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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight MSO9254A Mixed Signal Oscilloscope: 2.5 GHz, 4 Analog Plus 16 Digital Channels

Agilent MSO9254A Infiniium 9000 Series Oscilloscope The Agilent/Keysight MSO9254A is an Infiniium 9000 Series oscilloscope with 2.5 GHz analog bandwidth on 50 ohm paths. OEM 9000 Series datasheets list 10 GSa/s on 4 channels or 20 GSa/s on 2 channels, standard 20 Mpts/40 Mpts memory, and a 15 inch XGA display. High-speed digital debug, serial decode, mixed-signal timing (MSO models), and general-purpose Infiniium analysis. MegaZoom deep memory options up to Option 500 The Agilent/Keysight MSO9254A is an Infiniium 9000 Series oscilloscope with 2.5 GHz analog bandwidth on 50 ohm paths. OEM 9000 Series datasheets list 10 GSa/s on 4 channels or 20 GSa/s on 2 channels, standard 20 Mpts/40 Mpts memory, and a 15 inch XGA display. High-speed digital debug, serial decode, mixed-signal timing (MSO models), and general-purpose Infiniium analysis. MegaZoom deep memory options up to Option 500 Channel Configuration: 4 analog + 16 digital



MODEL

**Agilent / Keysight
MSO9254A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MSO9254A

LISTING

<https://aumictechlabs.com/products/mso9254a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight MSO9254A Mixed Signal Oscilloscope delivers 2.5 GHz analog bandwidth with integrated 4 analog and 16 digital channels, combining oscilloscope, logic analyzer, and protocol analyzer functionality in a single instrument. The MSO9254A captures complex mixed-signal designs with up to 20 GSa/s sample rate per channel and up to 1 Gpts upgradeable memory, enabling detailed signal acquisition and analysis across electronic design, validation, and troubleshooting workflows.

Technical Specifications

Analog Bandwidth: 2.5 GHz (upgradable)
Analog Channels: 4 Digital Channels: 16 Maximum Sample Rate: 20 GSa/s per channel (reduces when all four analog channels are active simultaneously)
Standard Memory: 20 Mpts per channel Upgradeable Memory: Up to 1 Gpts (on 2 channels; reduces when all four analog channels are active)
Waveform Acquisition Rate: Up to 250,000 waveforms per second Digital Memory (Logic Analyzer): 128 Mpts standard Display: 15" XGA color TFT LCD with touch screen Dimensions: 9 inches deep (23 cm) Weight: 26 pounds (11.8 kg) Power Input: Autoranging 100–240 VAC Interfaces: USB 2.0, 100BASE-T LAN, RS-232 port; LXI Class C compliant

Key Features

InfiniiScan advanced triggering for precise signal capture Drag-and-drop measurements from measurement bar with cycle-specific analysis Up to five measurements across five different cycles with statistics display 16 fast, deep-memory digital channels for timing and data value observation Integrated protocol viewers for packet-level analysis and time correlation between protocol and physical layers Optional protocol support: I²C, SPI, RS-232/UART, CAN, LIN, FlexRay, JTAG, MIPI D-Phy, PCI Express, USB 2.0, 8B/10B, DDR 1/2/3, Ethernet, USB triggering and decode, SATA (1.5 Gbs) triggering and decode Optional jitter analysis applications: EZJIT, EZJIT Plus Optional DDR and LPDDR Compliance Test Application

Typical Applications

Designed for complex signal analysis in digital design verification, embedded systems development, serial protocol debugging, power integrity assessment, and mixed-signal troubleshooting.

Compatibility & Integration

Part of the Infiniium series. Combines oscilloscope, logic analyzer, and protocol analyzer capabilities into a unified 3-in-1 platform for time-correlated analog and digital signal observation.

MSO9254A Characteristics / Specifications

PARAMETER	VALUE
Analog Bandwidth 50 Ohm	2.5 GHz
Analog Bandwidth 1 MOhm	500 MHz
Maximum Sample Rate 4 Channel	10 GSa/s
Maximum Sample Rate 2 Channel	20 GSa/s
Standard Memory 4 Channel	20 Mpts
Standard Memory 2 Channel	40 Mpts
Analog Channels	4
Logic Channels	16
Channel Configuration	4 analog + 16 digital
Display	15 inch XGA
Vertical Resolution	8 bit; high res mode 9 to 12 bits selectable
Input Impedance	50 ohm and 1 MOhm
Roll Mode	200 ms to 20 s
Equivalent Time Max	1000 GSa/s effective with 1.0 ps interpolator
Segment Timestamp Resolution	1 ps
Standard Segment Count	up to 8192 segments
Max Time Between Triggers	562950 s (6.5 days)
Rearm Time Analog	4.5 us
Digital Channel Sample Rate MSO	2 GSa/s
Digital Memory MSO	128/64 Mpts at 2 GSa/s
Digital Glitch Detect MSO	2 ns minimum width
Memory Option 50M	50/100 Mpts
Memory Option 1	100/200 Mpts
Memory Option 2	200/400 Mpts
Memory Option 5	500/250 Mpts on 4 ch or 1 Gpts/500 Mpts on 2 ch

PARAMETER	VALUE
Series Family	Infiniium 9000
Bandwidth	50 Ohm: 2.5 GHz

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	
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Analog Bandwidth 50 Ohm	2.5 GHz
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Vertical Resolution	8 bit; high res mode 9 to 12 bits selectable
Input Impedance	50 ohm and 1 MOhm
Roll Mode	200 ms to 20 s
Equivalent Time Max	1000 GSa/s effective with 1.0 ps interpolator
Segment Timestamp Resolution	1 ps
Standard Segment Count	up to 8192 segments
Option 500 Segment Count: up to 131072 segments	
Specifications	
PARAMETER	VALUE
Max Time Between Triggers	562950 s (6.5 days)
Rearm Time Analog	4.5 us
Digital Channel Sample Rate MSO	2 GSa/s
Digital Memory MSO	128/64 Mpts at 2 GSa/s
Digital Glitch Detect MSO	2 ns minimum width
Memory Option 50M	50/100 Mpts

PARAMETER	VALUE
Memory Option 100	100/200 Mpts
Memory Option 200	200/400 Mpts
Memory Option 500	500/250 Mpts on 4 ch or 1 Gpts/500 Mpts on 2 ch
Series Family	Infiniium 9000

Notes

Bandwidth/sample/memory numbers from Agilent/Keysight Infiniium 9000 Series oscilloscope datasheets. Confirm installed memory and MSO options.

Ordering Information

OPTION	DESCRIPTION
Option 500	Advanced triggering including serial

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.