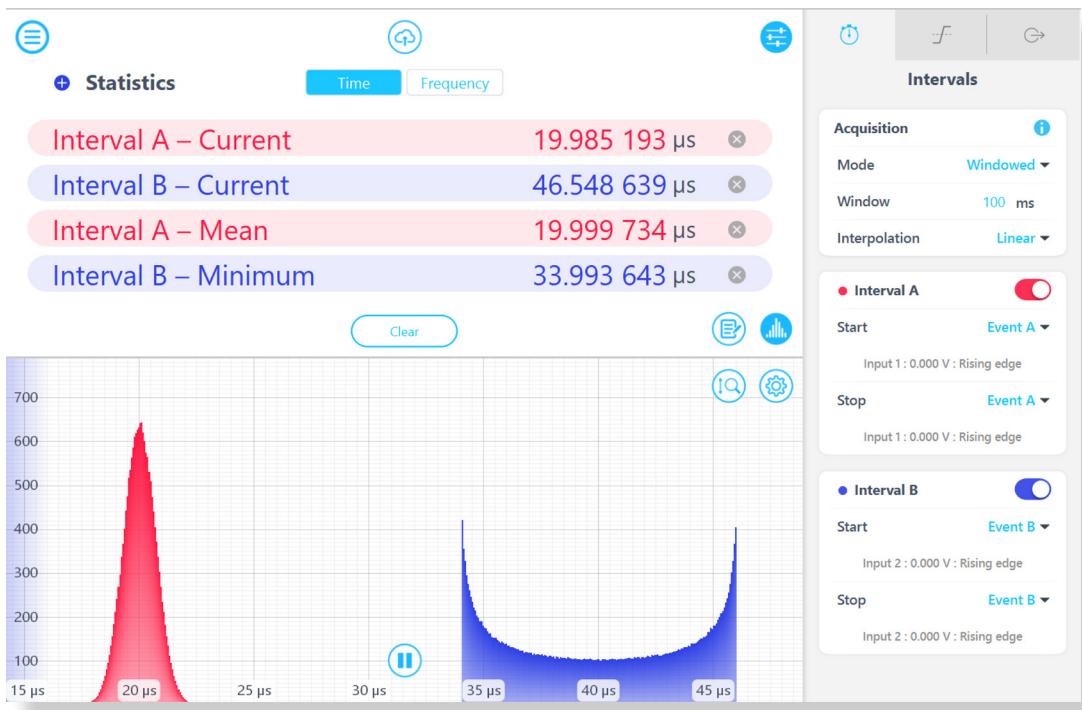




Time & Frequency Analyzer



The Moku:Lab Time & Frequency Analyzer measures intervals between configurable start and stop events with sub-ns precision. Select between continuous, windowed, or gated acquisition mode, compute histograms of interval duration losslessly and in real time, and log high-resolution event timestamps to an SD card. Output the measured interval count or current interval to analog output channels for active feedback control.



No. of independent interval analyzers
2

Jitter
< 20 ps

Clock stability
500 ppb

Digital resolution
1.95 ps

Max interval rate
62.5 MHz

Histogram
Real-time and lossless

Features

- Low device jitter of < 20 ps for high timing resolution analysis
- Up to two independent event detectors with configurable thresholds on rising edge, falling edge, or both
- Lossless, real-time histograms with a minimum bin width of 1.95 ps
- Output interval count or current interval with adjustable scaling factor
- High-resolution raw event timestamp logging to an SD card for post processing
- Combine with any other instruments in Multi-instrument Mode for system level characterization or feedback control

Specifications

- No. of independent interval analyzers: 2
- Jitter: < 20 ps
- Digital resolution: 1.95 ps
- Input frequency range: DC to 125 MHz
- Input trigger threshold range: ± 500 mV or ± 5 V
- Maximum interval rate: 62.5 MHz
- Acquisition modes: continuous, windowed, or gated
- Interpolation mode: none or linear
- Event logging rate:
 - up to 125 Mevt/sec burst
 - up to 10 Mevt/sec continuous
- Output range: 2 Vpp
- Output mode: interval count or current interval

Applications

- Oscillator analysis
- Photon counting
- Jitter analysis
- Linear optical quantum computing
- Pulsed laser stabilization