



# R&S®MXO 5 SERIES OSCILLOSCOPE

## vs Keysight Infiniium MXR B-Series

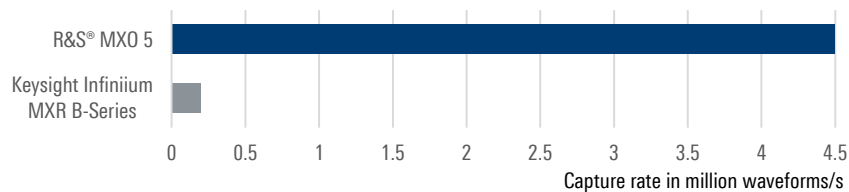


The R&S®MXO 5 Series delivers breakthrough oscilloscope technology to speed up your understanding in both the time and frequency domains. The MXO 5 Series 4 and 8-channel models combine the deepest standard memory of 500 Mpoints and the world's fastest acquisition rate of 18 million waveforms/second across multiple channels, letting the instrument stand out among competitors.

Your benefit	Features
See signals in real time	Never miss another signal anomaly. The fastest acquisition rate in the industry allows the R&S®MXO 5 to acquire over 99% of real-time signals. This outstanding performance can be easily accessed by any digital trigger and in free run mode.
Optimize perspectives, easily	Customizable layout and toolbar, smart menu and fast search function: the R&S®MXO 5 comes with the most intuitive and flexible user interface of any oscilloscope.
Uncompromising waveform analysis	R&S®MXO 5 has up to 18-bit HD precision in time and frequency measurements. The fast spectrum of > 45K FFT/s reveals spurious spectrum events that would be otherwise missed. The hardware for measurement and math functions allows for responsive control even with deep memory.

### Real-time acquisition rate comparison

The R&S®MXO 5 Series has the highest acquisition rate on the market to capture more signal details faster than any other scope on the planet. By comparison, Keysight Infiniium MXR B-Series is 22 times slower, with only a fraction of the capture time (e.g., <4% at 20 ns/div timebase).



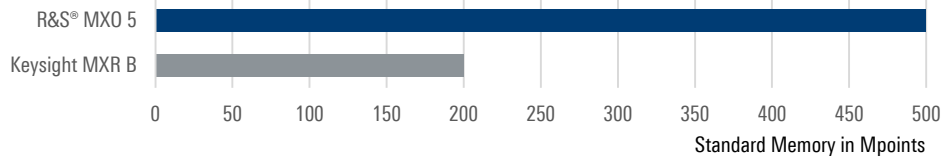
Parameter	R&S®MXO 5 Series	Keysight Infiniium MXR B-Series
Bandwidth (GHz)	0.1, 0.2, 0.35, 0.5, 1, 2 (upgradable)	0.5, 1, 2, 2.5, 4, 6 (upgradable)
Channels	4, 8	4, 8 (service center upgradable)
ADC bits (max vertical)	12 (18-bit HD mode)	10 (16 with high resolution)
Max. sampling rate	5 GSa/s	16 GSa/s
Memory depth: standard option	500 Mpts/ch 1 Gpoints/ch (interleaved 2 ch)	200 Mpts/ch 1.6 Gpoints/ch (interleaved 4 ch)
Max waveform update rate	> 4.5 M waveforms/s	0.2 M waveforms/s
Spectrum analysis	4 standard Span = scope BW up to 2 GHz	For pay option up to 8, Span limited to 320 MHz
Noise @50Ω (1mV/div, 20MHz)	10 μV	43 μV
Noise @1MΩ (1mV/div, 500MHz)	57 μV	192 μV
Trigger sensitivity	Digital. (0.0001 div) User selectable hysteresis	Analog. (0.15 div) No user hysteresis.
User interface	Signal icons, SmartGrid, Toolbar	No signal icons. No toolbar.
<b>Hardware options</b>		
Arbitrary function generator	2 ch, 100 MHz, Arb length 40 Mpoints, Freq. resolution 1 mHz, SR 625 MSample/s	1 ch, 50 MHz, Arb memory 122 kpoints, Freq. resolution 12.5 mHz, SR 200 MSample/s
Mixed signal capabilities (MSO)	16 ch, move across instruments	16 ch, each scope requires SW license
External monitor interface	HDMI™ 2.0, DisplayPort++ 1.3	DisplayPort, VGA
<b>Form factor</b>		
Display	15.6" full HD (1920 x 1080) pixel	15.6" full HD (1920 x 1080) pixel
Dimensions (W x H x D)	445 mm x 314 mm x 153 mm	444.5 mm x 327.5 mm x 224.1 mm
Weight	9.0 kg / 19.8 lbs	14.5 kg / 32 lbs
Acoustic noise at 1 m	25 dB	42.9 dB
Power consumption	Standby 1.6 W 8 active ch. 180 W	Standby 4.6 W 8 active ch. 370 W



For more information, visit  
[www.rohde-schwarz.com/product/MXO5](http://www.rohde-schwarz.com/product/MXO5)

## Standard memory depth comparison

Capture longer periods of time with high sample rate, with standard deep memory.



## Investment comparison for similar configurations

### Keysight Infinium MXR B-Series



- ▶ MXR058B: 500MHz, 8 ch.
- ▶ 400 Mpoints/Ch Memory
- ▶ RTSA and DDC
- ▶ 16-channel logic
- ▶ 2x logic probes
- ▶ 50 MHz generator



### R&S MXO 5



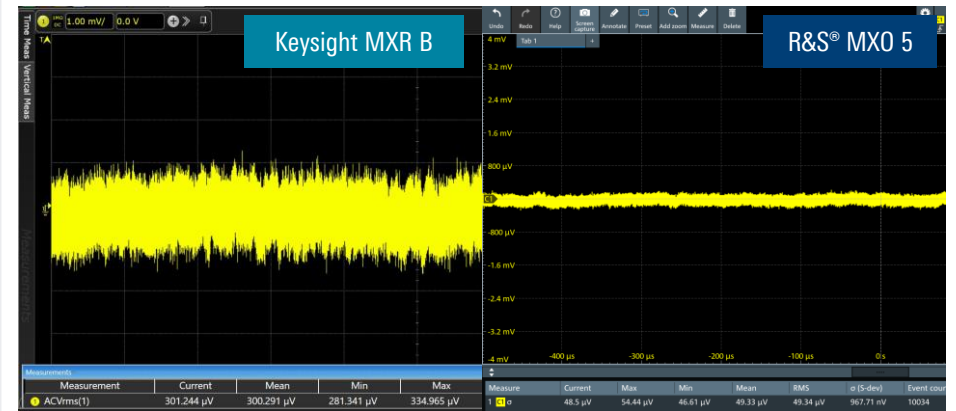
- ▶ MXO58: 500MHz, 8 ch.
- ▶ 500 Mpoints/ch memory
- ▶ Spectrum analysis
- ▶ 16-channel logic
- ▶ 2x logic probes
- ▶ 100 MHz generator



When the MXR B is configured for a set of typical hardware options, the whole system far more expensive, yet fails to achieve the performance of the R&S MXO 5.

R&S MXO 5 Series comes standard with almost every feature you need for testing. The entry-level 100 and 200 MHz configurations help make the setup even more affordable.

## Noise performance



Many applications – especially in power electronics - deal with high voltages and require excellent oscilloscope performance even with 1MOhm termination. Keysight Infinium MXR B-Series detects significantly more noise relative to the R&S MXO 5 even without inputs. Both instruments are set with 200 MHz bandwidth, full scale of  $\pm 4$ mV, with 1 MOhm input coupling. The MXO 5 performance is six times better.

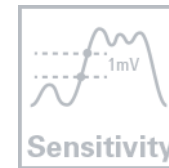
## Advantage factors of R&S MXO 5 Series versus Keysight Infinium MXR B-Series



**40 %**  
more cost efficient setup



**2.5 x**  
more standard memory



**1000 x**  
better trigger sensitivity



**>20 x**  
faster waveform update rate



**20 %**  
more vertical resolution  
at max sampling rate



**2 x**  
less power consumption