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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight MXR258A

Keysight Infiniium MXR258A Real Time Oscilloscope 2.5 GHz 8 Channel The Keysight Infiniium MXR258A is an MXR-Series real-time oscilloscope with 2.5 GHz analog bandwidth (-3 dB) on the 50 ohm path and 8 analog channels. The OEM Infiniium MXR-Series data sheet lists 16 GSa/s sample rate on every channel, 200 Mpts standard memory per channel, 10 bit vertical resolution (up to 16 bits in high-resolution mode), timebase accuracy of 8 ppb, intrinsic jitter as low as 118 fs, and a 15.6 inch full HD touch display. The Keysight Infiniium MXR258A is an MXR-Series real-time oscilloscope with 2.5 GHz analog bandwidth (-3 dB) on the 50 ohm path and 8 analog channels. The OEM Infiniium MXR-Series data sheet lists 16 GSa/s sample rate on every channel, 200 Mpts standard memory per channel, 10 bit vertical resolution (up to 16 bits in high-resolution mode), timebase accuracy of 8 ppb, intrinsic jitter as low as 118 fs, and a 15.6 inch full HD touch display. High-speed digital debug, power integrity and rail analysis, protocol decode, compliance testing, and multi-channel RF analysis with optional RTSA/DDC on the Infiniium MXR platform.

**MODEL****Agilent / Keysight
MXR258A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****MXR258A****LISTING**<https://aumictechlabs.com/products/mxr258a-2/>

NIST-traceable cal

SAM registered

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NAICS 423690 • 811210 • 541380

This unit

The Keysight MXR258A Infiniium MXR-Series Oscilloscope is a real-time instrument combining oscilloscope, spectrum analyzer, signal generator, and protocol decoder capabilities in a single 8-

in-1 platform. It delivers 2.5 GHz bandwidth across all 8 analog channels at 16 GSa/s sample rate, with 10-bit ADC resolution expandable to 16 bits in high-resolution mode. The instrument captures up to 1.6 Gpts memory depth and achieves noise as low as 43 μ V with 9.0 ENOB, enabling accurate complex signal analysis across digital, RF, and power integrity applications. Hardware acceleration ASICs from the Infiniium UXR-Series enable rapid eye plot generation and flexible three-stage triggering. Over 50 automated measurements with statistical analysis support detailed waveform characterization. Segmented memory captures up to 5,205 post-trigger events (or >100,000 events with no delay between captures) for comprehensive transient analysis. History mode preserves up to 1,024 previous trigger events for retrospective review.

Technical Specifications
Bandwidth: 2.5 GHz (all 8 analog channels) Analog Channels: 8 Sample Rate: 16 GSa/s maximum ADC Resolution: 10-bit standard; up to 16 bits in high-resolution mode Memory Depth: 200 Mpts per channel standard; up to 1.6 Gpts maximum ENOB: Up to 9.0 Noise Performance: 43 μ V minimum Triggering: Three-stage flexible triggering Measurements: Over 50 standard measurements with automation and statistics

Key Features
8-in-1 instrument integration: DVM, 10-digit counter, optional 16 digital channels (MSO license), optional 50 MHz waveform generator, real-time spectrum analyzer (RTSA), and digitally down-converted (DDC) analysis RF Analysis: Phase-coherent operation across 8 channels; simultaneous DDC on all channels with up to 2 GHz analysis bandwidth; RTSA spans from 40 MHz to 320 MHz; Frequency Extension option to 6 GHz Protocol Support: ARINC-429, BroadR-Reach/100BaseT1, CAN, CAN-FD, eSPI, eUSB2, Ethernet 10BT/100BT, I2C, I2S, LIN, Manchester, MIL-STD 1553, MIPI-I3C, Quad-SPI, RS-232/UART, SENT, Spacewire, SPI, SPMI, SVID, USB 2.0, USB-PD Power Integrity Analysis: PSRR, control loop response, and switching current characterization Jitter and Noise Analysis: Statistical methods for high-speed digital interfaces Fully upgradeable platform for future bandwidth and channel enhancements

Typical Applications
High-speed digital and mixed-signal circuit validation RF signal characterization and analysis Power supply and power integrity validation Protocol triggering and decode across industrial and automotive standards Transient and statistical jitter measurement

Compatibility & Integration
The MXR258A supports modular licensing for MSO digital channels and optional waveform generator functionality. ASIC acceleration ensures compatibility with Infiniium UXR-Series performance benchmarks.

MXR258A Characteristics / Specifications

PARAMETER	VALUE
Model	MXR258A
Instrument Family	Infiniium MXR-Series
Analog Bandwidth Fifty Ohm	2.5 GHz
Analog Bandwidth One Megohm	500 MHz
Analog Channels	8
Digital Logic Channels	16 optional via MXR2MSO
Sample Rate Real Time	16 GSa/s all analog channels
Sample Resolution	62.5 ps
Vertical Resolution	10 bits up to 16 bits high resolution mode
Standard Memory Depth	200 Mpts per channel
Extended Memory Depth	400 Mpts per channel or 1.6 Gpts combined flexible memory
Real Time Update Rate	greater than 200000 waveforms per second
Eye Diagram Plot Rate	greater than 750000 UI per second
Timebase Accuracy	8 ppb initial plus 75 ppb per year aging
Intrinsic Jitter Four Channel Models	118 fs rms at 100 ns/div
Intrinsic Jitter Eight Channel Models	150 fs rms at 100 ns/div
Inter Channel Intrinsic Jitter	100 fs rms
Lowest Noise One Millivolt Per Division	as low as 43 uV (20 MHz high resolution path)
Rms Noise Floor At Model Bandwidth	100 uV at 1 mV/div on 50 ohm inputs
Effective Number Of Bits At Model Bandwidth	7.5 at 50 mV/div on 50 ohm inputs
Typical Rise Time Ten Ninety	172 ps
Typical Rise Time Twenty Eighty	124 ps
Input Impedance Fifty Ohm	50 ohm plus or minus 3.5 percent
Input Impedance One Megohm	1 Mohm plus or minus 1 percent (14 pF typical)
Input Sensitivity Fifty Ohm	1 mV/div to 1 V/div

PARAMETER	VALUE
Input Sensitivity One Megohm	1 mV/div to 5 V/div
Max Input Voltage Fifty Ohm	plus or minus 5 V max
Max Input Voltage One Megohm	30 Vrms or plus or minus 40 V max
Dc Gain Accuracy	plus or minus 2 percent full scale (plus or minus 1 percent typical)
Channel Isolation Adjacent Dc To Two Gigahertz	less than or equal to -60 dB
Display	15.6 inch touch full HD 1920×1080 with dual screen support
Waveform Generator Bandwidth	50 MHz with MXR2WAV
Rtsa Analysis Bandwidth Standard	40 MHz
Rtsa Analysis Bandwidth Extended	160 MHz or 320 MHz with MXR2RTSA
Dimensions Height	327.5 mm (12.9 in)
Dimensions Width	444.5 mm (17.5 in)
Dimensions Depth	224.1 mm (8.85 in)
History Mode Depth	up to 1024 previous acquisitions
Segmented Memory Acquisitions	up to 78953 future acquisitions
Max Edge Trigger Frequency	6 GHz on 50 ohm path
Digital Channel Bandwidth	300 MHz with MSO
Digital Channel Sample Rate	8 GSa/s with MSO
Bandwidth	Fifty Ohm: 2.5 GHz
Rise Time	Ten Ninety: 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.

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Max Edge Trigger Frequency	6 GHz on 50 ohm path
Digital Channel Bandwidth	300 MHz with MS0
Digital Channel Sample Rate	8 GSa/s with MS0

Notes

Bandwidth, channel count, rise/fall times, sample rate, memory, noise, ENOB, timebase, jitter, input ranges, display size, and dimensions from the Keysight Infiniium MXR-Series data sheet performance characteristics and model number table (MXR05xA through MXR60xA rows). Model MXR258A uses the MXR family row matching 2.5 GHz 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.