2.0
- RJ-45 Console Serial Port supporting RS-232/422/485 signaling

MODULE I/O (CARRIER)

Ethernet Common Options

- AMC.2 Type E2 dual 1000BASE-BX ports 0 & 1

Serial ATA Storage Interface

- AMC.3 x2 SATA-150 on ports 2 & 3

PCI Express Fat Pipe

- AMC.1 Type 8 x8 (x1, x2, x4) PCI Express lanes on ports 4 -11
- PCI Express MLVDS 100 MHz clock (AdvancedMC TCLKA)

IPMB/MMC

- Driven by Pigeon Point Systems peripheral management device
  - Remote shutdown
  - Remote reset
  - Payload voltage monitoring
  - Temperature monitoring
  - FRU data access

INDICATORS

- In-Service/Out-Of-Service front bezel status LEDs
- Hot swap front bezel LED
- Front panel 1000BASE-T Link/Activity

OPERATING SYSTEM SUPPORT

- Phoenix BIOS firmware
- Red Hat Enterprise Linux (RHEL) board support package (BSP)
- MontaVista Carrier Grade Edition (CGE) Linux Support Package (LSP)
- Wind River Systems Platform for Network Equipment Linux Edition (PNE-LE) board support package (BSP)

STANDARDS COMPLIANCE

- PICMG AMC.0 – Advanced Mezzanine Card Base Specification
- PICMG AMC.1 – PCI Express and Advanced Switching on AdvancedMC Specification
- PICMG AMC.2 – AMC Gigabit Ethernet/10Gigabit XAUI Ethernet Specification
- PICMG AMC.3 – Advanced Mezzanine Card Extension for Storage Specification

PHYSICAL CHARACTERISTICS

- PCB dimensions: 180.6 mm x 73.5 mm
- Single mid-size and full-size form factors
- Power requirements: +3.3V management and 12 volts payload
- Operating temperature: 0 to +55 C°, not to exceed 85% relative humidity (non-condensing)

REGULATORY COMPLIANCE

- FCC Part 15 (US)/ICES-003 (Canada)
- IEC/UL/CSA 60950 (Western Europe and US)
- NEBS: Applicable sections of Telcordia GR-63 and GR-1089
- EN55022
- EN55024
- EN300386

Ordering Information

Marketing Number	Description
PRAMC-7220-12F-4G	PRAMC Intel Core2 Duo, 1.2 GHz, full-size, 4G DDR2, 4G NAND
PRAMC-7220-12M-4G	PRAMC Intel Core2 Duo, 1.2 GHz, mid-size, 4G DDR2, 4G NAND
PRAMC-7220-18F-4G	PRAMC Intel Core2 Duo, 1.8 GHz, full-size, 4G DDR2, 4G NAND

Accessories Ordering Information

Marketing Number	Description
M/N-TBD	RJ-45 Serial Console Cable

SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

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The global leader in enabling
Business-Critical Continuity™.

- AC Power
- Connectivity
- DC Power
- **Embedded Computing**
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
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