vadatech
THE POWER OF VISION

MicroTCA4 – A Dense, Powerful Architecture with I/O and Signal Conditioning Provisions

About MicroTCA.4

The MicroTCA (µTCA) open-standard architecture provides a dense, high-speed, managed platform with built-in high availability options. The newer µTCA.4 sub-specification adds functionality in the provision of µRTMs for signal conditioning and I/O. This makes it attractive for I/O-intensive applications and those requiring mixed-signal capabilities in a single chassis.

Key Features

- Supports full redundancy of power, cooling, MCH and payload AMCs/RTMs
- Up to 12 AMC slots, each supporting µRTM
- Capability to accept, filter and process many sensor inputs at high data rates
- Precision clock and trigger generation and distribution
- Compatible with an extensive range of processing and I/O AMCs
  (compatible with standard µTCA.O AMCs)

Markets

The MicroTCA.4 standard is well suited to applications requiring high backplane performance, high availability/reliability, scaling with multiple processors, and flexible high-bandwidth I/O.

- High-Energy Physics
- Sonar and other Mil/Aero
- Scientific Research
- Energy Exploration
- Video Broadcasting
- Other

Creative Design

VadaTech's creative designs provide superior solutions for your system. Our light weight chassis provides improvements in cable management, more reliable and smooth fan tray insertion/extraction, optimised fan distribution, and more.

Light weight aluminum construction

Small, powerful fans for optimised cooling distribution

Cable ducting for managing cables.

VadaTech provides the full MicroTCA.4 solution in-house. This includes the chassis platforms, MCH, PMs, AMCs, µRTMs, and more.

Chassis Platforms

- Lightweight • Smooth FRU removal • Densely packed horizontal and vertical-mount configurations • Cable ducting • Shrouded connectors on both mating ends for fan trays (increased reliability) • Superior airflow distribution • Backplane w/equal length clock traces from MCH to AMCs for latency equalisation

AMCs and µRTMs

- A/D and D/A conversion • Up to 250MSPS at 16 bits • High-performance Xilinx FPGAs
- Intel Xeon host processor • On-board SSD RAID • Front-panel 10GbE, SFP+
- Special function µRTMs (details on request)

MCH

- Managed 10GbE (Layer 2/3) • Fabric options in PCIe, SRIO, SRIO Gen 2, 10GbE
- Cross Bar Switch option

Power Modules

- Menu-driven RS-232, diagnostics through front panel • Broad range of AC and DC versions • Double width, full height to 1000W • Fully hot-swappable • Redundant, fail-over options with 2nd module

Application-Ready Platforms

- Fully or partially pre-configured platforms to place your application-layer on top
- Platform options with DSPs, A/D & D/A converters, digitisers, Piezo drivers, and more

Continuing Innovation

Sign up for VadaTech's newsletter at marketing@vadatech.co.uk to stay connected to the latest µTCA.4 and other leading-edge products.