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Data Sheet

August 13, 2026

RIGOL

RIGOL MSO2302A-S Mixed Signal Oscilloscope, 2 Channel, 300MHz

Rigol Mixed Signal Oscilloscopes (MSO). Channels: 2 at 300 MHz bandwidth, Channels: 16 logic analyzer inputs, Sample Rate: Up to 2 GSa/s.



MODEL

Rigol MSO2302A-S

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

MSO2302A-S

LISTING

<https://aumictechlabs.com/products/mso2302a-s-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The RIGOL MSO2302A-S is a mixed-signal oscilloscope that combines digital storage, arbitrary waveform generation, and logic analysis in a single platform. Built for embedded systems development and signal characterization, it delivers 300 MHz analog bandwidth across 2 channels with up to 2 GSa/s sampling, plus 16 digital logic channels at 1 GSa/s. The instrument captures up to 50,000 waveforms per second using UltraVision technology, revealing fine signal detail across both repetitive and transient events. Technical Specifications Analog Channels: 2 at 300 MHz bandwidth Digital Channels: 16 logic analyzer inputs Analog Sample Rate: Up to 2 GSa/s Digital Sample Rate: Up to 1 GSa/s Memory Depth (Analog): 14 Mpts standard; 56 Mpts optional Memory Depth (Digital): 14 Mpts (16 CH) standard; expandable to 28 Mpts (8 CH) optional Waveform Capture Rate: Up to 50,000 wfms/s Vertical Sensitivity: 500 μ V/div to 10 V/div Vertical Resolution: 8-bit A/D converter Input Impedance: 1 M Ω or 50 Ω (analog); 101 k Ω (digital) Maximum

Input Voltage: CAT I 300 Vrms; CAT II 100 Vrms; transient overvoltage 1000 Vpk Probe Attenuation Support: 0.01x to 1000x Display: 8-inch TFT WVGA (800×480 pixels) with up to 256 intensity levels Waveform Storage: Up to 65,000 frames hardware-based playbackKey Features Arbitrary Waveform Generator: 2 channels, 25 MHz bandwidth Trigger Functions: Edge, pulse, runt, slope, pattern, setup/hold; optional windows, nth edge, video, delay, timeout, duration Serial Protocol Support: RS232, I²C, SPI trigger and decode; CAN decode Reference Clock: 10 MHz in/outInterfaces & Connectivity USB Host (2 ports) for external storage and printers USB Device for PC connection LXI-compliant LAN interface VGA output for external monitors Optional GPIB via USB module Trigger/calibration outputTypical Applications Embedded system debug, digital signal validation, mixed-signal protocol analysis, and design verification workflows.

Features & description

From manufacturer datasheet

Built-in 25 MHz stimulus plus capture

Low level analog (500 uV/div) with 16 digital channels Production pass/fail and LAN/LXI remote Key Features 2 analog plus 16 digital plus 2 channel 25 MHz AWG Runt, Nth edge, setup/hold, and USB trigger options Hardware real-time record/playback (65 000 frames analog off) USB Host/Device, LAN (LXI), AUX; USB-GPIB optional Vertical 500 uV/div to 10 V/div Timebase 1.000 ns/div to 1.000 ks/div Technical Specifications Model: MSO2302A-S Manufacturer: Rigol Instrument Type: Mixed signal oscilloscope with built-in generator Alias: MSO2302A S; RIGOL MSO2302A-S Analog Bandwidth: 300 MHz Analog Channels: 2 Digital Channels: 16 Built In Source: 2 channel 25 MHz Analog Sample Rate Single: 2 GSa/s Analog Sample Rate Dual: 1 GSa/s Digital Sample Rate 8 ch: 1 GSa/s Digital Sample Rate 16 ch: 500 MSa/s Analog Memory Standard Single: 14 Mpts Analog Memory Standard Dual: 7 Mpts Analog Memory Optional Single: 56 Mpts Digital Memory Standard 8 ch: 14 Mpts Digital Memory Standard 16 ch: 7 Mpts Waveform Capture Rate: 52 000 wfms/s Record Frames Analog Off: up to 65 000 Record Frames Digital On: up to 32 000 Timebase Scale: 1.000 ns/div to 1.000 ks/div Vertical Scale: 500 uV/div to 10 V/div Analog Resolution: 8 bit

MSO2302AS Characteristics / Specifications

PARAMETER	VALUE
Model	MSO2302A-S
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope with built-in generator
Alias	MSO2302A S; RIGOL MSO2302A-S
Analog Bandwidth	300 MHz
Analog Channels	2
Digital Channels	16
Built In Source	2 channel 25 MHz
Analog Sample Rate Single	2 GSa/s
Analog Sample Rate Dual	1 GSa/s
Digital Sample Rate 8 ch	1 GSa/s
Digital Sample Rate 16 ch	500 MSa/s
Analog Memory Standard Single	14 Mpts
Analog Memory Standard Dual	7 Mpts
Analog Memory Optional Single	56 Mpts
Digital Memory Standard 8 ch	14 Mpts
Digital Memory Standard 16 ch	7 Mpts
Waveform Capture Rate	52 000 wfms/s
Record Frames Analog Off	up to 65 000
Record Frames Digital On	up to 32 000
Timebase Scale	1.000 ns/div to 1.000 ks/div
Vertical Scale	500 uV/div to 10 V/div
Analog Resolution	8 bit
Digital Min Pulse	5 ns
Peak Detect Analog Single	500 ps

PARAMETER	VALUE
Input Impedance Analog	1 MOhm or 50 ohm
Display	8.0 inch TFT, 800 × 480, 160 000 colors
AWG Sample Rate	200 MSa/s
AWG Vertical Resolution	14 bit
AWG Max Frequency	25 MHz
AWG Sine Range	100 mHz to 25 MHz
AWG Square Range	100 mHz to 15 MHz
AWG Pulse Range	100 mHz to 1 MHz
AWG Amplitude High Z	20 mVpp to 5 Vpp
AWG Amplitude 50 ohm	10 mVpp to 2.5 Vpp
Standard Analog Probes	2 x PVP2350 350 MHz
Standard Logic Probe	RPL2316
Power	100 V to 240 V, 45 Hz to 440 Hz, max 50 W
Dimensions	361.6 mm x 179.6 mm x 130.8 mm
Weight	3.9 kg plus/minus 0.5 kg without package
Operating Temperature	0 C to +50 C Notes Specs from Rigol MSO/DS2000A datasheet. MSO2302A-S includes the dual 25 MHz source; MSO2302A does not. Confirm memory option 56 Mpts and decode licenses.
Bandwidth	300 MHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to +50 C
Operating Temperature	0 C to +50 C

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	MS02302A-S
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope with built-in generator
Alias	MS02302A S; RIGOL MS02302A-S
Analog Bandwidth	300 MHz
Analog Channels	2
Digital Channels	16
Built In Source	2 channel 25 MHz
Analog Sample Rate Single	2 GSa/s
Analog Sample Rate Dual	1 GSa/s
Digital Sample Rate 8 ch	1 GSa/s
Digital Sample Rate 16 ch	500 MSa/s
Analog Memory Standard Single	14 Mpts
Analog Memory Standard Dual	7 Mpts
Analog Memory Optional Single	56 Mpts
Digital Memory Standard 8 ch	14 Mpts
Digital Memory Standard 16 ch	7 Mpts
Waveform Capture Rate	52 000 wfms/s
Record Frames Analog Off	up to 65 000
Record Frames Digital On	up to 32 000
Timebase Scale	1.000 ns/div to 1.000 ks/div
Vertical Scale	500 uV/div to 10 V/div
Analog Resolution	8 bit
Digital Min Pulse	5 ns
Peak Detect Analog Single	500 ps
Input Impedance Analog	1 MOhm or 50 ohm

PARAMETER	VALUE
Display	8.0 inch TFT, 800 x 480, 160 000 colors
AWG Sample Rate	200 MSa/s
AWG Vertical Resolution	14 bit
AWG Max Frequency	25 MHz
AWG Sine Range	100 mHz to 25 MHz
AWG Square Range	100 mHz to 15 MHz
AWG Pulse Range	100 mHz to 1 MHz
AWG Amplitude High Z	20 mVpp to 5 Vpp
AWG Amplitude 50 ohm	10 mVpp to 2.5 Vpp
Standard Analog Probes	2 x PVP2350 350 MHz
Standard Logic Probe	RPL2316
Power	100 V to 240 V, 45 Hz to 440 Hz, max 50 W
Dimensions	361.6 mm x 179.6 mm x 130.8 mm
Weight	3.9 kg plus/minus 0.5 kg without package
Operating Temperature	0 C to +50 C

Notes

Specs from Rigol MS0/DS2000A datasheet. MS02302A-S includes the dual 25 MHz source; MS02302A does not. Confirm memory option 56 Mpts and decode licenses.

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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.