

High-Speed Direct Sampling FMC for accelerator diagnostics

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Special diagnostic applications in the European-XFEL require a compact and cost efficient digitizer for sampling single-ended AC/DC coupled high speed signals directly. Analog mixer stages in front of the ADC boards are expensive and need a lot of space in the MTCA.4 crates of the accelerator control system. Therefore, DESY is developing a new digitizer board based on a 12-bit dual channel ADC in an FMC form factor. The digitizer comes with different internal and external clock sources and will offer a variety of clocking configurations. The presentation will provide an overview of the new FMC direct sampling digitizer family. A versatile clock tree and the compact design combined with a MTCA.4 FMC carrier make the digitizer also ideal for various high energy physics and industrial data acquisition applications.

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