

» AM42xx «



AdvancedMC Series of GbE/10GbE Intelligent IO modules

- » Mid-size formfactor
- » Cavium Octeon Plus 5650
- » Multiple Front Panel options
- » SW support

AdvancedTCA/AdvancedMC/MicroTCA

Open Modular Solution

AM42xx AMC Series of GbE/10GbE Intelligent IO Modules Based on next-generation Cavium® Octeon™ Plus CN5650 multi-core packet processor

Kontron enhances its AdvancedTCA 10GbE portfolio with the introduction of the AM42xx series of AdvancedMC GbE/10GbE Intelligent IO modules based on the Cavium Networks OCTEON™ Plus CN5650 multi-core packet processors. The AM42xx AMC modules are optimized for layer 4 to 7 data and security processing, targeting access and service providers with 3G/4G BTS, RNC, xGSN and Media Gateways. The Kontron AM4204 is the first in the series, featuring 4x 1GbE ports to the front and software configurable interfaces to the Fabric side (PCIe,

4x 1GbE or XAUI). When integrated with an AdvancedTCA switch, the Intelligent IO module provides exceptional added functionality such as load balancing for Web Server, SIP Server, SSL Offload, and content- or application-aware processing applications. Likewise, it can support QoS over Ethernet for IPTV, video on demand and any other broadband media services. The second module in the series is the Kontron AM4220, a 10GbE card with 2x 10GbE to the front and PCIe to the fabric side. When integrated with a general purpose AdvancedTCA processor node, like the Kontron AT8020, the Intelligent IO module provides exceptional added functionality such as for wireless and wireline security packet inspection applications. Similar applications can be equally ported to Kontron MicroTCA integrated platforms, such as the OM5080 2U platform.

Technical Information

Compliance

- » AMC.0 R2.0 Advance Mezzanine Card Base Specification
- » AMC.1 R2.0 PCI Express and Advance Switching AMC.1 Type 4
- » IPMI v1.5
- » AMC.2 R1.0 AMC Gigabit Ethernet AMC.2 Type4E2 or Type5E2 (AM4220 AMC.2 type E2)
- » IEEE 802.3

Multi Processor Unit

Cavium® Octeon™ Plus CN5650 12 cores 600 MHz

Dual Gigabit Ethernet Controller

- » Dual Gigabit Ethernet Controller Intel® 82571EB
- » PCIe 4-lane interface to Cavium Processor
- » 2x 1000Base-BX (Serdes) interfaces to AMC connector
- » Serial Over Lan via SMB

Memory

- » 1, 2 or 4 Gigabyte DDR2 Memory support with ECC 800 MHz data rate (2 GB standard)
- » 128 MB FLASH Memory
- » USB Flash Disk up to 4 GB

IPMI Features

- » IPMI 1.5 compliant
- » Voltage and Temperature Sensors
- » ATCA LEC control
- » FRU data storage for AMC
- » Firmware Update handling for field upgrades, rollbacks and watchdog function

Mechanical

181.5 x 73.8 x 18.96 mm, mid-size, single-width, Weight: 240 g

Power Requirements

Management power is less than 500 mA, Payload power <40 W

Environmental

Operating

0° to 55° C / 32° to 131° F

Storage and Transit

-40° to 70° C / -10° to 158° F

Temperature*

5% to 90% @ 55° C / 131° F non-condensing

5% to 95% @ 40° C / 104° F non-condensing

Humidity*

Altitude*

4000 m / 13,123 ft

15000 m / 49,212 ft

Shock*

30G, half-size 11 ms each axis

Beclore GR-63-CORE Section 4.3

Vibration*

5 - 500 Hz 1G, each axis

5 - 50 Hz, 2G; 50 - 500 Hz, 3G each axis

Airflow

Operating @ 12 CFM: 5° C to 45° C, Operating @ 19 CFM: 5° C to 65° C

*Designed to meet or exceed

Reliability

MTBF: >150000 hours @ 30° C / 77° F (Telcordia SR-332, Issue1)

Safety / EMC

Designed to meet or exceed:

Safety: UL60950 3rd ED; CSA C22.2 Ho 60950-00, EN 60950:2000, IEC60950-1
EMI/EMC: FCC 47 CFR Part 15, Class B, CE Mark to EN55022/EN55024

Warranty

Two years limited warranty

Operating System and Software Support

Cavium SDK 1.7 .x; WindRiver PNE LE 2.0; 6WindGate

Input/Output

Front I/O

- » AM4204: 4 SFP cages to support multi-rate copper and fiber SFP modules
- » AM4220: RJ45 RS232 interface, 2 SFP + cages to support 1G or 10G SFP/SFP + modules according IEEE 802.3

Rear I/O

- » Port 0 and Port 1: 1000Base-BX
- » Port 4 to Port 7: PCIe
- » Port 8 to Port 11: 1000Base-BX or 10G Base-BX4 (XAUI) (N/A on AM4220)
- » Port 15: RS232 (mapping is controlled by CPLD)

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