



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

### About MicroTCA.4

The MicroTCA ( $\mu$ TCA) open-standard architecture provides a dense, high-speed, managed platform with built-in high availability options. The newer  $\mu$ TCA.4 sub-specification adds functionality in the provision of  $\mu$ RTMs 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  $\mu$ RTM
- 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  $\mu$ TCA.0 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
- Scientific Research
- Video Broadcasting
- Sonar and other Mil/Aero
- Energy Exploration
- Other

### Creative Design

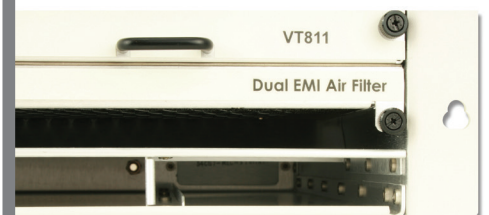
VadaTech's creative designs provide superior solutions for your system. Our light weight chassis provides improvements in cable management, more reliable and smooth fan tray insertion/extraction, optimized fan distribution, and more.



Light weight aluminum construction



Small, powerful fans for optimized cooling distribution

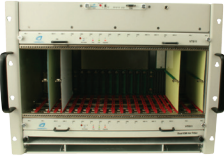


Cable ducting for managing cables.

# Innovative Solutions for the Full $\mu$ TCA.4 Ecosystem

VadaTech provides the full MicroTCA.4 solution in-house. This includes the chassis platforms, MCH, PMs, AMCs,  $\mu$ RTMs, 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 equalization

## AMCs and $\mu$ RTMs



- 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  $\mu$ RTMs (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, digitizers, Piezo drivers, and more

## Continuing Innovation

Sign up for VadaTech's newsletter at [marketing@vadatech.com](mailto:marketing@vadatech.com) to stay connected to the latest  $\mu$ TCA.4 and other leading-edge products.