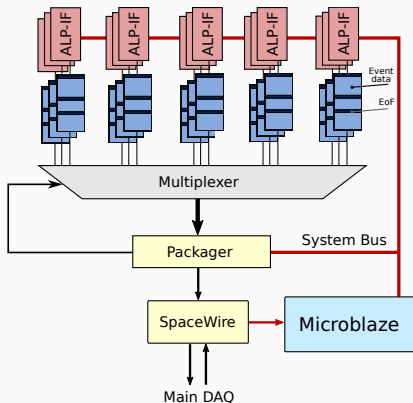# ALPIDE Readout devel report

October 10, 2019

Firmware Structure

- Pipelined DAQ system reading each tower independently.
- Event data in collected and packaged for transmission or local analysis.
- Soft-CPU (Microblaze) for housekeeping (interface with main DAQ, configuration, calibration, . . .)

Module power consumption

	Analog	Digital	Total (GND)	Unit
Power-on rise time	–	–	5.15	ms
idle, clock off	251	209	427	mA
empty event DAQ, 375 ns strobe				
Rdout time	–	–	100	μs
I_{max}	270	894	977	mA
empty event DAQ, 100 µs strobe				
Rdout time	–	–	205	μs
I_{max}	265	894	996	mA
Calibration: Threshold scan				
I_{max}(peak)	247	997	1008	mA

Compatible with the expected 71 mW/chip when DTU/PLL is disabled.