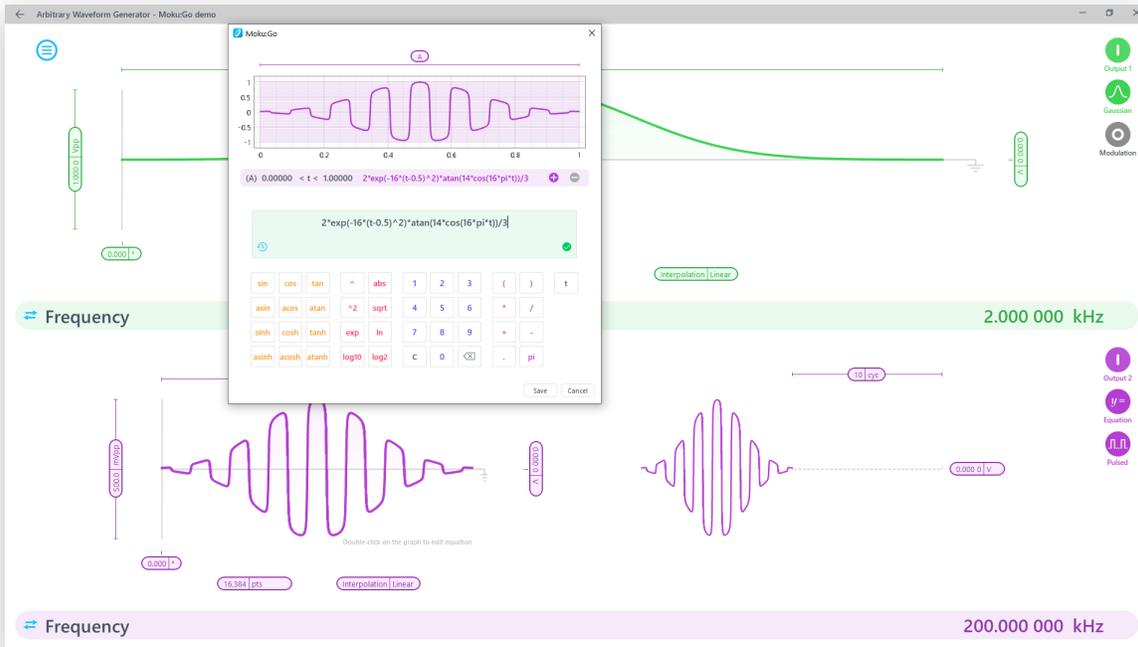# 125 MSa/s Arbitrary Waveform Generator

Moku:Go's Arbitrary Waveform Generator can generate custom waveforms with up to 65,536 points at sample rates of up to 125 MSa/s. Waveforms can be loaded from a file or input as a piece-wise mathematical function with up to 32 segments, enabling you to generate truly arbitrary waveforms. In burst mode, waveform generation can be triggered from input channels with start or n cycle modes. In pulsed mode, waveforms can be output with more than 250,000 cycles of dead time between pulses.

Maximum Sample Rate	Output Bandwidth	DAC Resolution	Independent Triggering	Supported Waveforms
125 MSa/s	**20 MHz**	**12-bits**	**Burst/Pulsed**	**6 predefined, segmented equations (up to 32), or custom**

Features

- Two independent AWG channels with 20 MHz output bandwidth.
- Choose between one of the preset waveforms, load points from a file, or input an equation directly.
- Phase synchronization output between the two channels.
- Triggered start or n-cycle mode with burst output.
- Configure pulsed output with up to 250,000 cycles of dead time between pulses.

Specifications

- Supported waveforms: Sine, Gaussian, Exponential fall, Exponential rise, Sinc, Cardiac, Equation editor, and Custom (from file)
- Output bandwidth: 20 MHz
- DC offset: ± 5 V with 3 mV resolution
- Phase offset: 0° to 360° with 0.001° resolution
- Maximum output rate:
  - 15.625 MSa/s with 65,536 points
  - 31.25 MSa/s with 32,768 points
  - 62.5 MSa/s with 16,384 points
  - 125 MSa/s with 8,192 points

Applications

- Random pattern generation
- System response simulation
- Additive manufacturing
- Instrument response function simulation