Converter Refresh for Future LIGO Upgrades

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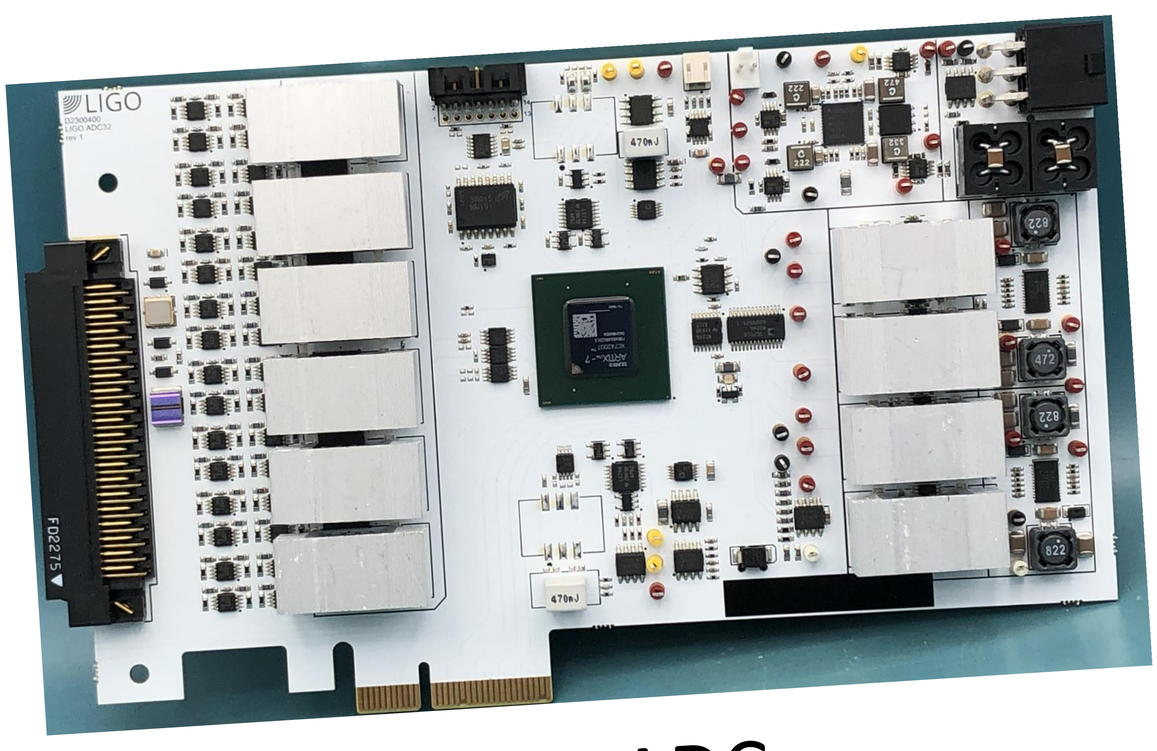
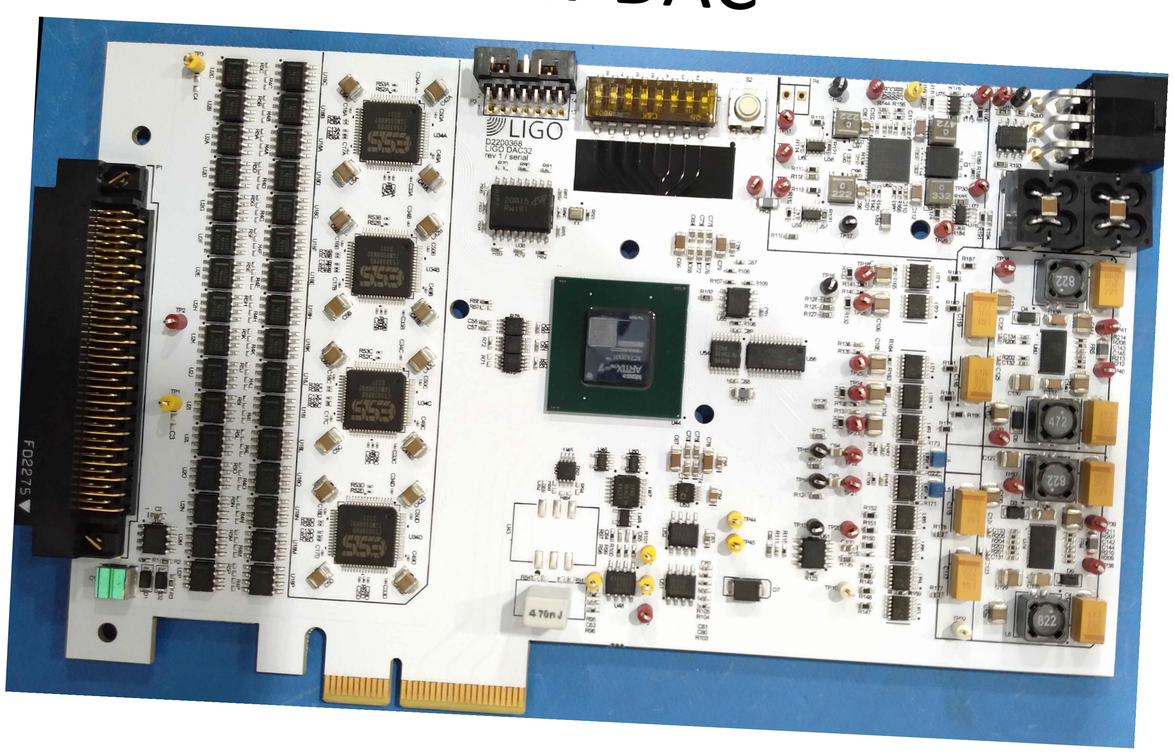
Features:

- 32-Channels / Differential
- ΣΔ-Technology w/ IIR Filters
- Faster Sampling Rates
- AA/AI Filters in FPGA
- Timing System Integration
- Time Stamped Data thru DMA



New ADC

New DAC

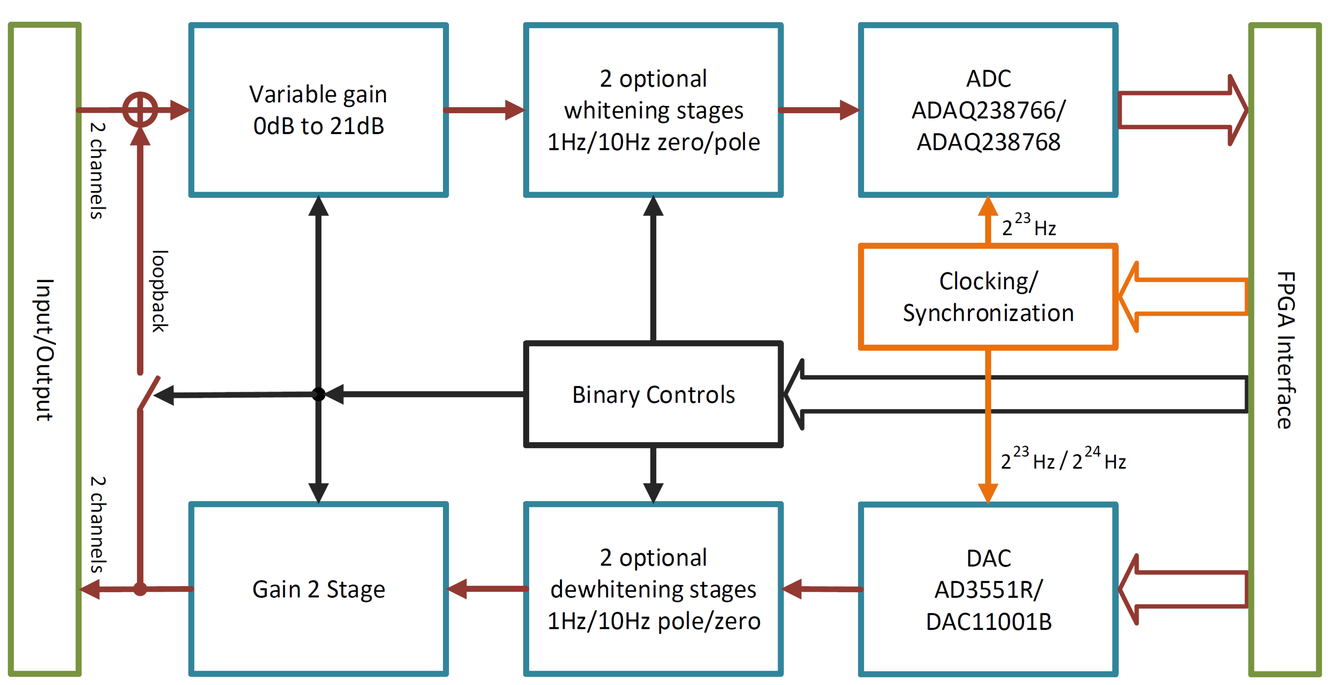


Performance:

- ADC ±20V / DAC ±10V
- DAC: 50nV/√Hz @ 100Hz
- ADC: 200nV/√Hz (prelim.)
- No Rogue Lines/Oscillators
- Full RTCDS Integration
- DAC: 6 Months Running at H1
- DAC: see T2400066

Future Developments:

- Fast Digital Servo 10-100kHz Bandwidth
- ADC → FPGA → DAC
- Sampling Rate ≈ 8MHz
- 4-8 Inputs & 2-4 Outputs
- Switchable Whitening
- Integration with RTCDS



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