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**Data Sheet**

August 14, 2026

AGILENT / KEYSIGHT

## Agilent/Keysight EXR604A

Agilent Keysight EXR604A Infiniium EXR-Series Oscilloscope The Keysight EXR604A is an Infiniium EXR-Series oscilloscope with 6 GHz analog bandwidth on 4 channels and 16 GSa/s sample rate on every channel. OEM EXR data sheets list 10-bit ADC resolution (up to 16-bit high-resolution), 100 Mpts/ch standard memory, and optional 16 digital MSO channels. High-speed digital debug, multi-lane serial analysis, power integrity, and general-purpose high-bandwidth multi-channel capture. Sample Rate Real Time: 16 GSa/s all analog channels The Keysight EXR604A is an Infiniium EXR-Series oscilloscope with 6 GHz analog bandwidth on 4 channels and 16 GSa/s sample rate on every channel. OEM EXR data sheets list 10-bit ADC resolution (up to 16-bit high-resolution), 100 Mpts/ch standard memory, and optional 16 digital MSO channels. High-speed digital debug, multi-lane serial analysis, power integrity, and general-purpose high-bandwidth multi-channel capture. Sample Rate Real Time: 16 GSa/s all analog channels Vertical Resolution: 10 bits up to 16 bits with high resolution mode



MODEL

**Agilent / Keysight  
EXR604A**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**EXR604A**

LISTING

<https://aumictechlabs.com/products/exr604a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

### This unit

The Keysight EXR604A is a 6 GHz real-time oscilloscope built on the Infiniium EXR-Series platform, delivering 16 GSa/s sampling across four analog channels with 10-bit ADC resolution and up to 16-bit high-resolution mode. This instrument integrates oscilloscope, logic analyzer, protocol

analyzer, digital voltmeter, counter/totalizer, and optional arbitrary waveform generator and frequency response analyzer into a single chassis - a true 7-in-1 measurement solution.

**Technical Specifications**

Bandwidth: 6 GHz on all analog channels

Analog Channels: 4 (upgradeable to 8)

Sampling Rate: 16 GSa/s simultaneous on all analog channels

Vertical Resolution: 10-bit ADC; high-resolution mode up to 16 bits

System ENOB: Up to 9.0 bits with hardware filtering

Noise Floor: 43  $\mu$ V minimum

Rise/Fall Time: 71.7 ps typical

Memory Depth: 100 Mpts/channel standard; upgradeable to 1.6 Gpts

Waveform Update Rate: >200,000 waveforms/sec

History Mode: 1,024 trigger events retained

Segmented Memory: >100,000 post-trigger events captured

Processing: 100M+ gate CMOS ASIC architecture

**Key Features**

Advanced triggering: Edge, pulse width, glitch, runt, timeout, pattern, burst, setup/hold, edge transition, window, OR'd edges, Nth edge - plus three-stage flexible trigger logic and Fault Hunter anomaly detection

Digital channels (with MSO upgrade): 8 GSa/s sampling, 400 MHz toggle rate, per-nibble threshold configuration

Integrated DVM: 4-digit AC/RMS, DC, DCRMS measurements at 100/sec update rate

Counter/Totalizer: Frequency, period, totalize, ratio on A, B, C channels; 5–10 digit resolution, 64-bit depth

Optional AWG: Sine output 12.5 mHz to 50 MHz ( $\pm 0.5$  dB  $\leq 20$  MHz,  $\pm 1$  dB  $> 20$  MHz); harmonic distortion  $-40$  dBc; triangle/ramp 12.5 mHz to 200 kHz with 0.01 linearity and 0–100% symmetry adjustment

Optional frequency response analyzer (Bode plotter) for network analysis

**Typical Applications**

Signal integrity verification, multi-protocol debugging, analog-digital co-design validation, waveform characterization, timing analysis, and functional test automation in high-speed digital and RF environments.

**Compatibility & Integration**

Fully upgradeable channel count and instrument suite. Logic/protocol capability via EXR2MSO; arbitrary waveform generation via EXR2WAV; frequency response analysis available as optional module or bundled offering.

## EXR604A Characteristics / Specifications

| PARAMETER                       | VALUE                                                               |
|---------------------------------|---------------------------------------------------------------------|
| Model                           | EXR604A                                                             |
| Analog Bandwidth 50 Ohm         | 6 GHz                                                               |
| Analog Bandwidth 1 MOhm         | 500 MHz                                                             |
| Analog Channels                 | 4                                                                   |
| Sample Rate Real Time           | 16 GSa/s all analog channels                                        |
| Sample Resolution               | 62.5 ps                                                             |
| Vertical Resolution             | 10 bits up to 16 bits with high resolution mode                     |
| ENOB Class                      | as high as 9.0                                                      |
| Standard Memory Depth           | 100 Mpts per channel                                                |
| Typical Rise Time 10/           | 71.7 ps                                                             |
| Typical Rise Time 20/           | 51.7 ps                                                             |
| Real Time Update Rate           | greater than 200000 waveforms per second                            |
| Digital Logic Channels Optional | 16 dedicated MSO input                                              |
| Display                         | 15.6 inch touch full HD dual screen support                         |
| Input Impedance 50 Ohm          | 50 ohm plus or minus 3.5 percent                                    |
| Input Impedance 1 MOhm          | 1 MOhm plus or minus 1 percent (14 pF typical)                      |
| Series Family                   | Infiniium EXR-Series                                                |
| Brand Lineage                   | Agilent / Keysight                                                  |
| Form Factor                     | benchtop InfiniiumEye Diagram Speed Class: greater than 750000 UI/s |
| Bandwidth Upgrade Path          | at maximum 6 GHz family bandwidth                                   |
| Channel Upgrade Path            | 4 to 8 channel license path on 4ch models                           |
| Bandwidth                       | 50 Ohm: 6 GHz                                                       |
| Rise Time                       | 10/90: 71.7 ps                                                      |

# EXR604A Specifications

| PARAMETER                | VALUE                                                                  |
|--------------------------|------------------------------------------------------------------------|
| Key Features             | 6 GHz bandwidth on all analog channels                                 |
| Technical Specifications | Model: EXR604A                                                         |
| Notes                    | From Keysight Infiniium EXR-Series data sheet model table for EXR604A. |

# 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                                                          |                                                                     |
|-------------------------------------------------------------------------|---------------------------------------------------------------------|
| Specifications                                                          |                                                                     |
| PARAMETER                                                               | VALUE                                                               |
| Model                                                                   | EXR604A                                                             |
| Analog Bandwidth 50 Ohm                                                 | 6 GHz                                                               |
| Analog Bandwidth 1 MOhm                                                 | 500 MHz                                                             |
| Analog Channels                                                         | 4                                                                   |
| Sample Rate Real Time                                                   | 16 GSa/s all analog channels                                        |
| Sample Resolution                                                       | 62.5 ps                                                             |
| Vertical Resolution                                                     | 10 bits up to 16 bits with high resolution mode                     |
| ENOB Class                                                              | as high as 9.0                                                      |
| Standard Memory Depth                                                   | 100 Mpts per channel                                                |
| Optional Memory 400 Mpts: 400 Mpts per channel option path              |                                                                     |
| Optional Flexible Memory: 1.6 Gpts combined flexible memory option path |                                                                     |
| Specifications                                                          |                                                                     |
| PARAMETER                                                               | VALUE                                                               |
| Typical Rise Time 10/90                                                 | 71.7 ps                                                             |
| Typical Rise Time 20/80                                                 | 51.7 ps                                                             |
| Real Time Update Rate                                                   | greater than 200000 waveforms per second                            |
| Digital Logic Channels Optional                                         | 16 dedicated MSO input                                              |
| Display                                                                 | 15.6 inch touch full HD dual screen support                         |
| Input Impedance 50 Ohm                                                  | 50 ohm plus or minus 3.5 percent                                    |
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| Series Family                                                           | Infiniium EXR-Series                                                |
| Brand Lineage                                                           | Agilent / Keysight                                                  |
| Form Factor                                                             | benchtop InfiniiumEye Diagram Speed Class: greater than 750000 UI/s |
| Bandwidth Upgrade Path                                                  | at maximum 6 GHz family bandwidth                                   |
| Channel Upgrade Path                                                    | 4 to 8 channel license path on 4ch models                           |

## Notes

From Keysight Infiniium EXR-Series data sheet model table for EXR604A.

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

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NIST-traceable calibration · SAM registered ·  
30-day returns  
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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.