## Fast Direct-Sampling Digitizer for RF Accelerator Diagnostics

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The rapid development in the field of digitizers is leading to Analog-to-Digital Converters (ADC) with ever higher sampling rates. Nowadays many high-speed digitizers for RF applications and radio communication are available which can sample broadband signals without the need of down converters. These ADCs fit perfectly into beam instrumentation and diagnostic applications like Bunch Arrival time Monitor (BAM) or measuring beam-induced higher-order modes of accelerating cavities. To cover these high- frequency diagnostic applications, DESY has developed a direct sampling FMC digitizer board based on a 12-bit high-speed ADC with an analog input bandwidth of 2.7 GHz. A high-speed direct-sampling data acquisition system capable of acquiring 2 channels at 500 MSP/s will be presented.

**Primary author:** Mr ZINK, Johannes (DESY)

**Co-authors:** Dr SCHLARB, Holger (DESY); Mr MARJANOVIC, Jan (DESY); Dr CZWALINNA, Marie Kristin (DESY); Mr FENNER, Michael (DESY); Mr JABLONSKI, Szymon (DESY); Mr MAVRIC, Uros (DESY)

**Presenter:** Mr ZINK, Johannes (DESY)

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