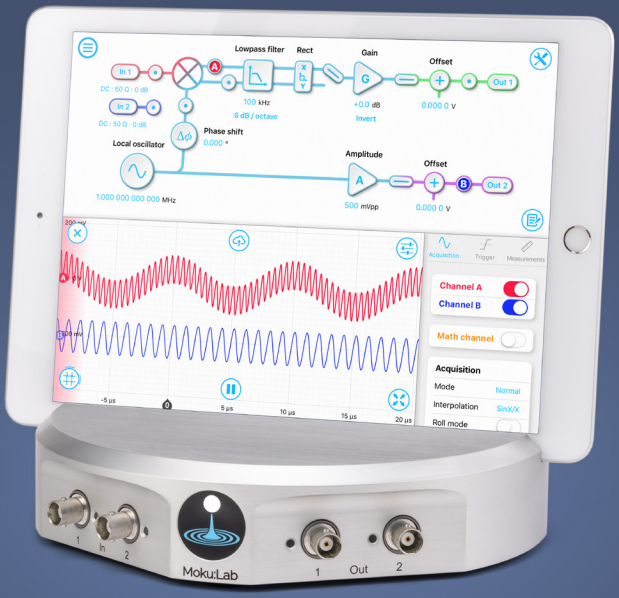
One flexible hardware platform.
Twelve powerful instruments.

Discover Moku:Lab



Learn more at liquidinstruments.com

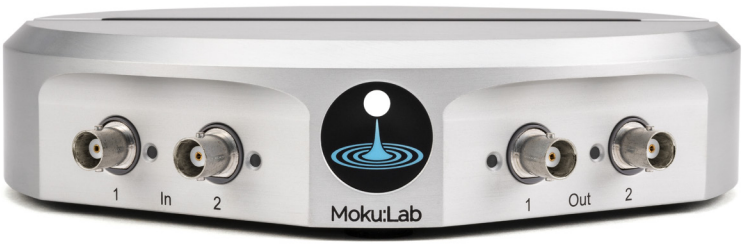
Moku:Lab

One flexible hardware platform

Moku:Lab is a software-configurable hardware platform for test and measurement that combines the signal processing power of an FPGA with high-speed analog inputs and outputs. Moku:Lab brings a new level of flexibility to the lab, the field, and on the production line.

An expanding suite of instruments

Moku:Lab includes a suite of twelve professional-grade instruments, with more on the way through software updates! As you may have noticed, we've got big plans for this compact device.



2 inputs (analog)

- 500 MS/s, 12-bit ADCs
- 200 MHz bandwidth (-3 dB, 50 Ω)
- 50 Ω or 1 MΩ impedance
- AC or DC coupling

2 outputs (analog)

- 1 GS/s, 16-bit DACs
- >300 MHz bandwidth (-3 dB)
- 50 Ω impedance
- DC coupled

Clocks & triggering

- Ultra-stable oscillator (<500 ppb accuracy)
- 10 MHz reference input
- 10 MHz reference output
- External trigger input (BNC, TTL)

Connectivity & storage

- Wi-Fi, Ethernet and USB
- iPad, LabVIEW, Python, and MATLAB
- Save to cloud, SD, or RAM
- 16 GB SD card included

A flexible hardware platform for test and measurement

Twelve powerful instruments

Lock-in Amplifier

Demodulate small signals at frequencies up to 200 MHz with PLL, I-Q and R-Θ modes and a built-in PID.

Arbitrary Waveform Generator

Generate custom waveforms with up to 65k points with update rates up to 1 GS/s, load waveform points from a file or input an equation directly.

PID Controller

Create two independent control loops with flexible gain profiles and sub-µs latencies.

Frequency Response Analyzer

Measure the magnitude and phase of a system's transfer function using a swept sine output from 10 mHz to 120 MHz.

Laser Lock Box

Stabilize a laser's frequency to a reference cavity or atomic transition using high-performance modulation locking techniques.

Phasemeter

Track phase, frequency and amplitude of tones from 1 kHz-200 MHz, perform advanced spectral analysis and save data at up to 125 kS/s.

Oscilloscope

Capture and display signals at up to 500 MS/s with a built in dual-channel waveform generator. Use sophisticated waveform measurements and modern visualization tools such as histograms, measurement trends and advanced interpolation options.

Featuring integration with Python, MATLAB, and LabVIEW

Twelve powerful instruments

Spectrum Analyzer

Record power spectra of signals from 100 Hz to 250 MHz, with a resolution bandwidth down to 1 Hz.

Digital Filter Box

Create up to eighth-order lowpass, highpass, bandpass and bandstop filters with adjustable parameters, or use your own coefficients to build a customized response.

Waveform Generator

Generate sine, square, ramp or pulse waveforms with frequencies up to 250 MHz. Make triggered bursts or sweeps, and modulate the amplitude, frequency or phase from an internal or external source.

Data Logger

Log voltage data to an SD card at up to 100 kS/s, or to internal memory for short durations at up to 1 MS/s, and upload data files directly to the cloud.

FIR Filter Builder

Design finite-impulse-response (FIR) filters with arbitrary impulse response in the time or frequency domain.

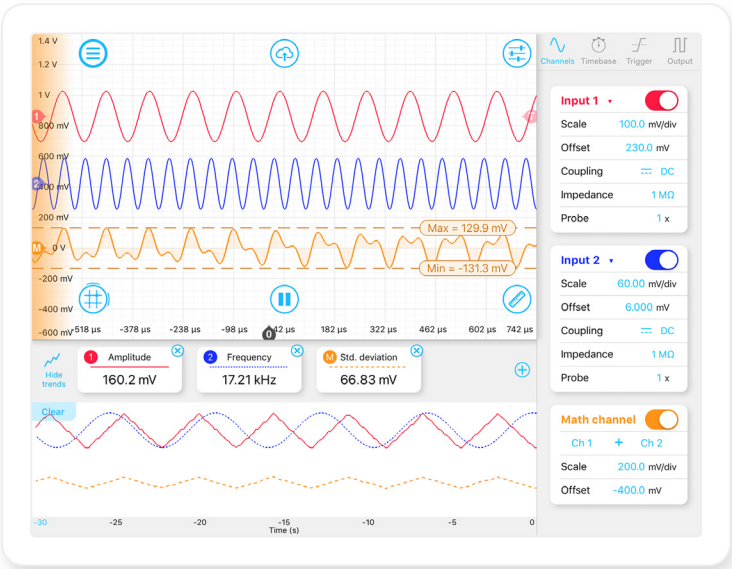
More coming soon

That's right, there are more instruments currently being planned and developed for Moku:Lab.

An intuitive user interface

Capture results in a beautiful way

Moku:Lab's fluid and intuitive user interface takes full advantage of the iPad's multi-touch gesture capability, to redefine the way scientists, engineers, students, and professionals acquire data, run measurements, and control their experiments.



(Moku:Lab's Oscilloscope interface pictured above)

Try the App for free on your iPad

1. Search for "Moku:Lab" on the App Store.
2. Install and open on your iPad.
3. Tap "Demo" on the device selection screen.
4. Enjoy the quick interactive preview
5. Visit our website for more info on each instrument

Sophisticated measurements with an intuitive iPad interface

Liquid Instruments was founded by a team of experimental physicists and engineers with expertise in precision measurement and gravitational wave detector instrumentation. We provide equipment that helps scientists, engineers, students and professionals seamlessly acquire data, run measurements and control their experiments.

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