

MicroTCA systems at ESS

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The ESS has adopted the MicroTCA.4 platform for the high speed FPGA-based applications because it is one of the most promising and innovative standards for high-speed data acquisition available for accelerator controls. Some different types of MicroTCA base systems will be selected to be deployed in the facility to provide the infrastructure needed for the different systems. A few COTS AMC boards are currently being used for the ESS designs and for those systems that require an early commissioning. Some other AMCs based on the Xilinx Ultrascale FPGA families, are currently being designed and will be evaluated to define which will become the ESS standard solutions. These boards are designed to satisfy all the demanding applications in terms of data processing and interfaces throughput of the ESS high speed data acquisition systems.

An overview about the ESS MicroTCA.4 platforms will be presented in this work as well as the ESS experience in collaborating with the MicroTCA.4 industry on the design and evaluation of the applications based on the standard.

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