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**Data Sheet**
August 13, 2026

RIGOL

# Rigol MSO1074Z-S 70 MHZ Oscilloscope (4 Channel)

Rigol Mixed Signal Oscilloscopes (MSO). Channels: 4 at 70 MHz bandwidth (-3 dB), Channels: 16 logic analyzer inputs, Sample Rate: 1 GSa/s real-time.

| | |
|---|---|
| MODEL<br>Rigol MSO1074Z-S | CALIBRATION<br>Available on request |
| CONDITION<br>Used | STATUS<br>In stock |
| RFQ / SKU<br>MSO1074Z-S | LISTING<br>https://aumictechlabs.com/products/mso1074z-s-2/ |

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

## This unit

The Rigol MSO1074Z-S is a 70 MHz mixed-signal oscilloscope combining four analog channels with 16 digital logic analyzer channels. Engineered for embedded systems debugging and signal analysis, it delivers 1 GSa/s real-time sampling, up to 30,000 waveforms/s capture rate, and deep memory up to 12 Mpts per channel (expandable to 24 Mpts). The 7-inch WVGA display with multi-level intensity grading enables detailed waveform observation across complex measurement scenarios.Technical Specifications Analog Channels: 4 at 70 MHz bandwidth (-3 dB) Digital Channels: 16 logic analyzer inputs Sample Rate: 1 GSa/s real-time Memory Depth: 12 Mpts/channel standard; optional 24 Mpts/channel Waveform Capture Rate: 30,000 wfms/s Vertical Resolution: 8-bit analog, 1-bit digital Vertical Scale: 1 mV/div to 10 V/div (1X probe ratio) Vertical Offset: ±2 V (1 mV to 499 mV/div); ±100 V (500 mV to 10 V/div) Input Impedance: Analog 1 MΩ ±1% || 15 pF ±3 pF; Digital 100 kΩ ±1% || 8 pF ±3 pF Maximum Input Voltage: Analog CAT I

300 Vrms, CAT II 100 Vrms, transient 1000 Vpk; Digital CAT I 40 Vrms, transient 800 Vpk Input Coupling: DC, AC, GND (analog) Probe Attenuation: 0.01X to 1000X (1-2-5 steps) Timebase: 5 ns/div to 50 s/div; ±25 ppm accuracy; ±5 ppm/year drift Display: 7-inch WVGA (800×480) TFT LCDKey Features UltraVision architecture with deep memory and high capture rates Bandwidth limit option at 20 MHz Low frequency response ≤5 Hz (AC coupling) YT, XY, and Roll timebase modes Serial bus triggering and decoding: RS232/UART (2400–921600 bps), I2C (7/8/10-bit addressing), SPI (4–32-bit data, 16 ns–10 s timeout) Advanced trigger types: Runt, Window, Nth Edge, Slope, Delay, Duration Delay range: negative to ±1/2 (memory/sample rate); positive 1 s to 500 sTypical Applications Embedded system design, protocol analysis, multi-channel signal debugging, and complex timing measurements in laboratory and enterprise environments.Compatibility & Integration Supports variable probe attenuation coefficients from 0.01X to 1000X for flexible measurement scaling across high and low-voltage domains.

## 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 70 MHz analog bandwidth; calculated rise 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: MSO1074Z-S Manufacturer: Rigol Instrument Type: Mixed signal oscilloscope with built-in generator Alias: MSO1074Z S; RIGOL MSO1074Z-S Analog Bandwidth: 70 MHz Single Shot Bandwidth: 70 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: 5 ns

# MSO1074ZS Characteristics / Specifications

| PARAMETER | VALUE |
|---|---|
| **Model** | MSO1074Z-S |
| **Manufacturer** | Rigol |
| **Instrument Type** | Mixed signal oscilloscope with built-in generator |
| **Alias** | MSO1074Z S; RIGOL MSO1074Z-S |
| **Analog Bandwidth** | 70 MHz |
| **Single Shot Bandwidth** | 70 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** | 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 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 Pulse Range** | 0.1 Hz to 1 MHz |
| **AWG Ramp Range** | 0.1 Hz to 100 kHz |
| **AWG Amplitude High Z** | 20 mVpp to 5 Vpp |
| **AWG Amplitude 50 ohm** | 10 mVpp to 2.5 Vpp |
| **AWG Arbitrary Length** | 2 to 16 kpts |
| **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 |
| **Sibling Without Source** | MSO1074Z Notes Specs from Rigol MSO/DS1000Z datasheet. MSO1074Z-S includes the dual 25 MHz source; MSO1074Z does not. Confirm memory option 24 Mpts and serial decode licenses. |
| **Bandwidth** | 70 MHz |
| **Rise Time** | is 5 ns. Waveform capture rate is up to 30 000 wfms/s. Standard probes are four PVP2150 plus RPL1116. 7 inch 800 × 480 WVGA. |

## General Specifications & Supplementary Characteristics

| PARAMETER | VALUE |
| --- | --- |
| **Operating temperature** | 0 C to +50 C |
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| **Sibling Without Source** | MSO1074Z Notes Specs from Rigol MSO/DS1000Z datasheet. MSO1074Z-S includes the dual 25 MHz source; MSO1074Z does not. Confirm memory option 24 Mpts and serial decode licenses. |

# 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** | MSO1074Z-S |
| **Manufacturer** | Rigol |
| **Instrument Type** | Mixed signal oscilloscope with built-in generator |
| **Alias** | MSO1074Z S; RIGOL MSO1074Z-S |
| **Analog Bandwidth** | 70 MHz |
| **Single Shot Bandwidth** | 70 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** | 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 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 Pulse Range** | 0.1 Hz to 1 MHz |
| **AWG Ramp Range** | 0.1 Hz to 100 kHz |
| **AWG Amplitude High Z** | 20 mVpp to 5 Vpp |
| **AWG Amplitude 50 ohm** | 10 mVpp to 2.5 Vpp |
| **AWG Arbitrary Length** | 2 to 16 kpts |
| **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 |
| **Sibling Without Source** | MSO1074Z |

Notes
Specs from Rigol MSO/DS1000Z datasheet. MSO1074Z-S includes the dual 25 MHz source; MSO1074Z 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

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

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