

Dariusz Makowski - Overview of DMCS Projects and MicroTCA.4 Developments

Wednesday 5 December 2018 17:00 (15 minutes)

The Lodz University of Technology, Department of Microelectronics and Computer Science is involved in the development of MicroTCA.4 and MicroTCA.4.1 standards from 2007 onwards. Since that time, we developed various MicroTCA.4 components including Intelligent Platform Management, Advanced Mezzanine Cards, Rear Transition Modules for data acquisition and processing systems used in numerous accelerators and fusion projects.

The presentation will discuss the history of developments and new ideas for Intelligent Platform Management of Advanced Mezzanine Cards, Rear Transition Modules and FPGA Mezzanine Cards in AdvancedTCA and MicroTCA systems.

The high-power piezo driver HPD-200 designed for the European Spallation Source accelerator will be presented as an example of challenging development breaking the limitations of MicroTCA specification. The device is suitable for driving piezo actuators used to compensate the Lorenz force detuning for both elliptical and spoke cavities.

Finally, an universal and flexible framework, based on MicroTCA.4, will be presented as an example of powerful image acquisition and processing system dedicated for large-scale physics projects.

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