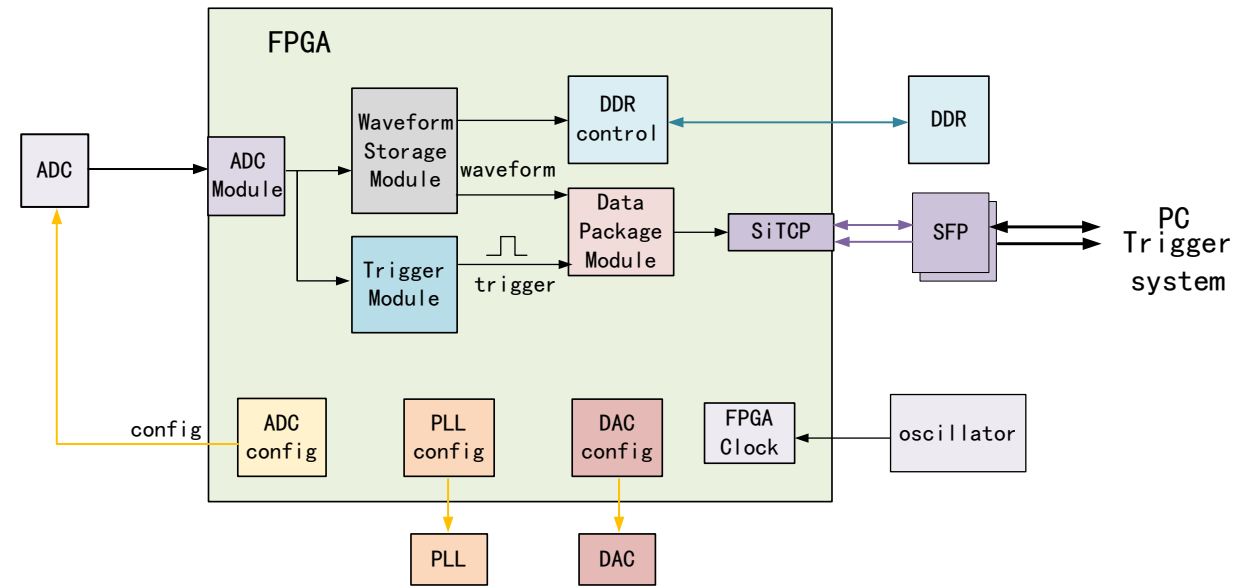
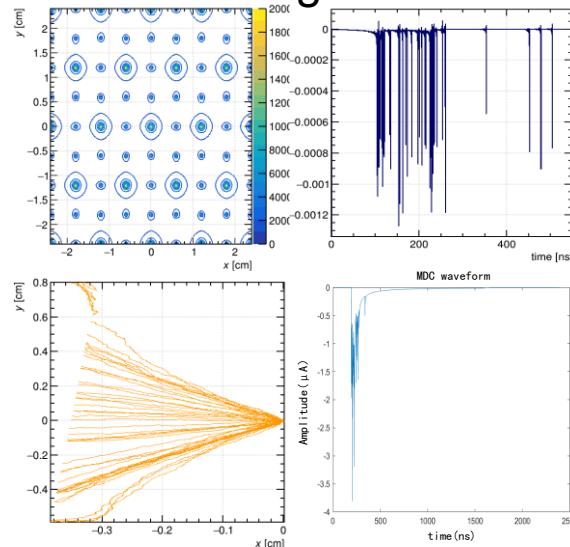
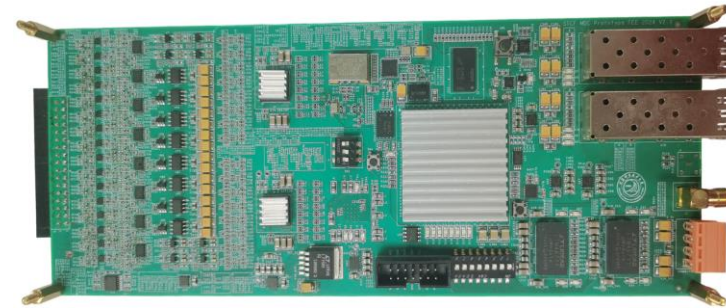
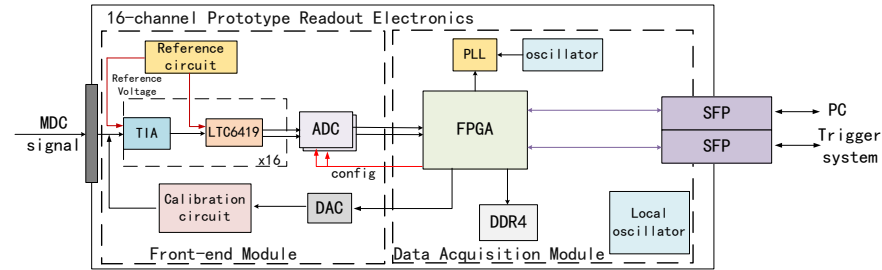


Design of Prototype Readout Electronics of the High Counting Rate Main Drift Chamber in Particle Physics Experiments

——Yilin Ma



- the waveform of the high counting rate Main Drift Chamber simulation
- Prototype Readout Electronics
 - Front-End Module(FEM)
 - Data Acquisition Module(DEM)
- FPGA logic
 - ADC Module
 - Trigger Module
 - Date Package Module



Design of Prototype Readout Electronics of the High Counting Rate Main Drift Chamber in Particle Physics Experiments —Yilin Ma



➤ Performance Evaluation

- Dynamic Range: 60–1800fC.
- Charge Resolution < 8 fC.
- Time Resolution < 1 ns RMS

➤ Joint Detector Test

- Cosmic Ray : resolved multi-peak structures in waveforms.
- ^{55}Fe source :energy resolution achieved 24.72% at 1150V and 19.11% at 1200V.

