A **Full Digital Servo** for

214,614,220,160,499.34 Hz*

Laser Frequency Stabilization

- 120ns digital latency
- 1933nV/√Hz@1Hz
- Full configurable **dual** feedback channel

- AMO experiements
- Atomic clock
- More application in ...

Fast Channel Openloop Frequency Response

Beat Frequency of U3 and U1 Allan Deviation
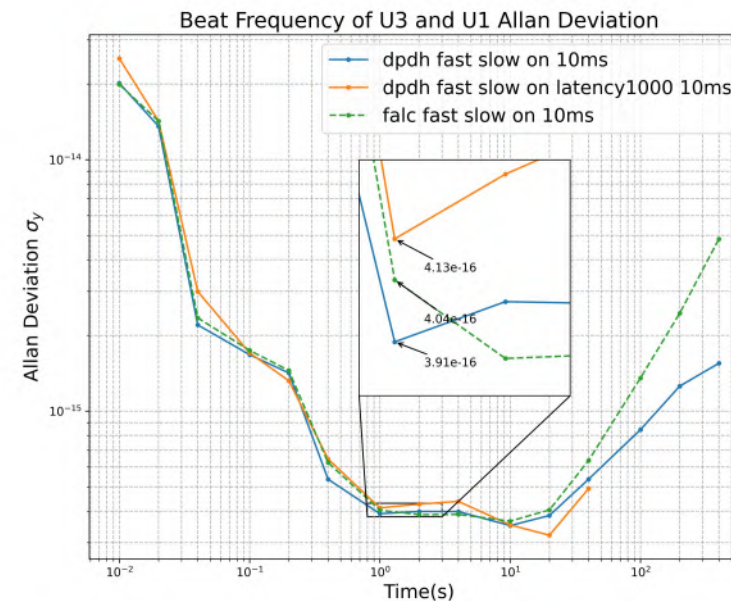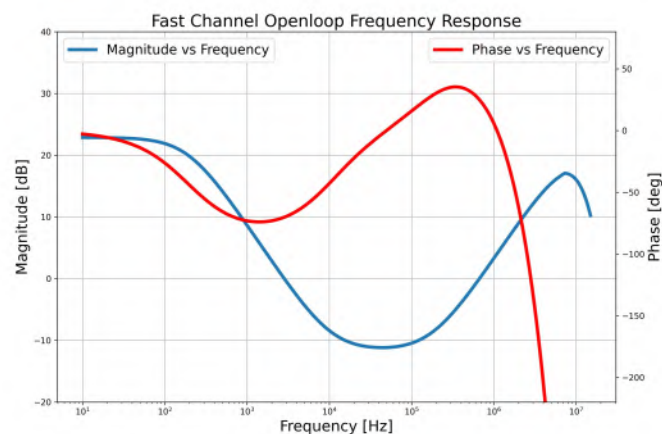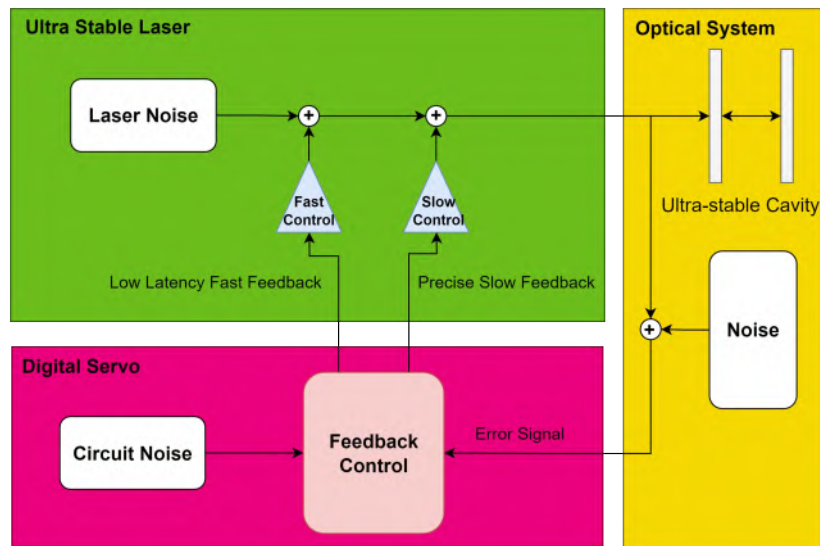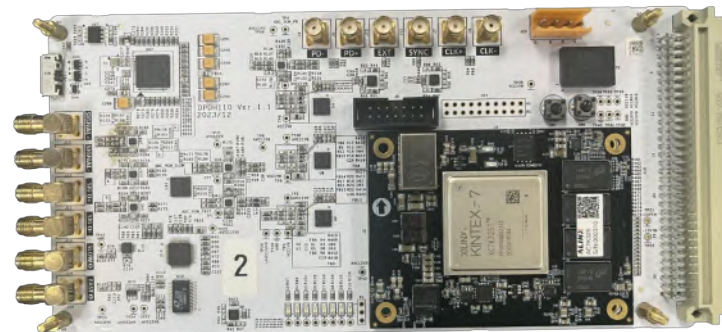
*Approximated on 1396.890nm laser with allan deviation at 4e-16

ID #125 A Full Digital Servo for Ultra-Stable Laser Frequency Stabilization
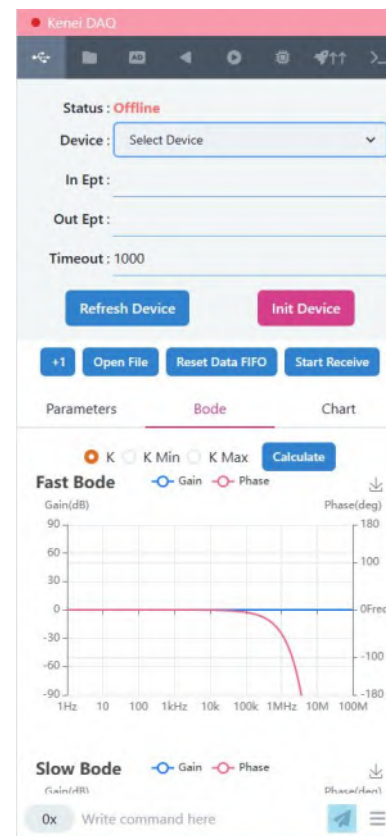
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- React-based frontend   – mobile and desktop friendly design
- Rust-based USB3.0 **high speed** backend   – high sample rate analysis
- Python-based **remote webserver** backend – multi-platform remote monitor

- Data transfer
- PID param control
- Out of lock notification

Software Demo

kenei.zeka.cloud

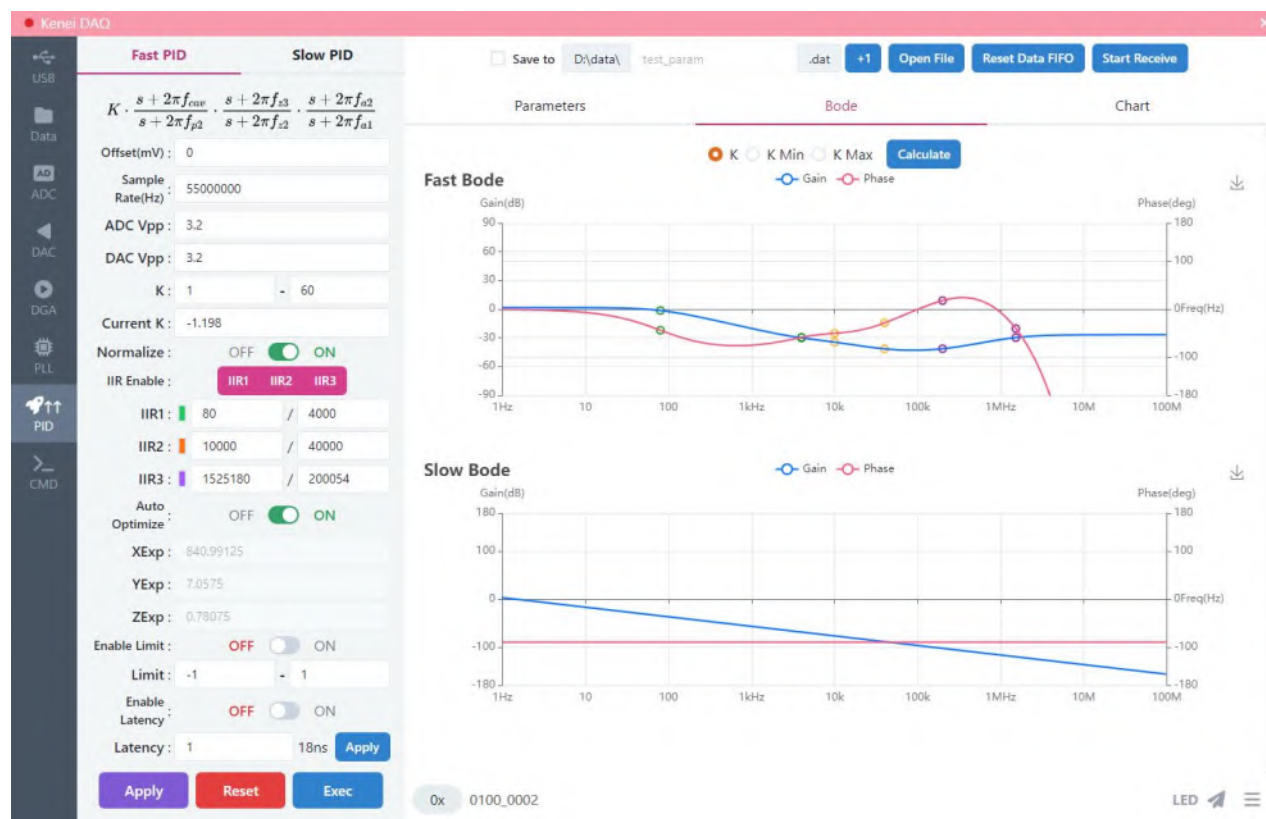**ID #125** A Full Digital Servo for Ultra-Stable Laser Frequency Stabilization

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