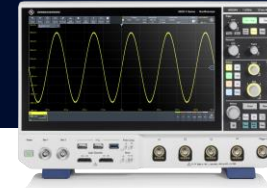




R&S®MXO 4 OSCILLOSCOPE

versus LeCroy WaveSurfer 4000HD



Rohde & Schwarz introduces the first of a new generation of oscilloscopes that excel in both performance and value. Designed with the latest technologies, including 12-bit ADC, 400 Mpoints segmented memory and an industry-leading > 4.5 million waveforms/second capture rate, the R&S®MXO 4 Series delivers a once-in-a-decade engineering breakthrough for accelerated insight.

Your benefit	Features
Find signal anomalies quickly	Unparalleled update rate with a trigger rearm time of < 21 ns makes the R&S®MXO 4 the fastest waveform capturing oscilloscope in the industry.
See your signals accurately	The R&S®MXO 4 has an enhanced 18-bit vertical system resolution with HD mode. Combined with low measurement noise and a digital trigger, you can see and trigger with maximum accuracy and sensitivity.
Capture more time	With ultra-deep memory, the R&S®MXO 4 can record very long durations of waveforms, giving you maximum assurance when monitoring long events while preserving maximum sample resolutions.

Memory depth comparison

R&S®MXO 4: standard 400 Mpoints memory	800 Mpoints memory and 1.6 Gpoints segmented memory (option)
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← LeCroy WaveSurfer 4000HD: standard 12.5 Mpoints per channel

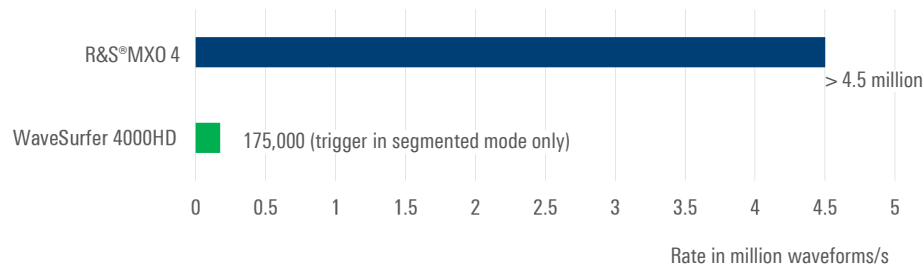
32 times more standard memory means that the R&S®MXO 4 can capture longer periods of time with a high sample rate. The R&S®MXO 4 also excels by offering up to 1 million segmented acquisitions – something no other oscilloscope can.

Parameter	R&S®MXO 4	LeCroy WaveSurfer 4000HD
Acquisition system		
Bandwidth (GHz)	0.2, 0.35, 0.5, 1, 1.5 (upgradeable)	0.2, 0.35, 0.5, 1 (upgradeable)
Maximum vertical resolution	18 bit	12 bit
Maximum sampling rate	5 Gsample/s	5 Gsample/s
Maximum memory depth	400 Mpoints/channel (max. 800 Mpoints on 2 channels with option)	12.5 Mpoints/channel (max. 25 Mpoints on 2 interleaved channels)
Waveform update rate	> 4 500 000 waveforms/s	175 000 waveforms/s trigger rate only
Hardware input sensitivity	0.5 mV/div to 1 V/div at 50 Ω	1 mV/div to 1 V/div at 50 Ω
Segmented/history mode	> 1 000 000 acquisitions	1000 acquisitions
Spectrum analysis	Hardware accelerated with > 40 000 FFT/s Independent spectrum and time settings with 0.1 Hz resolution bandwidth	FFT function as part of math < 10 FFT/s Limited RBW due to memory capture length
Signal integrity		
Noise (1 mV/div, 1 GHz, 50 Ω)	104 μV (better at higher sensitivity)	125 μV (better at lower sensitivity)
Trigger system	Digital	Analog
Trigger sensitivity	0.0001 div (for all bandwidths and all vertical scales)	0.9 ~ 1 division depending on bandwidth and only valid for edge trigger
Timebase accuracy	< 0.2 ppm	±2.5 ppm (only clock accuracy specified)
Hardware options		
Arbitrary function generator	2 channels, 100 MHz, ARB length: 40 Mpoints	1 channel, 25 MHz, ARB length: 16 kpoints
Mixed signal capabilities (MSO)	400 MHz, 16 channels, 5 Gsample/s, 400 Mpoints/channel	125 MHz, 16 channels, 500 Msample/s, 12.5 Mpoints/channel
Form factor		
Display	13.3" Full HD (1920 × 1080 pixel)	12.1" VGA (1200 × 800 pixel)
Dimensions (W × H × D)	414 mm × 279 mm × 162 mm	380 mm × 273 mm × 150 mm
Weight	6 kg	5.3 kg



Waveform capture rate

Real-time acquisition rate (waveforms/s)

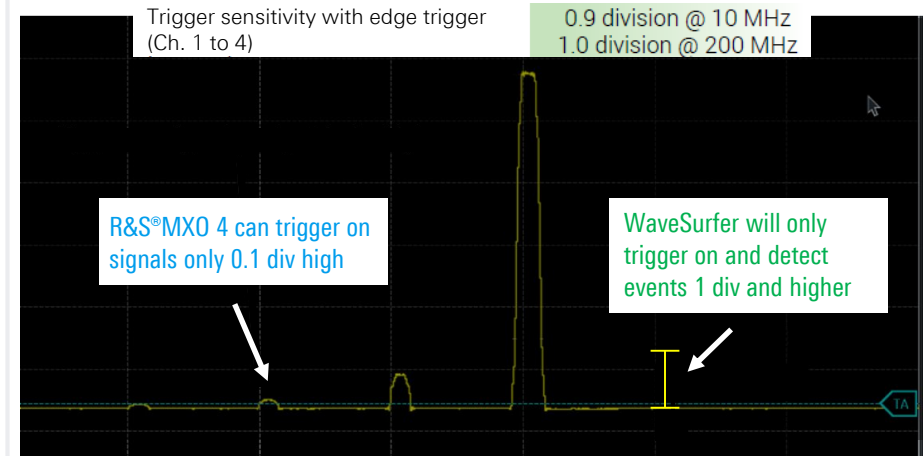


The waveform capture rate is quintessential in today's test and measurement applications. A fast oscilloscope will significantly increase the probability of capturing random and rare events.

The LeCroy WaveSurfer 4000HD can only reach < 4 % of the R&S MXO 4 capture rate and will be 90 % blind even in the segmented mode.

The R&S MXO 4 offers an industry-leading capture rate of > 4.5 million waveforms/s in normal operation mode, with a trigger rearm blind time of < 21 ns.

Trigger sensitivity



With higher precision, smaller waveform variations can be captured and measured.

The LeCroy WaveSurfer 4000HD, which uses conventional analog trigger architecture, misses out on many of the small signals under 1 division

The R&S MXO 4, with 12-bit ADC and advanced digital trigger technology, is overwhelmingly superior in triggering for small events in samples

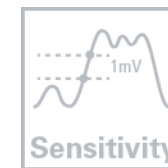
Advantages of the R&S MXO 4 over the LeCroy WaveSurfer 4000HD



25 x
Faster capture rate



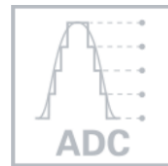
32 x
More memory



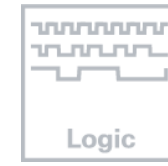
10 000 x
Better input sensitivity



2 x
Number of arbitrary generators



64 x
More vertical resolution



3 x
Better MSO toggle rate

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