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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 54622D 2+16 Channel, 100 MHz Mixed-Signal Oscilloscope

HP Agilent 54622D MegaZoom Mixed Signal Oscilloscope The Agilent 54622D combines 2 analog channels (100 MHz, 200 MSa/s, 4 MB MegaZoom) with 16 digital channels. OEM datasheet acquisition specs list digital sampling at 400 MSa/s interleaved (200 MSa/s each channel) and 1-bit digital vertical resolution, enabling mixed-signal correlation on the MegaZoom platform. Embedded mixed-signal debug, correlating analog sensors with digital control lines, and capturing infrequent events across analog and logic with deep memory. The Agilent 54622D combines 2 analog channels (100 MHz, 200 MSa/s, 4 MB MegaZoom) with 16 digital channels. OEM datasheet acquisition specs list digital sampling at 400 MSa/s interleaved (200 MSa/s each channel) and 1-bit digital vertical resolution, enabling mixed-signal correlation on the MegaZoom platform. Embedded mixed-signal debug, correlating analog sensors with digital control lines, and capturing infrequent events across analog and logic with deep memory. Deep memory always on for analog and digital



MODEL

**HP / Agilent
54622D**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

54622D

LISTING

<https://aumictechlabs.com/products/54622d-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 54622D is a 2+16 channel mixed-signal oscilloscope delivering simultaneous acquisition of analog and digital signals up to 100 MHz bandwidth. Built for engineers analyzing complex embedded systems, digital interfaces, and multi-protocol designs, this instrument combines 2 analog channels with 16 digital logic channels in a single platform.

Technical Specifications

Analog Channels Bandwidth: 100 MHz Sample Rate: 400 MSa/s maximum Vertical Resolution: 8-bit Vertical Sensitivity: 1 mV to 5 V/div Vertical Accuracy: $\pm(0.01\% \text{ reading} \pm 0.1\% \text{ screen width}) + 40 \text{ ps}$ typical (same channel); $\pm(0.01\% \text{ reading} \pm 0.1\% \text{ screen width}) \pm 80 \text{ ps}$ typical (channel-to-channel) Input Impedance: $1 \text{ M}\Omega \pm 3\%$ with 14 pF Maximum Input: $\pm 40 \text{ V}$ peak CAT I

Digital Channels Channels: 16 (two 8-channel pods) Sample Rate: 400 MSa/s Threshold Options: TTL, CMOS, ECL, user-definable ($\pm 8.0 \text{ V}$ in 10 mV increments) Input Impedance: $100 \text{ k}\Omega \pm 2\%$ Channel-to-Channel Skew: 2 ns typical, 3 ns maximum

Acquisition & Memory Memory Depth: 2 MB/channel standard; 4 MB maximum in single-channel mode MegaZoom deep memory technology for long, non-repeating signal capture Time Base: 5 ns/div to 50 s/div Time Base Resolution: 40 ps Interpolation: Sin x/x Display Modes: Vector or dot; high-resolution mode provides up to 12 bits real-time resolution Vector Processing: 25 million vectors/sec Triggering Edge, Pulse Width, Pattern, CAN, Duration, I²C, LIN, Sequence, SPI, TV, and USB triggering Available across all channels Waveform Analysis Math functions: FFT, subtract, multiply, integrate, differentiate

Key Features 7-inch monochrome CRT display with superior horizontal resolution Pre-trigger capture (negative delay) greater than 1 screen width or 10 ms; post-trigger (positive delay) up to 500 seconds Dual-threshold logic pods for flexible digital protocol analysis

Typical Applications Embedded system debugging, serial protocol validation (I²C, SPI, CAN, USB, LIN), mixed-signal verification, digital timing analysis, analog-to-digital signal correlation.

Compatibility & Integration Standard RS-232 and parallel ports; optional GPIB module for remote control and automated data transfer.

54622D Characteristics / Specifications

PARAMETER	VALUE
Analog Channels	2
Digital Channels	16
Analog Bandwidth	dc to 100 MHz
Analog AC Coupled Bandwidth	3.5 Hz to 100 MHz
Analog Max Sample Rate	200 MSa/s
Analog Max Memory	4 MB interleaved, 2 MB each channel
Analog Peak Detection	5 ns
Analog Vertical Resolution	8 bits
Analog Calculated Risetime	approximately 3.5 ns
Analog Single Shot Bandwidth	50 MHz
Analog Vertical Range	1 mV/div to 5 V/div
DC Vertical Gain Accuracy	±2.0% full scale
Analog Input Resistance	1 Mohm
Analog Input Capacitance	approximately 14 pF
Digital Max Sample Rate Interleaved	400 MSa/s
Digital Max Sample Rate Per Channel	200 MSa/s
Digital Vertical Resolution	1 bit
BW Limit Analog	approximately 20 MHz selectable
Coupling Analog	ac, dc, ground
Maximum Input Analog CAT I	300 Vrms, 400 Vpk
Channel Isolation dc to 20 MHz	greater than 40 dB
Averaging	2 to 16383
High Resolution Analog Mode	12 bits at ≥500 us/div
Bandwidth	dc to 100 MHz

54622D Specifications

PARAMETER	VALUE
HP Agilent 54622D MegaZoom Mixed Signal Oscilloscope	Overview
Key Features	2 analog + 16 digital MegaZoom MSO
Deep memory always on for analog and digital	Series flexible triggering including I2C/CAN/SPI/USB class features
Technical Specifications	Analog Channels: 2

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	
Specs from Agilent 54600-Series Oscilloscopes data sheet for 54622D. Digital threshold and pod details are in the digital vertical section of the same sheet.	

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.