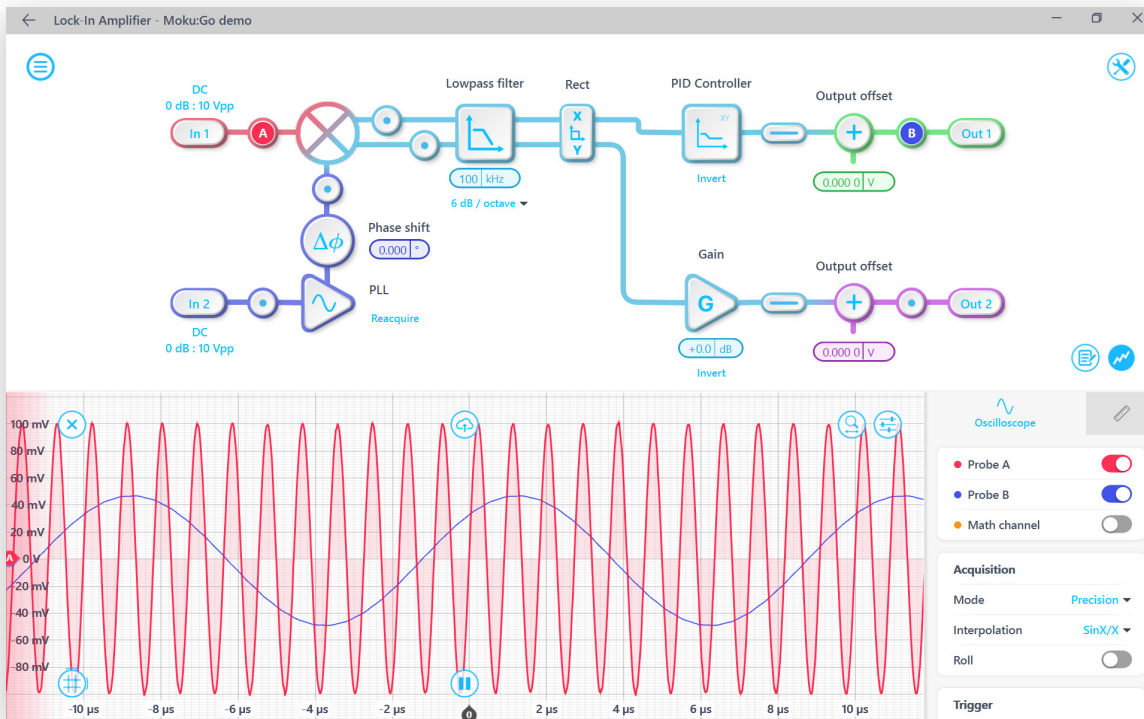




20 MHz Lock-in Amplifier



Moku:Go's digital Lock-in Amplifier supports dual-phase demodulation (XY/R θ) from DC to 20 MHz. It features an integrated 2-channel Oscilloscope and Data Logger, enabling you to observe signals at up to 125 MSa/s and log data at up to 1 MSa/s. A PID Controller can also be placed after the demodulation stage for phase-locked loop applications.



Demod. Frequency 1 mHz to 20 MHz	Time Constant 128 ns to 2.15 s	Filter Slopes 6, 12, 18, 24 dB/Oct	Dual-phase Demod. X/Y or R/ θ	Signal Generator Up to 20 MHz	Built-in Feature PID Controller
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Features

- Block diagram view of the digital signal processing chain
- Built-in probe points for signal monitoring and data logging
- Internal or external demodulation modes including a phase-locked loop (PLL)
- Demodulate at up to the 250th harmonic or down to 1/8th of the fundamental frequency
- Dual-phase demodulation
- Toggle between rectangular (X/Y mode) or polar coordinates (R/ θ mode)
- Built-in PID Controller

Specifications

- Demodulate with frequencies ranging from 1 mHz to 20 MHz with μ Hz resolution
- Phase shift precision of 0.000 001°
- 1 M Ω input impedance, AC/DC coupling
- Adjustable time constant from 128 ns to 2.15 s
- 6, 12, 18, or 24 dB/octave filter roll-off
- Output gain range: -80 to +160 dB
- LO output up to 20 MHz with variable amplitude
- Dynamic reserve > 100 dB
- Onboard data acquisition: snapshot mode up to 125 MSa/s, continuous mode up to 1 MSa/s

Applications

- Laser frequency stabilization
- Phase-locked loop
- Radio receiver education
- Signal extraction from noise education
- Signal modulation and demodulation
- Software-defined radio