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A new µTCA-based waveform digitizer for the Muon g-2 experiment

Saturday, 6 August 2016 18:00 (2 hours)

We present the design of a µTCA-based waveform digitizer that will be deployed in the Muon g-2 experiment at Fermilab. The digitizer features five independent channels, each with 12-bit, 800-MSPS digitization and a 1-Gbit memory buffer. The data storage and readout along with the configuration are handled by six Xilinx Kintex-7 FPGAs. In addition, the digitizer is equipped with a mezzanine card for analog signal conditioning prior to digitization, further widening its range of possible applications. The performance results of this design will also be presented.

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