


Aumictech

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 3, 2026

KEYSIGHT

Keysight 33510B 20MHz Waveform Generator

Keysight 33510B 20 MHz Waveform Generator The Keysight 33510B is a two-channel 20 MHz Trueform waveform generator without arbitrary waveform capability in the 33500B Series. Jitter < 40 ps, THD < 0.04%, amplitude 1 mVpp–10 Vpp, 250 MSa/s, 16-bit resolution. Optional OCX and SEC. Dual-channel function generation at 20 MHz where arb memory is not required (use 33512B for arb). Instrument Type: Waveform Generator (Trueform; no arb) The Keysight 33510B is a two-channel 20 MHz Trueform waveform generator without arbitrary waveform capability in the 33500B Series. Jitter < 40 ps, THD < 0.04%, amplitude 1 mVpp–10 Vpp, 250 MSa/s, 16-bit resolution. Optional OCX and SEC. Dual-channel function generation at 20 MHz where arb memory is not required (use 33512B for arb). Instrument Type: Waveform Generator (Trueform; no arb) Bandwidth: 20 MHz; Channels: 2; Arbitrary: No



MODEL

Keysight 33510B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

33510B

LISTING

<https://aumictechlabs.com/products/33510b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 33510B is a dual-channel, 20 MHz waveform generator built on Trueform technology to deliver superior signal fidelity and accuracy for test and development environments. Unlike traditional DDS generators, Trueform synthesis achieves 5x lower harmonic distortion on sine waves, 12x better jitter performance, and 8.4-ns rise/fall times - critical for applications demanding precise edge placement and minimal signal artifacts. With 16-bit resolution, 160 MSa/s sampling, and 1 μ Hz frequency resolution, the 33510B generates everything from standard

waveforms to complex arbitrary signals with confidence. Technical Specifications Channels: 2 Bandwidth: 20 MHz Sampling Rate: Up to 160 MSa/s Resolution: 16-bit Amplitude Range: 1 mVpp to 10 Vpp (high impedance) Frequency Resolution: 1 μ Hz Rise/Fall Times: 8.4 ns Key Features Arbitrary Waveform Memory: 1 MSa/channel standard; expandable to 16 MSa/channel with Option MEM Built-in Waveforms: 17 standard waveforms including Sine, Square, Ramp, Triangle, Gaussian Noise, and PRBS Modulation Modes: AM, FM, PM, FSK, BPSK, PWM, and Sum (multi-carrier) Signal Summing: Combine up to four signals across two channels for dual-tone and multifrequency generation PRBS Patterns: Standard PN sequences (PN7, PN19) up to 50 Mbit/sec Noise Generation: Variable bandwidth noise with controlled frequency content Total Harmonic Distortion: Class-leading THD performance ensures measurement integrity Waveform Editing: Front-panel interface, oscilloscope capture integration, or external software (MATLAB, Excel) Typical Applications Component and subsystem characterization Digital serial bus testing with PRBS generation Audio and RF signal simulation Equipment validation and compliance testing Educational and laboratory measurements Compatibility & Integration Supports point-by-point arbitrary waveform creation with sequencing for user-defined signal reproduction across multiple platforms.

Features & description

From manufacturer datasheet

Features

- 20 MHz; 2 channels; no arb • Trueform; jitter < 40 ps; THD < 0.04% • 250 MSa/s; 16-bit; 1 mVpp–10 Vpp • Options: OCX, SEC

33510B Characteristics / Specifications

PARAMETER	VALUE
Model	33510B
Manufacturer	Keysight Technologies
Instrument Type	Waveform Generator (Trueform; no arb)
Family	33500B Series
Alias	33510B
Bandwidth	20 MHz; Channels: 2; Arbitrary: No
Jitter	< 40 ps; THD: < 0.04%
Amplitude	1 mVpp to 10 Vpp
Sample Rate	250 MSa/s; Resolution: 16-bit Model Contrast 33510B: 20 MHz, 2 ch, no arb 33512B: 20 MHz, 2 ch, with arb 33509B: 20 MHz, 1 ch, no arb Operational Notes Prefer Keysight 33500B Series fact sheet 5991-0757.
Options	OCX, SEC

33510B Specifications

PARAMETER	VALUE
Keysight 33510B 20 MHz Waveform Generator	Overview
Applications	Dual-channel function generation at 20 MHz where arb memory is not required (use 33512B for arb).
Key Features	- 20 MHz; 2 channels; no arb
Technical Specifications	Model: 33510B
Model Contrast	33510B: 20 MHz, 2 ch, no arb
Operational Notes	Prefer Keysight 33500B Series fact sheet 5991-0757.

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.

Specifications

Specifications

PARAMETER	VALUE
Model	33510B
Manufacturer	Keysight Technologies
Instrument Type	Waveform Generator (Trueform; no arb)
Family	33500B Series
Alias	33510B

Specifications

PARAMETER	VALUE
Bandwidth	20 MHz; Channels: 2; Arbitrary: No
Jitter	< 40 ps; THD: < 0.04%
Amplitude	1 mVpp to 10 Vpp
Sample Rate	250 MSa/s; Resolution: 16-bit

Model Contrast

33510B: 20 MHz, 2 ch, no arb
33512B: 20 MHz, 2 ch, with arb
33509B: 20 MHz, 1 ch, no arb

Operational Notes

Prefer Keysight 33500B Series fact sheet 5991-0757.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 3, 2026

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