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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight MXR604A

Keysight Infiniium MXR604A Real Time Oscilloscope 6 GHz 4 Channel The Keysight Infiniium MXR604A is an MXR-Series real-time oscilloscope with 6 GHz analog bandwidth (-3 dB) on the 50 ohm path and 4 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 MXR604A is an MXR-Series real-time oscilloscope with 6 GHz analog bandwidth (-3 dB) on the 50 ohm path and 4 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
MXR604A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****MXR604A****LISTING**<https://aumictechlabs.com/products/mxr604a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight MXR604A Infiniium MXR-Series oscilloscope delivers 6 GHz bandwidth across all four analog channels with simultaneous 16 GSa/s sampling. Built on a 10-bit ADC architecture with

up to 9.0 ENOB and noise floors as low as 43 μV , this instrument captures fast transients with exceptional signal fidelity. The platform integrates oscilloscope, waveform generator, and six additional measurement instruments into a single chassis, reducing bench footprint while maintaining full upgrade capability. Memory depth reaches 1.6 Gpts maximum, supporting extended waveform capture and in-depth analysis of complex signal behavior. The MXR604A executes over 200,000 waveforms per second, enabling rapid fault detection and interactive troubleshooting workflows. Three-stage flexible triggering includes edge, glitch, pulse width, pattern/state, runt, setup-and-hold, edge transition, timeout, window, and sequential modes. InfiniiScan Event Identification software identifies rare anomalies automatically.

Technical Specifications

- Bandwidth: 6 GHz on all 4 analog channels
- Sample Rate: 16 GSa/s simultaneously across all channels
- Memory: 1.6 Gpts maximum; 200 Mpts standard per channel (upgradable)
- ADC: 10-bit resolution; up to 16 bits with high-resolution mode; 9.0 ENOB maximum
- Signal Integrity: 43 μV noise floor; low-noise custom IC front end
- Waveform Update Rate: >200,000 waveforms/sec
- Analog Channels: 4 standard; 16 digital channels optional (MXR2MSO)

Key Features

- Over 50 standard measurements plus math functions, FFT, and histograms
- Real-time spectrum analysis (RTSA) with 40 MHz to 320 MHz spans
- Protocol triggering and decode: ARINC-429, CAN, CAN-FD, I2C, LIN, MIL-STD-1553, SPI, USB 2.0
- Compliance testing support: 100BASE-T1, 1000BASE-T1, 10/100/1G Ethernet, HDMI, MIPI D-PHY, PCI Express Gen 1-4, USB 2.0
- Jitter and noise analysis; PrecisionProbe de-embedding; Fault Hunter and Power Analysis tools
- Digital Voltmeter (DVM): 4-digit ACRMS/DC/DCRMS at 100/sec
- Counter/Totalizer: 5-10 digits, 64-bit; frequency, period, ratio, totalize functions

Typical Applications

- High-speed digital design validation, serial protocol debug, RF/microwave transient capture, power integrity analysis, compliance testing, and jitter characterization.

Compatibility & Integration

Fully upgradeable platform supporting optional MSO capability, compliance packages, and legacy Infiniium analysis tools including mask testing, real-time eye, equalization, crosstalk, and phase noise measurement.

MXR604A Characteristics / Specifications

PARAMETER	VALUE
Model	MXR604A
Instrument Family	Infiniium MXR-Series
Analog Bandwidth Fifty Ohm	6 GHz
Analog Bandwidth One Megohm	500 MHz
Analog Channels	4
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	193 uV at 1 mV/div on 50 ohm inputs
Effective Number Of Bits At Model Bandwidth	6.8 at 50 mV/div on 50 ohm inputs
Typical Rise Time Ten Ninety	71.7 ps
Typical Rise Time Twenty Eighty	51.7 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: 6 GHz
Rise Time	Ten Ninety: 71.7 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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Segmented Memory Acquisitions	up to 78953 future acquisitions
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 MXR604A uses the MXR family row matching 6 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

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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.