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Data Sheet

August 13, 2026

RIGOL

Rigol MSO1104Z-S Mixed Signal Oscilloscope 100MHz

The Rigol MSO1104Z-S is a 100 MHz mixed signal oscilloscope combining four analog channels with 16 digital logic channels and a dual-channel 25 MHz arbitrary waveform generator. Purpose-built for engineers debugging complex electronics, this instrument delivers integrated analog, digital, and signal generation capabilities in a single benchtop platform. UltraVision technology enables deep memory capture, high waveform acquisition rates up to 30,000 wfms/s, and multi-level intensity grading for precise signal observation and analysis. Typical Applications Multi-domain signal debugging in embedded systems, mixed-signal protocol analysis, timing verification, and arbitrary waveform generation for prototype stimulation. Compatibility & Integration Ships with passive probes (150 MHz bandwidth), logic probe, and software bundle. USB and LAN interfaces support remote operation and data acquis



MODEL

Rigol MSO1104Z-S

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

MSO1104Z-S

LISTING

<https://aumictechlabs.com/products/mso1104z-s-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rigol MSO1104Z-S is a 100 MHz mixed signal oscilloscope combining four analog channels with 16 digital logic channels and a dual-channel 25 MHz arbitrary waveform generator. Purpose-built for engineers debugging complex electronics, this instrument delivers integrated analog,

digital, and signal generation capabilities in a single benchtop platform. UltraVision technology enables deep memory capture, high waveform acquisition rates up to 30,000 wfms/s, and multi-level intensity grading for precise signal observation and analysis.

Technical Specifications

Bandwidth: 100 MHz Analog Channels: 4 Digital Channels: 16 Arbitrary Waveform Generator: 2 channels, 25 MHz bandwidth Real-Time Sampling: 1 GSa/s (single channel), 500 MSa/s (dual channel), 250 MSa/s (four channels) Memory Depth: 12 Mpts standard (12 Mpts/1 CH, 6 Mpts/2 CH, 3 Mpts/3–4 CH); optional 24 Mpts (24 Mpts/1 CH, 12 Mpts/2 CH, 6 Mpts/3–4 CH) Waveform Capture Rate: 30,000 wfms/s Display: 7-inch WVGA TFT LCD (800×480 pixels) with intensity grading Power Input: 100–240 V, 45–440 Hz; max 50 W; 2 A T-rated fuse (250 V)

Key Features

Automated measurements: Vpp, Vamp, Vmax, Vmin, Vtop, Vbase, Vavg, Vrms, preshoot, overshoot, frequency, period, rise/fall time, positive/negative width Advanced triggering including serial bus trigger/decode (RS232, I2C, SPI) USB Host and Device connectivity; LAN interface; TrigOut/PassFail auxiliary output

Typical Applications

Multi-domain signal debugging in embedded systems, mixed-signal protocol analysis, timing verification, and arbitrary waveform generation for prototype stimulation.

Compatibility & Integration

Ships with passive probes (150 MHz bandwidth), logic probe, and software bundle. USB and LAN interfaces support remote operation and data acquisition workflows.

Features & description

From manufacturer datasheet

Built-in 25 MHz stimulus for analog and digital benches

Optional RS232/UART, I2C, SPI decode Education and production with LXI LAN UltraVision intensity graded capture Key Features 100 MHz analog bandwidth; calculated rise 3.5 ns Digital min pulse 10 ns; threshold plus/minus 15.0 V in 10 mV steps AWG 200 MSa/s, 14 bit, sine to 25 MHz USB Host/Device, LAN (LXI), AUX Hardware record/playback up to 60 000 frames optional Vertical 1 mV/div to 10 V/div Technical Specifications Model: MSO1104Z-S Manufacturer: Rigol Instrument Type: Mixed signal oscilloscope with built-in generator Alias: MSO1104Z S; RIGOL MSO1104Z-S Analog Bandwidth: 100 MHz Single Shot Bandwidth: 100 MHz Analog Channels: 4 Digital Channels: 16 Built In Source: 2 channel 25 MHz Analog Sample Rate 1 ch: 1 GSa/s Analog Sample Rate 2 ch: 500 MSa/s Analog Sample Rate 3 or 4 ch: 250 MSa/s Digital Sample Rate 8 ch: 1 GSa/s Digital Sample Rate 16 ch: 500 MSa/s Analog Memory Standard 1 ch: 12 Mpts Analog Memory Optional 1 ch: 24 Mpts Digital Memory Standard 8 ch: 12 Mpts Digital Memory Standard 16 ch: 6 Mpts Waveform Capture Rate: 30 000 wfms/s Record Frames Optional: up to 60 000 Timebase Scale: 5 ns/div to 50 s/div Timebase Accuracy: less than or equal to plus/minus 25 ppm Calculated Rise Time: 3.5 ns

MSO1104ZS Characteristics / Specifications

PARAMETER	VALUE
Model	MSO1104Z-S
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope with built-in generator
Alias	MSO1104Z S; RIGOL MSO1104Z-S
Analog Bandwidth	100 MHz
Single Shot Bandwidth	100 MHz
Analog Channels	4
Digital Channels	16
Built In Source	2 channel 25 MHz
Analog Sample Rate 1 ch	1 GSa/s
Analog Sample Rate 2 ch	500 MSa/s
Analog Sample Rate 3 or 4 ch	250 MSa/s
Digital Sample Rate 8 ch	1 GSa/s
Digital Sample Rate 16 ch	500 MSa/s
Analog Memory Standard 1 ch	12 Mpts
Analog Memory Optional 1 ch	24 Mpts
Digital Memory Standard 8 ch	12 Mpts
Digital Memory Standard 16 ch	6 Mpts
Waveform Capture Rate	30 000 wfms/s
Record Frames Optional	up to 60 000
Timebase Scale	5 ns/div to 50 s/div
Timebase Accuracy	less than or equal to plus/minus 25 ppm
Calculated Rise Time	3.5 ns
Vertical Scale	1 mV/div to 10 V/div
Analog Resolution	8 bit

PARAMETER	VALUE
Digital Resolution	1 bit
Analog Input Impedance	(1 MOhm plus/minus 1 percent) parallel (15 pF plus/minus 3 pF)
Digital Input Impedance	(100 kOhm plus/minus 1 percent) parallel (8 pF plus/minus 3 pF)
Digital Threshold Range	plus/minus 15.0 V, 10 mV step
Digital Min Pulse	10 ns
Analog Max Input	CAT I 300 Vrms, CAT II 100 Vrms, 1000 Vpk transient
Bandwidth Limit	20 MHz
AWG Sample Rate	200 MSa/s
AWG Vertical Resolution	14 bit
AWG Sine Range	0.1 Hz to 25 MHz
AWG Square Range	0.1 Hz to 15 MHz
AWG Amplitude High Z	20 mVpp to 5 Vpp
Display	7.0 inch TFT, 800 × 480, 16 million colors
Standard Analog Probes	4 x PVP2150 150 MHz
Standard Logic Probe	RPL1116
Power	100 V to 240 V, 45 Hz to 440 Hz, max 50 W
Dimensions	313.1 mm x 160.8 mm x 122.4 mm
Weight	3.2 kg plus/minus 0.2 kg without package
Operating Temperature	0 C to +50 C Notes Specs from Rigol MSO/DS1000Z datasheet. MSO1104Z-S includes the dual 25 MHz source; MSO1104Z does not. Confirm memory option 24 Mpts and serial decode licenses.
Bandwidth	100 MHz
Rise Time	3.5 ns

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	MS01104Z-S
Manufacturer	Rigol
Instrument Type	Mixed signal oscilloscope with built-in generator
Alias	MS01104Z S; RIGOL MS01104Z-S
Analog Bandwidth	100 MHz
Single Shot Bandwidth	100 MHz
Analog Channels	4
Digital Channels	16
Built In Source	2 channel 25 MHz
Analog Sample Rate 1 ch	1 GSa/s
Analog Sample Rate 2 ch	500 MSa/s
Analog Sample Rate 3 or 4 ch	250 MSa/s
Digital Sample Rate 8 ch	1 GSa/s
Digital Sample Rate 16 ch	500 MSa/s
Analog Memory Standard 1 ch	12 Mpts
Analog Memory Optional 1 ch	24 Mpts
Digital Memory Standard 8 ch	12 Mpts
Digital Memory Standard 16 ch	6 Mpts
Waveform Capture Rate	30 000 wfms/s
Record Frames Optional	up to 60 000
Timebase Scale	5 ns/div to 50 s/div
Timebase Accuracy	less than or equal to plus/minus 25 ppm
Calculated Rise Time	3.5 ns
Vertical Scale	1 mV/div to 10 V/div
Analog Resolution	8 bit
Digital Resolution	1 bit

PARAMETER	VALUE
Analog Input Impedance	(1 MOhm plus/minus 1 percent) parallel (15 pF plus/minus 3 pF)
Digital Input Impedance	(100 kOhm plus/minus 1 percent) parallel (8 pF plus/minus 3 pF)
Digital Threshold Range	plus/minus 15.0 V, 10 mV step
Digital Min Pulse	10 ns
Analog Max Input	CAT I 300 Vrms, CAT II 100 Vrms, 1000 Vpk transient
Bandwidth Limit	20 MHz
AWG Sample Rate	200 MSa/s
AWG Vertical Resolution	14 bit
AWG Sine Range	0.1 Hz to 25 MHz
AWG Square Range	0.1 Hz to 15 MHz
AWG Amplitude High Z	20 mVpp to 5 Vpp
Display	7.0 inch TFT, 800 x 480, 16 million colors
Standard Analog Probes	4 x PVP2150 150 MHz
Standard Logic Probe	RPL1116
Power	100 V to 240 V, 45 Hz to 440 Hz, max 50 W
Dimensions	313.1 mm x 160.8 mm x 122.4 mm
Weight	3.2 kg plus/minus 0.2 kg without package
Operating Temperature	0 C to +50 C

Notes

Specs from Rigol MS0/DS1000Z datasheet. MS01104Z-S includes the dual 25 MHz source; MS01104Z does not. Confirm memory option 24 Mpts and serial 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

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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.