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Data Sheet

August 13, 2026

KEITHLEY

Keithley 196 6.5 Digit Digital Multimeter

Keysight M8196A 92 GSa/s Arbitrary Waveform Generator The Keysight M8196A is a high-speed AXIe arbitrary waveform generator with sample rates to 92 GSa/s, up to 4 differential channels per 1-slot module, 32 GHz analog bandwidth, and 512 kSa waveform memory per channel. Built-in frequency and phase response calibration supports multi-level and multi-channel high-speed digital and coherent optical stimulus to 64 GBaud and beyond. The Keysight M8196A is a high-speed AXIe arbitrary waveform generator with sample rates to 92 GSa/s, up to 4 differential channels per 1-slot module, 32 GHz analog bandwidth, and 512 kSa waveform memory per channel. Built-in frequency and phase response calibration supports multi-level and multi-channel high-speed digital and coherent optical stimulus to 64 GBaud and beyond.



MODEL

Keithley 196

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

196

LISTING

<https://aumictechlabs.com/products/196-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keithley 196 is a 6.5-digit autoranging digital multimeter engineered for precision DC and AC measurements across voltage, current, and resistance. It delivers 100 nV resolution on the 300 mV range and typical DC voltage accuracy of 0.0013% + 10 counts, making it suitable for both benchtop and automated test system integration. The instrument combines a 10-character alphanumeric LED display with up to 1000 readings per second measurement rate and onboard storage for 500 readings. Full IEEE-488 programmability enables remote control and data

retrieval, while a weighted average digital filter and exceptional common mode rejection (>110 dB at DC) ensure clean, reliable measurements in demanding environments.

Technical Specifications

Measurement Functions

DC Voltage: 300 mV to 300 V, 100 nV resolution, $\pm 0.0013\% + 10$ counts accuracy (3V range)

True RMS AC Voltage: 300 mV to 300 V, 1 μ V resolution, $\pm(0.01\% + 0.01 \text{ dB})$ accuracy, 300 kHz bandwidth, 3:1 crest factor

DC Current: 300 μ A to 3 A, 1 nA resolution, 3A fuse protection (250V)

True RMS AC Current: 300 μ A to 3 A

Resistance: 300 Ω to 300 M Ω , 100 $\mu\Omega$ resolution, $\pm 0.0020\% + 2$ counts accuracy (300 Ω range), 5.5V max open circuit voltage

Performance Metrics

Measurement rate: Up to 1000 readings/second

Analog settling time: <1 ms (110 dB at DC, 50/60 Hz with 1 k Ω source imbalance)

NMRR: >60 dB at 1 kHz and 60 Hz

Temperature coefficient: $<\pm(0.1 \times \text{accuracy})/^{\circ}\text{C}$ below 20 kHz; $\pm(0.2 \times)$ from 20 kHz to 100 kHz

Input impedance (DC voltage): 10 M Ω shunted by <120 pF

Display resolution: $\pm 3,030,000$ counts (6.5 digits)

Key Features

10-character alphanumeric 14-segment LED display

Data memory: 500 readings via IEEE-488 bus

Programmable digital calibration from front panel or remote interface

Configurable weighted average digital filter

Interfaces & Integration

IEEE-488 (GPIB) interface for full programmability

Support for MULTILINE (OCL, LLO, SOC, GET, GTL, UNT, UNL, SPE, SPD) and UNILINE (Fe, REN, EOI) commands

Rear-panel accessible fuse

Typical Applications

Precision component characterization, calibration labs, automated test systems, semiconductor parametric measurements, and long-term data logging.

Features & description

From manufacturer datasheet

Features

- Sample rate up to 92 GSa/s on up to 4 channels
- Analog bandwidth 32 GHz typical
- 8 bit vertical DAC resolution
- 512 kSa waveform memory per channel
- 1 2 or 4 differential channels software upgradeable
- Built-in frequency and phase response calibration

Applications

- Multi-level SERDES and optical transceiver stimulus
- Coherent optical dual-polarization I/Q generation
- Multi-channel MIMO and phased-array baseband/RF
- High-speed ATE and R&D waveform playback

196 Characteristics / Specifications

PARAMETER	VALUE
Model	M8196A
Manufacturer	Keysight
Instrument Type	Arbitrary Waveform Generator
Alias	M8196A; Keysight M8196A AWG
Maximum sample rate	92 GSa/s
Sample rate range	82.24 to 92 GSa/s
DAC resolution	8 bits
Channels per module	1 2 or 4 Opt 001 002 004
Analog bandwidth typical 3 dB	32 GHz
Maximum waveform memory	512 kSa per channel
Amplitude single ended	up to 1 Vpp se into 50 ohm
Amplitude differential	up to 2 Vpp diff into 50 ohm
Amplitude minimum se	75 mVpp se
Amplitude minimum diff	150 mVpp diff
Voltage window	-1.0 to +2.5 V
Rise fall 20 to 80 percent corrected typical	9 ps
Rise fall 20 to 80 percent uncorrected typical	14 ps
Amplitude resolution	400 uV nominal
DC amplitude accuracy typical	plus or minus (2.5 percent + 10 mV)
Impedance	50 ohm nominal
Maximum baud rate class	64 GBaud and beyond
Pattern length support	up to PRBS 2 ¹⁵ -1 class
Waveform granularity	128 samples
Minimum waveform length	128 samples

PARAMETER	VALUE
Form factor	1 slot AXIe
Publication	Keysight 5992-0971 M8196A datasheet
Embedded calibration	frequency and phase response
Output type	differential channels
Related sync module	M8197A Multi Channel Synchronization Notes Specs from Keysight M8196A 92 GSa/s AWG datasheet 5992-0971. Confirm channel option (001/002/004), firmware, and M8197A sync presence on the system.
Bandwidth	32 GHz typical - 8 bit vertical DAC resolution - 512 kSa waveform memory per channel - 1 2 or 4 differential channels software upgradeable - Built-in frequency and phase response calibration

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.

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Notes
Specs from Keysight M8196A 92 GSa/s AWG datasheet 5992-0971. Confirm channel option (001/002/004), firmware, and M8197A sync presence on the system.

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.