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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 54831M

Keysight 54831M Infiniium Oscilloscope Mixed Signal Class The Agilent 54831M is the mixed-signal class companion to the 54831B Infiniium MegaZoom oscilloscope family. OEM Infiniium 54830 Series literature rates 600 MHz analog bandwidth, up to 4 GSa/s interleaved sampling, and MegaZoom deep memory with digital timing channels on M-class models. Mixed analog and digital debug at 600 MHz, embedded timing analysis with MegaZoom deep memory, and Windows-based Infiniium automated measurements. 4 analog channels plus digital timing class The Agilent 54831M is the mixed-signal class companion to the 54831B Infiniium MegaZoom oscilloscope family. OEM Infiniium 54830 Series literature rates 600 MHz analog bandwidth, up to 4 GSa/s interleaved sampling, and MegaZoom deep memory with digital timing channels on M-class models. Mixed analog and digital debug at 600 MHz, embedded timing analysis with MegaZoom deep memory, and Windows-based Infiniium automated measurements. 4 analog channels plus digital timing class Instrument Type: Infiniium mixed signal oscilloscope



MODEL

**Agilent / Keysight
54831M**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

54831M

LISTING

<https://aumictechlabs.com/products/54831m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 54831M is a 600 MHz, 4-channel mixed-signal oscilloscope (MSO) from the Infiniium Series, engineered for advanced debugging and analysis of complex electronic designs.

This military-specification variant integrates 16 digital channels alongside four analog channels, delivering mixed-signal triggering and simultaneous acquisition across both analog and digital signal domains. The 54831M shares identical electrical specifications with the 54831B, with differences limited to military-specific accessories and documentation.

Technical Specifications
Bandwidth: 600 MHz Analog Channels: 4 Digital Channels: 16 (MSO functionality) Sampling Rate: Up to 4 GSa/s (2-channel mode); up to 2 GSa/s (4-channel mode) Acquisition Memory: 2 Mpts/channel standard; 4 Mpts maximum total Display: 8.4-inch Color TFT-LCD Input Ranges: 5 Vrms maximum at 50 Ω (CAT I); ± 100 V (dc + ac, ac < 10 kHz) at 1 M Ω impedance (CAT I) Operating System: Windows 98 (Windows XP upgrade path available)

Key Features MegaZoom technology enables rapid waveform update rates and instant response without performance degradation across deep memory acquisitions Analog-like front panel with Windows-based GUI combines intuitive hardware control with advanced measurement and analysis software Mixed-signal triggering across analog and digital channels for synchronized multi-domain capture Direct waveform interaction including drag-and-drop positioning and instant zoom capability Color-coded waveforms and display elements for signal identification Task-oriented Setup Guide and context-sensitive help system for measurement configuration

Typical Applications Debugging digital-to-analog and analog-to-digital interactions; validating embedded system timing relationships; analyzing protocol-driven analog circuits; mixed-signal system integration testing.

Connectivity & Integration USB (2 ports), PS/2 (2 ports), GPIB, VGA (external monitor), and LAN connectivity. Compatible with Agilent/Keysight Infiniium series probes and logic analyzer integration.

54831M Characteristics / Specifications

PARAMETER	VALUE
Model	54831M
Instrument Type	Infiniium mixed signal oscilloscope
Analog Channels	4
Analog Bandwidth 50 Ohm	600 MHz
Calculated Rise Time 50 Ohm	583 ps
Analog Bandwidth 1 Mohm With Probe Class	500 MHz class
Sample Rate Two Channel Mode	4 GSa/s
Sample Rate Four Channel Mode	2 GSa/s
Standard Memory Class	2 Mpts per channel class family
Maximum Memory With Options Class	up to 64 Mpts per channel interleaved class
Equivalent Time Sample Rate Max	250 GSa/s
Vertical Sensitivity 1 Mohm	1 mV/div to 5 V/div
Vertical Sensitivity 50 Ohm	1 mV/div to 1 V/div
Vertical Resolution	8 bits greater than or equal to 12 bits with averaging
Input Impedance	1 Mohm or 50 Ohm
Hardware Bandwidth Limit	20 MHz
Timebase Accuracy Class	15 ppm class family
Processor Class	Pentium III 1 GHz class
Cpu Memory Class	512 MB class
Hard Drive Class	greater than or equal to 20 GB class
Operating System	Windows XP Pro class
Remote Interfaces	LAN GPIB USB VGA
Display	color Infiniium display class
Series Family	Agilent Infiniium 54830 Series
Digital Timing Class	M variant mixed signal timing channels

PARAMETER	VALUE
Bandwidth	50 Ohm: 600 MHz
Rise Time	50 Ohm: 583 ps

54831M Specifications

PARAMETER	VALUE
Key Features	4 analog channels plus digital timing class
MegaZoom deep memory architecture	Up to 4 GSa/s interleaved sampling
Technical Specifications	Model: 54831M

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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Standard Memory Class	2 Mpts per channel class family
Maximum Memory With Options Class	up to 64 Mpts per channel interleaved class
Equivalent Time Sample Rate Max	250 GSa/s
Vertical Sensitivity 1 Mohm	1 mV/div to 5 V/div
Vertical Sensitivity 50 Ohm	1 mV/div to 1 V/div
Vertical Resolution	8 bits greater than or equal to 12 bits with averaging
Input Impedance	1 Mohm or 50 Ohm
Hardware Bandwidth Limit	20 MHz
Timebase Accuracy Class	15 ppm class family
Processor Class	Pentium III 1 GHz class
Cpu Memory Class	512 MB class
Hard Drive Class	greater than or equal to 20 GB class
Operating System	Windows XP Pro class
Remote Interfaces	LAN GPIB USB VGA
Display	color Infiniium display class
Series Family	Agilent Infiniium 54830 Series
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Notes

From Agilent Infiniium 54830 Series Oscilloscopes data sheet model column shared with 54831B, with M-class denoting mixed-signal timing capability. Exact digital channel count follows the installedMconfiguration.

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.