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Data Sheet

August 3, 2026

KEYSIGHT

Keysight 33520B 30MHz Waveform Generator

Keysight 33520B 30 MHz Waveform Generator Overview The Keysight 33520B is a two-channel 30 MHz Trueform waveform generator in the 33500B Series without arbitrary waveform capability (function/waveform generation). It shares the Trueform performance envelope of the 33500B family: jitter < 40 ps, THD < 0.04%, amplitude 1 mVpp to 10 Vpp, 250 MSa/s sampling, and 16-bit amplitude resolution. Optional OCX and SEC are available. Applications Dual-channel sine, square, pulse, ramp, and modulated function generation for design validation and ATE where arb memory is not required (use 33522B when arb is needed). Overview The Keysight 33520B is a two-channel 30 MHz Trueform waveform generator in the 33500B Series without arbitrary waveform capability (function/waveform generation). It shares the Trueform performance envelope of the 33500B family: jitter < 40 ps, THD < 0.04%, amplitude 1 mVpp to 10 Vpp, 250 MSa/s sampling, and 16-bit amplitude resolution. Optional OCX and SEC are available. Applications Dual-channel sine, square, pulse, ramp, and modulated function generation for design validation and ATE where arb memory is not required (use 33522B when arb is needed).



MODEL

Keysight 33520B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

33520B

LISTING

<https://aumictechlabs.com/products/33520b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight 33520B is a dual-channel, 30 MHz waveform generator engineered for precision signal generation in design validation, manufacturing test, and education. Built on Keysight's Trueform technology, it delivers superior signal fidelity with total harmonic distortion as low as 0.04% - five times better than conventional DDS generators - along with 12x lower jitter than competitive instruments.

Technical Specifications The 33520B outputs standard waveforms (sine, square, ramp, pulse, triangle), gaussian noise, PRBS, and DC. Seventeen built-in arbitrary waveforms including cardiac, haversine, and Lorentz patterns enable rapid prototyping. True point-by-point arbitrary waveform generation with sequencing supports user-defined signals with 1 MSa per channel standard memory; optional 16 MSa per channel (Option MEM) accommodates longer waveforms. Waveform summing combines up to four signals across two channels. Core signal parameters include 250 MSa/s sampling rate, 16-bit vertical resolution, and 1 mVpp to 10 Vpp amplitude range. Pulse edge jitter measures as low as 40 ps with 8.4 ns rise and fall times. These performance metrics enable testing of precision analog and mixed-signal circuits.

Key Features Dual independent channels with synchronized or asynchronous operation AM, FM, PM, FSK, BPSK, PWM, and sum modulation up to the carrier frequency USB, LAN (LXI-C/LXI Core), and GPIB interfaces for laboratory and production environments Front-panel USB for direct file management and remote web-browser operation over LAN Compact form factor: 212.8 mm (W) × 272.3 mm (D) × 88.3 mm (H); 3.3 kg Operating temperature 0°C to +55°C

Typical Applications Pulse characterization, transient response testing, communication signal simulation, sensor excitation, and educational demonstrations of signal processing and waveform generation principles.

Compatibility & Integration Standard laboratory interfaces (USB, LAN, GPIB) integrate with automated test systems. BenchVue software support enables remote instrument control and data logging.

Features & description

From manufacturer datasheet

Features

- Bandwidth: 30 MHz; 2 channels - No arbitrary waveforms (contrast 33522B) - Trueform technology - Jitter: < 40 ps - THD: < 0.04% - Amplitude: 1 mVpp to 10 Vpp - Sample rate: 250 MSa/s - Resolution: 16-bit - Optional: OCX high-stability timebase; SEC NISPOM security

33520B Characteristics / Specifications

PARAMETER	VALUE
Technical Specifications Model	33520B Manufacturer: Keysight Technologies Instrument Type: Waveform Generator (Trueform; no arb) Family: 33500B Series Alias: 33520B; Keysight 33520B; Agilent 33520B
Bandwidth and Channels Bandwidth	30 MHz Number of Channels: 2 Arbitrary Waveforms: No (upgrade path historically via arb options on related models–33522B is the 2-ch arb sibling) Sine / Pulse: Up to 30 MHz
Trueform Performance Jitter	< 40 ps THD: < 0.04% Amplitude Range: 1 mVpp to 10 Vpp Sample Rate: 250 MSa/s Amplitude Resolution: 16-bit
Model Contrast 33519B	30 MHz, 1 channel, no arb 33520B: 30 MHz, 2 channels, no arb 33521B: 30 MHz, 1 channel, with arb 33522B: 30 MHz, 2 channels, with arb Operational Notes Prefer Keysight 33500B Series product fact sheet 5991-0757 and full 33500B datasheet for modulation, accuracy, and I/O tables. Do not confuse with 33620A-class or 33522B (arb-equipped).
Bandwidth	30 MHz; 2 channels - No arbitrary waveforms (contrast 33522B) - Trueform technology - Jitter: < 40 ps - THD: < 0.04% - Amplitude: 1 mVpp to 10 Vpp - Sample rate: 250 MSa/s - Resolution: 16-bit - Optional: OCX high-stability timebase; SEC NISPOM secur

33520B Specifications

PARAMETER	VALUE
Keysight 33520B 30 MHz Waveform Generator	Overview
Key Features	- Bandwidth: 30 MHz; 2 channels
Technical Specifications	Model: 33520B
Bandwidth and Channels	Bandwidth: 30 MHz
Trueform Performance	Jitter: < 40 ps
Model Contrast	33519B: 30 MHz, 1 channel, no arb

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance envelope of the 33500B family: jitter < 40 ps, THD < 0.04%, amplitude 1 mVpp to 10 Vpp, 250 MSa/s sampling, and 16-bit amplitude resolution. Optional OCX and SEC are available.

Applications Dual-channel sine, square, pulse, ramp, and modulated function generation for design validation and ATE where arb memory is not required (use 33522B when arb is needed).

Key Features - Bandwidth: 30 MHz; 2 channels - No arbitrary waveforms (contrast 33522B) - Trueform technology - Jitter: < 40 ps - THD: < 0.04% - Amplitude: 1 mVpp to 10 Vpp - Sample rate: 250 MSa/s - Resolution: 16-bit - Optional: OCX high-stability timebase; SEC NISPOM security

Technical Specifications Model: 33520B Manufacturer: Keysight Technologies Instrument Type: Waveform Generator (Trueform; no arb) Family: 33500B Series Alias: 33520B; Keysight 33520B; Agilent 33520B

Bandwidth and Channels Bandwidth: 30 MHz Number of Channels: 2 Arbitrary Waveforms: No (upgrade path historically via arb options on related models-33522B is the 2-ch arb sibling) Sine / Pulse: Up to 30 MHz

Trueform Performance Jitter: < 40 ps THD: < 0.04% Amplitude Range: 1 mVpp to 10 Vpp Sample Rate: 250 MSa/s Amplitude Resolution: 16-bit

Options OCX: High-stability OCX0 timebase SEC: NISPOM and file security

Model Contrast 33519B: 30 MHz, 1 channel, no arb 33520B: 30 MHz, 2 channels, no arb 33521B: 30 MHz, 1 channel, with arb 33522B: 30 MHz, 2 channels, with arb

Operational Notes Prefer Keysight 33500B Series product fact sheet 5991-0757 and full 33500B datasheet for modulation, accuracy, and I/O tables. Do not confuse with 33620A-class or 33522B (arb-equipped).

Specifications

PARAMETER	VALUE
Bandwidth	30 MHz
Number of Channels	2
Arbitrary Waveforms	No (upgrade path historically via arb options on related models-33522B is the 2-ch arb sibling)
Sine / Pulse	Up to 30 MHz

Technical Specifications

PARAMETER	VALUE
Model	33520B
Manufacturer	Keysight Technologies
Instrument Type	Waveform Generator (Trueform; no arb)
Family	33500B Series
Alias	33520B; Keysight 33520B; Agilent 33520B

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.