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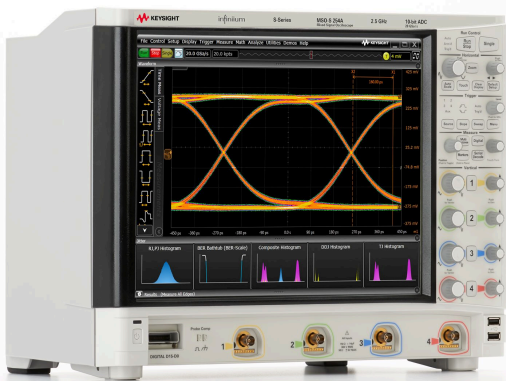
Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight MSOS254A

Channel Bandwidth Four Active Note: 2.5 GHz four-channel bandwidth Acquisition Architecture: Infiniium S-Series low-noise front end Connectivity Class: USB LAN GPIB class Infiniium interfaces From Keysight Infiniium S-Series oscilloscope product fact sheet 5991-4028 model column for MSOS254A. 6 GHz and 8 GHz bandwidths are two-channel active modes with 4 GHz four-channel bandwidth. Acquisition Architecture: Infiniium S-Series low-noise front end Connectivity Class: USB LAN GPIB class Infiniium interfaces From Keysight Infiniium S-Series oscilloscope product fact sheet 5991-4028 model column for MSOS254A. 6 GHz and 8 GHz bandwidths are two-channel active modes with 4 GHz four-channel bandwidth.



MODEL

**Agilent / Keysight
MSOS254A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MSOS254A

LISTING

<https://aumictechlabs.com/products/msos254a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight MSOS254A is a mixed-signal oscilloscope combining 2.5 GHz analog bandwidth with 16 integrated digital channels for simultaneous analog and logic signal capture. Built for design validation and signal integrity analysis, the instrument delivers up to 20 GSa/s sampling per channel with 10-bit vertical resolution and memory depths to 1 Gpts per channel. Its triggering architecture spans edge, glitch, pattern, video, sequence, and duration modes, with optional protocol triggers for serial buses including I2C, SPI, UART, USB, CAN, and LIN. The 15.3-

inch capacitive touch display, four BNC analog inputs, 16 logic probe inputs, and comprehensive measurement automation make it suitable for embedded systems debugging, protocol analysis, and complex signal characterization across communications, automotive, and industrial electronics applications.

Technical Specifications

Bandwidth: 2.5 GHz
Analog Channels: 4
Digital Channels: 16
Sampling Rate: Up to 20 GSa/s per channel (high-resolution mode)
Memory Depth: 256 Mpts per channel standard; expandable to 1 Gpts per channel
Vertical Resolution: 10-bit ADC
Vertical Sensitivity: 1 mV/div to 1 V/div
Vertical Accuracy: $\pm 1.0\%$ of full scale
Input Impedance: $50\ \Omega \pm 1\%$, $< 10\ \text{pF}$
Trigger Jitter: $< 1.5\ \text{ps rms}$

Key Features

Trigger modes: edge, glitch, pattern, video, sequence, duration
Optional protocol triggers for I2C, SPI, UART, USB, CAN, LIN
Waveform math functions: add, subtract, multiply, divide, FFT
Automated amplitude, time, and frequency domain measurements
Search and mark capability for event location in acquisition memory

15.3-inch high-definition capacitive touch display

Typical Applications

Mixed-signal validation in embedded system design
Serial protocol and bus analysis
Signal integrity debugging
Complex waveform characterization

Compatibility & Integration

Four BNC analog channel inputs
16 logic probe digital inputs
USB host ports for external storage and peripherals
Ethernet LAN connectivity
External trigger input and probe compensation output
Compatible with Keysight $50\ \Omega$ passive and active probes (1 GHz, 2.5 GHz, and higher bandwidth)

MSOS254A Characteristics / Specifications

PARAMETER	VALUE
Model	MSOS254A
Series Family	Infiniium S-Series
Instrument Type	Mixed signal oscilloscope
Analog Bandwidth	2.5 GHz
Calculated Rise Time 10 To	172 ps
Analog Channels	4
Digital Channels	16
Sample Rate Two Channels	20 GSa/s
Sample Rate Four Channels	10 GSa/s
Standard Memory Depth	100 Mpts/ch
Memory Upgrade Class	up to 400 Mpts/ch
Vertical Resolution Full Bandwidth	10 bits
Vertical Resolution High Res Class	up to 16 bits
Full Bandwidth Enob Typical	7.4
Full Bandwidth Noise Floor Typical	130 uV at 2 mV/div class
Rf Noise Density Typical	-160 dBm/Hz class
Sfdr Typical	72 dB class
Display	15 inch XGA capacitive touchscreen
External Display	VGA and DisplayPort
Channel Bandwidth Four Active Note	2.5 GHz four-channel bandwidth
Chassis Form	benchtop Infiniium
Brand Lineage	Keysight / Agilent
Acquisition Architecture	Infiniium S-Series low-noise front end
Connectivity Class	USB LAN GPIB class Infiniium interfaces
Bandwidth	2.5 GHz

PARAMETER	VALUE
Rise Time	10 To 90: 172 ps

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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Notes

From Keysight Infiniium S-Series oscilloscope product fact sheet 5991-4028 model column for MSOS254A. 6 GHz and 8 GHz bandwidths are two-channel active modes with 4 GHz four-channel bandwidth.

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.