# AMC-9210
## AdvancedMC Module

Embedded Computing for
**Business-Critical Continuity™**

## High performance packet processing for broadband networks

- AMC.0 R2.0 mid-size and full-size AdvancedMC module
- Cavium Networks high performance OCTEON Plus CN58xx family of packet processors
- 4x GbE (AMC.2) plus x4 PCI Express (AMC.1) to carrier
- 4x GbE small form factor plug-in (SFP) interfaces on front panel
- 2x 1000BASE-BX interfaces to carrier
- Hotswappable
- Integrated IPMI
- Designed for NEBS/ETSI
- Carrier Grade Linux with Cavium extensions

The Advanced Mezzanine Card (AdvancedMC™) standard is 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 AMC-9210 AdvancedMC (AMC) packet processor card extends the broad portfolio of communication processing and network processing solutions to address the growing need for wire-speed packet processing solutions for the delivery of broadband services in the 3G Wireless, Voice over IP and IMS network infrastructure.

The AMC-9210 is based on the Cavium OCTEON Plus high-performance multi-core processor architecture which provides a pin compatible chip that can support 8 or 12 cnMIPS Plus MIPS 32/64 architecture compatible cores; per core hardware acceleration for packet processing and security including addition of support for Kasumi for wireless security; and integrated coprocessors for packet I/O, compression/decompression, IDS and anti-virus.

Available front panel options include full-size and mid-size AMC modules. The module is AMC.0 rev 2.0 compliant and uses serial Ethernet and PCI Express signaling defined in AMC.1 and AMC.2. With its four interchangeable SFP modules, powerful on-board OCTEON Plus packet processor, dual management interface and upgradeable memory, the AMC-9210 is extremely versatile and provides the functionality necessary for migrating to next-generation infrastructures and converged networks.
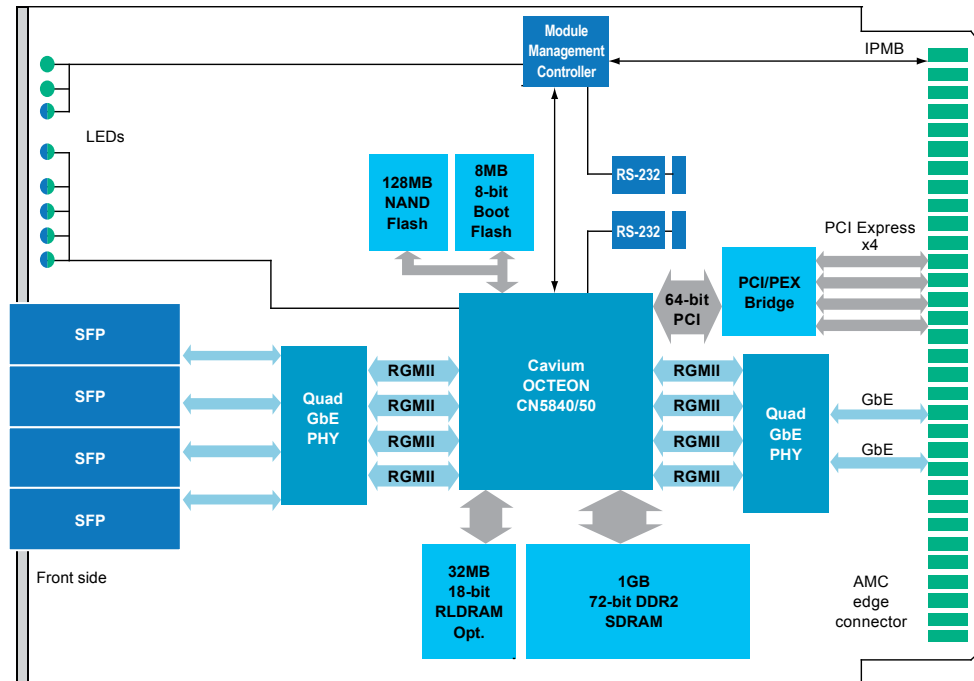
Target applications for the AMC-9210 include media servers, deep packet content inspection, Node-B/RNCs, line rate crypto and security functions, VoIP, stateful protocol identification, edge/access routers and policy enforcement.



**RoHS** 6/6 COMPLIANT
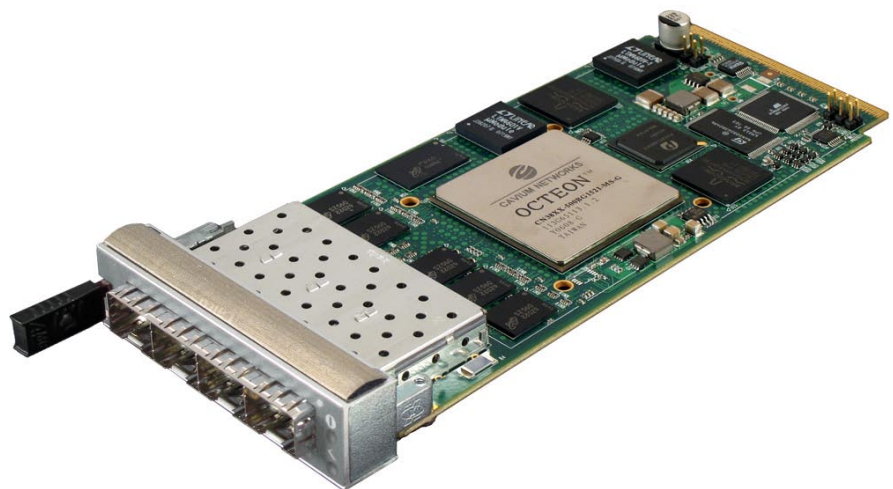
**AdvancedMC**®

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**Network Power**

## Block Diagram



## Specifications

### PROCESSOR

- Designed around the Cavium OCTEON Plus CN58xx processor family running at up to 600 MHz
  - ▲ Mid-size: 8 core
  - ▲ Full-size: 12 core
- Support for NSP or SCP device family options
- NSP – Network Services Processor supports encryption, reg-ex acceleration, TCP acceleration, compression/decompression, networking and QOS
- SCP – Secure Communications Processor supports encryption, networking, TCP acceleration and QOS

### MEMORY

- 1GB of DDR2-800 SDRAM memory
- Optional 32MB of RLDRAM
- 8MB downloadable 8-bit boot flash memory
- 128MB downloadable NAND flash memory for firmware storage (organized in dual banks)

### ADVANCEDMC CONNECTIVITY

- Gigabit Ethernet link options
  - ▲ AMC.0 Type E2 ports 0,1
  - ▲ AMC.2 Type 2 ports 8, 9

- PCI Express
  - ▲ AMC.1 Type 4 x4 PCI Express lanes on ports 4-7
  - ▲ PCI Express 100 MHz clock on AdvancedMC CLK3

### EXTERNAL INTERFACES

- Four Gigabit Ethernet link options
  - ▲ SFP receptacles on the front panel for maximum configurability (SFP modules purchased separately)

### OPERATING SYSTEM SUPPORT

- U-BOOT firmware
- Cavium Simple Executive
- Wind River PNE Linux with Cavium OCTEON extensions
- MontaVista CGE Linux with Cavium OCTEON extensions

### COMPATIBLE SFP MODULES*

- Methode: DM7041-R-L (1000BASE-T, RJ-45)
- Avago: AFBR-57L5APZ (1000BASE-SX, LC)

*Purchased separately

## MECHANICAL

- Form Factor: AMC.0 R2.0 mid-size and full-size AdvancedMC module
- Length: 180.6 mm (7.11 in.)
- Width: 73.5 mm (2.89 in.) (single-width)

## OPERATING ENVIRONMENTS

- Power Consumption: 40W to 45W typical depending on number of cores (8 or 12), processor speed, and memory
- Temperature: 0 to 55°C (32 to 144.5°F)
- Storage Range: −40 to 80°C (−40 to 176°F)
- Relative Humidity: 5% to 95% non-condensing
- Altitude: 0 to 2000 m (0 to 6500 ft)

## REGULATORY COMPLIANCE

- US: FCC 47 CFR Part 15 Class A
- Canada: ICES 003 Class A
- Japan: VCCI Class A
- Europe Commercial: EN 55022:1994 Class A
- Europe Commercial: EN 55024:1998 Class A
- Europe Commercial: EN 61000-4-2,3,5,6,8,11: 2001
- Europe Commercial: EN 61000-4-4: 2000 (Limits for harmonic current emissions)
- Europe Commercial: EN 61000-3-2,3
- Europe Telecom Carrier: EN 300-386 v1.3.3 April 2005
- Europe CE Mark
- Australia: AS/NZS 3548 C-Tick
- Korea: MIC
- Taiwan: BSMI

## Ordering Information

| Marketing Number | Description |
| --- | --- |
| AMC-9210-F-1G-N | Full-size, 12 core CN5850 600 MHz NSP processor with 1GB DRAM and 32MB RLDRAM |
| AMC-9210-M-1G-N | Mid-size, 8 core CN5840 500 MHz NSP processor with 1GB DRAM and 32MB RLDRAM |
| AMC-9210-M-1G-S | Mid-size, 8 core CN5840 500 MHz SCP processor with 1GB DRAM |

Note: SFPs not included in the above configurations.

## Installed SFP Ordering Information

| | |
| --- | --- |
| SFP-CU-RJ45 | Small form factor pluggable XCVR copper 1000BASE-T, RJ-45 connector |
| SFP-MM-SX-LC | Small form factor pluggable XCVR multi-mode fiber 1000BASE-SX, LC connector |

## 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™.

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- Outside Plant
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