

# High precision analog measurements in high speed modular standards

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One of the major benefit of a MicroTCA.4 system is to combine high-speed digital data processing AMC boards with high precision analog signal conditioning RTM boards. In this presentation we show high precision measurements using different grounding configurations, particularly for AMC and RTM Z3 ac-coupled differential signal transmission for the detection and regulation of high frequency signals and broadband dc-coupled signal conditioning on RTMs. We present EMC concepts, sources of distortions, detectors signal purity, its channel scaling behavior, signal integrity and the packaging required for measurements far below -80dB.

In addition we compare the partitioning of high precision sub-components in modular standards and its impact on the robustness and reliability for the operation.

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