Contribution ID: **37** Type: **not specified**

The DAMC-UNIZUP processing board for the new MTCA.4 BPM system for PETRA IV

Wednesday 6 December 2023 11:30 (15 minutes)

I-Tech and DESY have developed a MTCA.4 BPM electronics prototype for Petra IV TDR, which consists of the BPM-optimized signal conditioning RTM module from I-Tech, and the DAMC-FMC2ZUP AMC processing board from DESY MSK.

While the DAMC-FMC2ZUP board proved to be invaluable for the prototype phase, it is an overkill in terms of the FPGA resources required for the BPM application. In light of the cost optimization of the final ~800 BPM series for Petra IV, a new DAMC-UNIZUP universal processing AMC board has been developed by DESY MSK, featuring a range of smaller Zynq Ultrascale+ SoC, D1.2 and/or D1.3 Zone3 standard, as well as full bandwidth availability for the LVDS lines to/from the Zone3 connector. The new board features are discussed in light of the current BPM, as well as future potential applications.

Primary authors: BARDORFER, A. (Instrumentation Technologies, Slovenia); REPIC, B. (Instrumentation Technologies, Slovenia); DURSUN, Burak (MSK (Strahlkontrollen)); SCHMIDT-FÖHRE, Frank (DESY); KUBE, Gero (MDI (Diagnose & Instrumentierung)); Dr SCHLARB, Holger (DESY); WITTENBURG, Kay (MDI (Diagnose & Instrumentierung)); CARGNELUTTI, M. (Instrumentation Technologies, Slovenia); FENNER, Michael (MSK (Strahlkontrollen)); LEBAN, P. (Instrumentation Technologies, Slovenia); PAGLOVEC, P. (Instrumentation Technologies, Slovenia)

Presenters: BARDORFER, A. (Instrumentation Technologies, Slovenia); PAGLOVEC, P. (Instrumentation Technologies, Slovenia)

Session Classification: Session IV