

## A Reconfigurable Cluster Element (RCE) DAQ Test Stand for the ATLAS Pixel Detector Upgrade

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The RCE DAQ system is based on System-On-Chip building Blocks (RCEs) residing in Virtex-4/5 FPGAs and hosted within an ATCA based ecosystem with generic high bandwidth capabilities and 10-GE support. User applications in C++ run on the PowerPC core of the RCEs under the real-time operating system RTEMS. We will present a new application of these flexible DAQ building blocks targeted for the ATLAS pixel detector upgrade with full implementation of calibrations and multi-channel read-out. This application is used in both test-beam and cosmic telescope experiments, and in exploring the viability of this concept for an upgraded readout system.

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