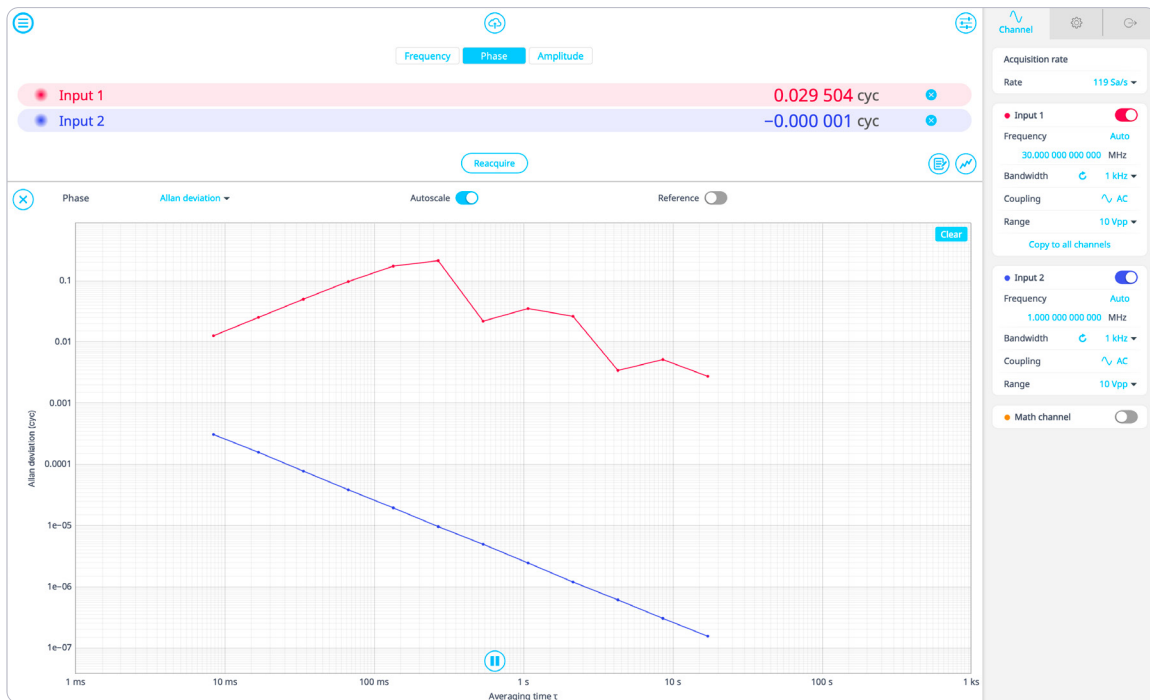




The Moku:Go Phasemeter tracks and measures phase (relative to a reference clock), frequency, and amplitude of two independent input signals from 1 kHz to 30 MHz. Based on a digitally implemented phase-locked loop architecture, the Phasemeter provides exceptional dynamic range, zero dead time, and measurement precision that exceeds the performance of conventional lock-in amplifiers and frequency counters.



Frequency range
1 kHz to 30 MHz

Tracking bandwidth
Up to 100 kHz

Phase error
1.1 $\mu\text{rad}/\sqrt{\text{Hz}}$ @ 10 Hz

Data capturing rates
30 Hz to 122 kHz

Built-in analysis
Allan deviation

Features

- Two independent phasemeter channels that track and record phase, frequency, and amplitude
- Phase-locked output option enables you to generate sine waves that are phase-locked to the inputs at the fundamental frequency or harmonics
- Output measured amplitude, phase, or frequency offset for closed-loop control systems, or stream to a computer using Moku APIs
- Real-time spectral analysis to display and save power spectral densities, Allan deviation, and more
- Phase-locked loop tracking bandwidths from 1 Hz to 100 kHz

Specifications

- Input frequency range: 1 kHz to 30 MHz
- Input voltage range: 10 Vpp or 50 Vpp
- Tracking bandwidth: 1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz
- Data acquisition rates: 30 Hz, 119 Hz, 477 Hz, 1.9 kHz, 15.2 kHz, 122 kHz
- Reference frequency resolution: 1 μHz
- Sine wave generators: two-channel 20 MHz (manual or input-locked)
- Output frequency multiplier: 0.125x to 250x (phase-locked to input)
- Phase output wrap: off, $\pm \pi$, $\pm 2\pi$, $\pm 4\pi$

Applications

- Interferometry
- Optical/ultrasound ranging
- Oscillator analysis
- Phase-locked loop