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Towards a Scalable Data Readout System for Terascale Era Experiments

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Future Terascale-era experiments require scalable, high-performance data acquisition (DAQ) systems to handle extreme data rates. We present a DAQ solution based on the Advanced Mezzanine Card (AMC) standard, under development for the Micro-Vertex Detector (MVD) readout chain of the PANDA experiment. This contribution emphasizes the system's modularity and scalability. A preliminary test card, targeting the power supply architecture and Module Management Controller (MMC), has been assembled and evaluated. We present the test results and recent design improvements of the AMC module, demonstrating progress toward a robust and flexible DAQ platform for the demanding needs of next-generation high-energy physics experiments.

Speed talk:

I am unwilling/unable to present a speed talk

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