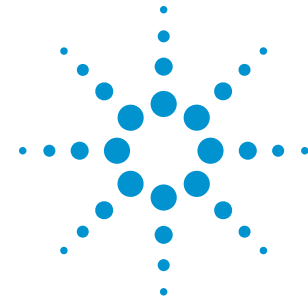# Agilent 33521A, 33522A, 30-MHz Function/Arbitrary Waveform Generators
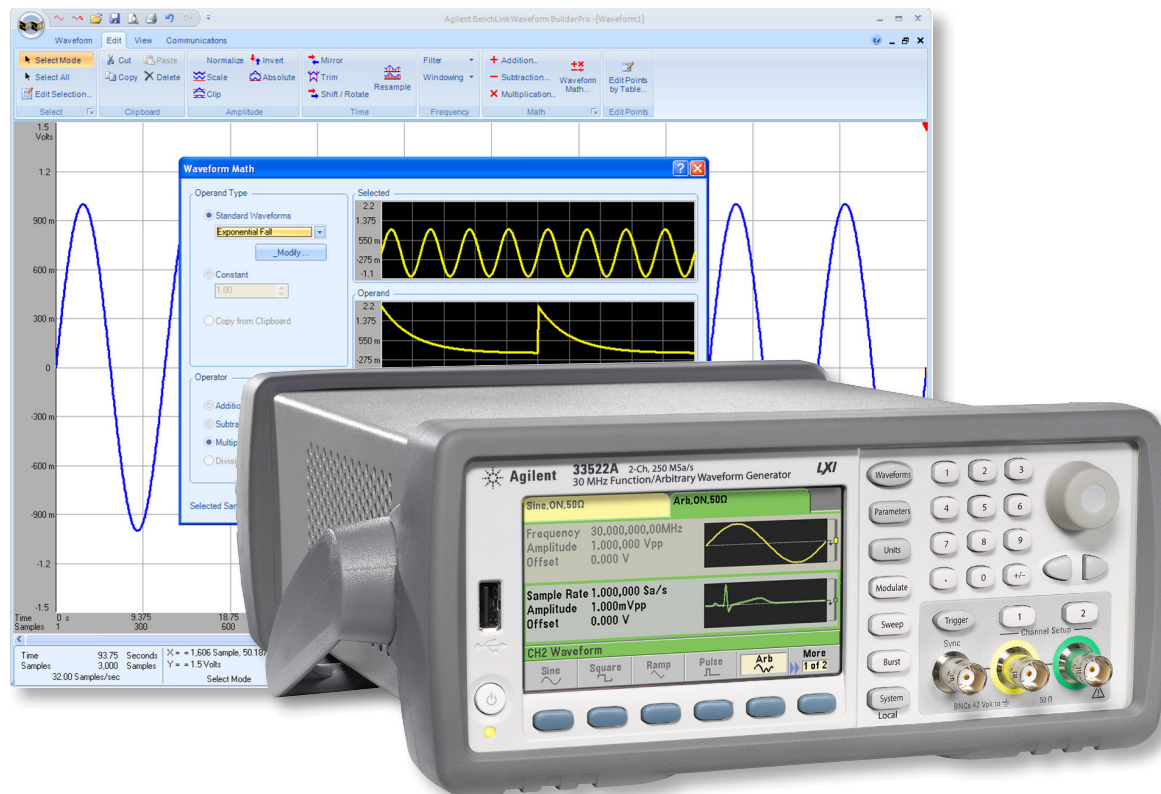
Revolutionary signal generation delivers the highest signal fidelity in its class, full-bandwidth pulses and real point-by-point arbitrary waveforms

Agilent 33500 Series of function/arbitrary waveform generators are the first in their class with 30 MHz sine, square, and pulse waveforms and 250 MSa/s, 16-bit sampling with true point-by-point arbitrary waveforms. The 33500 Series comes in 1- and 2-channel configurations with a large color display and embedded waveform builder. The 2-channel model has a flexible dual-channel mode with frequency and amplitude coupling, differential channels and combined output channels. Optional BenchLink Waveform Builder Pro software offers advanced PC-based waveform creation, manipulation and downloading for more complex waveforms.

Key features

- 30 MHz sine, square, pulse bandwidth

- 250 MSa/s, 16-bit sampling rate for high time resolution arbitrary waveforms

- True point-by-point arbitrary waveforms for more accurate representation of user defined waveforms

- 0.04% THD and < 40 ps jitter for greater signal fidelity

- USB and LAN (LXI-C) standard for easy utilization and connecting

- A TCXO timebase standard, OCXO optional for ultrahigh stability

- Optional BenchLink Waveform Builder Pro software simplifies the creation of complex waveforms.

Anticipate ___*Accelerate* ___*Achieve*

Agilent Technologies

Quick Fact Sheet

Agilent 33521A, 33522A, 30-MHz Function/Arbitrary Waveform Generators

Product specifications

Product specifications and price	33521 1-channel	33522A 2-channel
Frequency range (sine and square)	1 µHz to 30 MHz	1 µHz to 30 MHz
Arb resolution and sample rate	16-bit, 250 MSa/s, 1MSa/channel memory	16-bit, 250 MSa/s, 1MSa/channel memory
Jitter and THD	< 40 PS, jitter, 0.04% THD	< 40 PS, jitter, 0.04% THD
Ramp symmetry	< 0.05% from 5% to 95% of the signal amplitude	< 0.05% from 5% to 95% of the signal amplitude
Sum modulation	Add any 2 signals, independent frequency and amplitude	Add any 2 signals, independent frequency and amplitude
Square wave duty cycle	0.01% to 99.99%	0.01% to 99.99%
Pulse frequency range	8.4 ns to 1 µs, independently variable, 100-ps or 3-digit resolution	8.4 ns to 1 µs, independently variable, 100-ps or 3-digit resolution
Modulation carrier waveforms	AM, FM, PM, FSK, BPSK, PWM, Sum (carrier + modulation)	AM, FM, PM, FSK, BPSK, PWM, Sum (carrier + modulation)
Modulation capability	Continuous, modulate, frequency sweep, burst, output gate	Continuous, modulate, frequency sweep, burst, output gate
Amplitude range	1 mVpp to 10 Vpp into 50 Ω	1 mVpp to 10 Vpp into 50 Ω
Amplitude accuracy	± 1% of offset setting ± 0.25% of amplitude setting ±2mV	± 1% of offset setting ± 0.25% of amplitude setting ± 2mV
Frequency accuracy	± 1 ppm of setting ± 15 pHz	± 1 ppm of setting ± 15 pHz
2-channel coupling		Frequency and amplitude coupling, equal or inverted channels
Interface	LAN, USB, optional GPIB	LAN, USB, optional GPIB

Options and Accessories

Options	Description
Option 002	Increases arbitrary waveform memory to 16 MSa/channel
Option 010	High-stability frequency reference
Option 400	GPIB interface
33503A	BenchLink Waveform Builder Pro Software

Recommended service options
Additional two years of Return-to-Agilent warranty
Additional two years of Return-to-Agilent calibrations
For more information go to **www.agilent.com/find/removealldoubt**

For more details on the Agilent 33521A and 33522A Function/arbitrary waveform generators, see the *DataSheet*, literature number 5990-5914EN

For more information on Agilent function/arbitrary waveform generators, please visit:
www.agilent.com/find/functiongenerators

To find a distributor in your area, go to: **www.agilent.com/find/distributors**

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