Open Modular Platforms

MicroTCA

2008/2009

Integrated Platforms

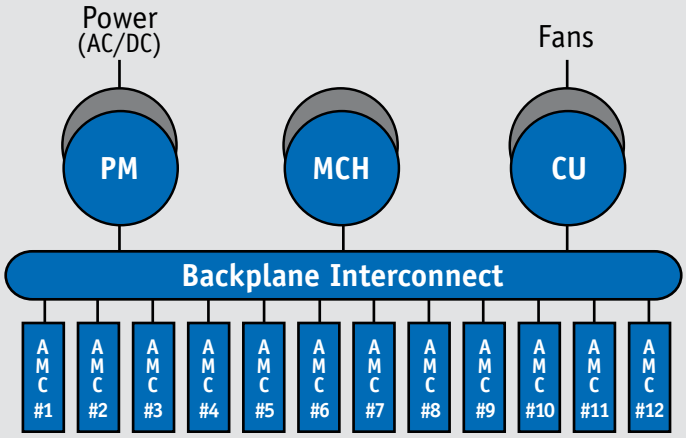
AMCs

MCHs

kontron

Application Design / Vertical Markets

MicroTCA offers designers a wide range of options by allowing fully redundant systems, partially redundant systems and systems with no redundancy at all. It's because of these types of options that MicroTCA is an ideal platform for a wide range of applications spaces:



Communications

MicroTCA offers TEMs/NEPs high bandwidth and five nines (0.99999) availability and fulfills their requirements to design full systems deployed at the telecom edge and customer premise communications applications. Ideal applications include WiFi and Wimax base stations, fiber nodes, optical network connections, IP-based multi-server access nodes and other applications at the network edge.

- Dual star Gigabit Ethernet connectivity
- Modular and serviceable – hot swap

Industrial

Cost-sensitive automation applications require network connectivity in MicroTCA's small inexpensive form factor.

- Highly reliable architecture reduces Total Cost of Ownership
- Minimal cost overhead via integrated MCH and Power Module functionality

Medical

The ability to use a MicroTCA system as a small form factor supercomputer with up to 12 multi-core processing blades makes it an ideal architecture for medical imaging applications.

- Twelve AdvancedMC (AMC) boards on a single backplane
- Variety of form factors eases system integration

Military/Aerospace/Government

The systems supporting the next generation warfighter demand an architecture with high processing power connected to a high throughput IP-based network. MicroTCA is uniquely targeted to meet these needs in a small form factor that can be widely deployed.

- Small form factor with 2U AdvancedMCs (AMCs)
- Scalable size and redundancy allows a single architecture to support multiple deployment targets

Kontron and MicroTCA

Kontron is a world leader in embedded computer technology. With global corporate headquarters located in Europe and regional headquarters in North America and Asia, we have established a strong presence worldwide. Addressing the needs of our customers is priority number one and that is why we are making a big play in the development of MicroTCA platforms and services. When it comes to new technologies like MicroTCA, you can depend on our far reaching network to exceed the requirements of even your most demanding applications.

MicroTCA is a PICMG standard for open modular systems designed to address cost sensitive and physically small applications. In addition to the wide variety of form-factors offered by Kontron, MicroTCA offers extremely high communication bandwidth, high processing capacity, and high availability.

With its vast amount of compute and communication power, Kontron MicroTCA platform's have more than enough bandwidth for the most challenging applications. Deployed into a wide range of application spaces, including defense, government, aerospace, communications, industrial automation, and medical, MicroTCA proves itself as a versatile and affordable form-factor. Applications in these spaces present some similar requirements, including very high communication bandwidth and/or very high availability in a small form factor. All of these factors combine to help make Kontron MicroTCA platforms a leading choice for demanding applications.

Let Kontron work with you to design your ideal MicroTCA platform. With engineering staff located throughout the world, Kontron has the resources you need!

Benefits of working with Kontron on your next MicroTCA Project:

- Kontron offers integrated platforms to help you with faster development and deployment
- For fully customized projects Kontron offers each of the unique MicroTCA building blocks
- Kontron's wide variety of AMCs provide a vast amount of computing resources
- Kontron offers many different form-factors from 2 slot 1U platforms through 12-slot 8U systems for you to choose from
- The experience and expertise of Kontron's highly knowledgeable Engineering staff

How Does MicroTCA Compare?

The following chart gives an overview of how MicroTCA compares to other platforms

	cPCI/ VME	VITA 31	VITA 41	PICMG 2.16	ATCA	uTCA
Compute Bandwidth (System)	Low	High	High	High	Very High	High
Comm. Bandwidth	Low	Med.	Med.	Med.	Very High	High
High Availability	No	No	No	Yes	Yes	Yes
Form Factor	3U	6U	6U	6U	8U	2U
Rugged	Yes	Yes	Yes	Yes	No	Under Way

Integrated Platforms

OM5080

- 2U integrated carrier grade platform
- 8 mid-size AdvancedMCs
- Dual integrated MCH
- Dual integrated AC or DC Power Supply

The OM5080 provides the lowest per-slot cost for carrier grade MicroTCA today, by integrating both the MCH and Power Module functionality in the 2U chassis. The OM5080 is ideally suited for high bandwidth multi-processor and I/O intensive applications that need be deployed in a small footprint.

OM6060

- 3U integrated platform
- 6 Mid-size AMC slots
- 1 MCH
- Integrated AC Power Supply

The OM6060 extends the advantages of the OM6040 by offering the same footprint with two additional AMC slots.

All systems shown are pre-configured and tested to speed up development and deployment of your MicroTCA application design.

Kontron also offers fully customized MicroTCA platforms and solutions to fit a wide variety of application spaces and requirements. Contact us today to start building your ideal MicroTCA solution.

OM6040

- 3U integrated platform
- 4 Full-size AdvancedMCs
- 1 MCH
- Integrated AC Power Supply

The OM6040 is an ideal fit for small, non-redundant, cost-sensitive applications requiring PCI Express connectivity, such as those often found in industrial applications.

OM6062

- 5U integrated platform
- 6 Mid-size, Double-width AMC slots
- 1 MCH
- Pluggable Power Supply Units

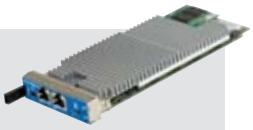
The OM6062 extends the advantages of the OM6040 by offering space for up to six dual-width or single-width AMCs and pluggable power supplies.

Advanced Mezzanine Cards and Management Controller Hubs

AMC (AdvancedMC) is a PCI Industrial Computer Manufacturers Group specification (PICMG AMC.0) for hot-swappable and field-replaceable mezzanine cards. Using the "AMCs Everywhere" strategy, Kontron offers a comprehensive range of functionality on all AMCs for use throughout various application spaces utilizing MicroTCA.

AdvancedMC™

Processor AMCs:



AM4011 powered by Embedded Multi-Core Processor

- High performance Processor AMC
- Full- or Mid-Size
- Intel® Core2™Duo 1.5GHz - Up to 4 GByte SDRAM memory
- Two Gigabit Ethernet ports on two RJ-45 connectors

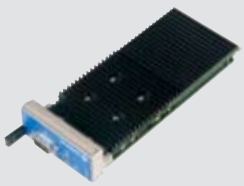
AM4010 powered by Embedded Multi-Core Processor

- High performance Processor AMC
- Full- or Mid-size
- Intel® Core™ Duo or Intel® Core™2 Duo, scalable up to 1.66 GHz
- Up to 4 GByte SDRAM memory (soldered) with ECC running at 400 MHz

AM4100 powered by Embedded Multi-Core Processor

- Processor AMC based on Freescale Power Architecture
- Full- or Mid-size
- Freescale dual-core MPC8641D PowerPC, 1.0/1.33/1.5 GHz
- Up to 2 GByte soldered SDRAM memory with ECC running at up to 533 MHz

AM4002



- High performance Processor AMC
- Full- or Mid-size
- Intel® Pentium® M, scalable up to 2.0 GHz
- Up to 4 GByte DDR2 400 MHz memory

Communication AMCs:

AM42xx

- Cavium Octeon Plus 5650 Network Service Processor

Multiple Front Panel configurations:

AM4204: 4x SFP GbE

AM4220: 2x SFP+ 10GbE and Serial RJ45

- 12x MIPS64 R2 Cores; 600Mhz
- Up to 14.4 Billion MIPS64 instructions per second

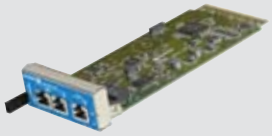
AM4301

- Quad GbE Module
- Full- or Mid-Size
- Four (4) 10/100/1000 Base-T connection provided on four (4) RJ-45 connectors
- PCI-Express x8, x4, x2, x1 link controller

AM5010 powered by Embedded Multi-Core Processor

- High performance Processor AMC
- Full - or Mid-size, double width
- Intel® Core™2 Duo 1.5 GHz
- Integrated graphics and hard drive

MCHs:



AM4901

- Unmanaged BCM5396 Ethernet switch
- Power management, electronic keying, hot-swap of up to 12 AMCs

Storage AMCs:

AM4520

- High Perfomance SAS Storage Module
- Full- or Mid-Size
- AMC.3 compliant
- Up to 146 GB capacity

AM4500

- High Capacity SATA Storage Module
- Full- or Mid-Size
- AMC.3 compliant
- Up to 120 GB capacity

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