MXO 3 SERIES OSCILLOSCOPE

versus Keysight 3000X Series

MXO 3: Fast. Precise. Compact.

Benefit	MXO 3 features
Fast	▶ Instantly see all signal activity to better understand your system ▶ Catch rare signal anomalies ▶ See all signal variations, including subtle changes ▶ Responsive to what you do, as you do it for the most information in the shortest amount of time
Precise	▶ Get a sharper and more accurate system overview ▶ See the smallest details even for larger signals ▶ Isolate slightest spikes, bumps, dips and any other important changes ▶ Retain fast sample rates when capturing nanoseconds or milliseconds of time ▶ Replace speculation and persistent doubt with certainty
Compact	▶ Compact enough to work anywhere ▶ Unmatched four-channel and eight-channel performance up to 1 GHz in a surprisingly small package ▶ Integrated ARB, MSO, DMM and protocol analysis ▶ Rackmount with just 5 U

For options, prices and more information, visit
www.rohde-schwarz.com/product/MXO3

Parameter	MXO 3 series	Keysight 3000X series
Channels	4, 8	2, 4
Bandwidth	100/200/350/500 MHz, 1 GHz	100/200/350/500 MHz, 1 GHz
Maximum sampling rate	5.0 Gsample/s	5.0 Gsample/s
User-controlled sampling rate	automatically or manually	no
Maximum standard memory depth per channel	125 Mpoints; 500 Mpoints (optionally)	4 Mpoints
User memory control	automatically or manually (1 kpoint to 125 Mpoints)	no
ADC bits in hardware	12 bit	8 bit
Real time capture ▶ At 20 ns/div ▶ At 1 µs/div	 86 % 99 %	 83 % 60 %
Maximum update rate	4 500 000 waveforms/s	1 000 000 waveforms/s
Maximum offset at 1 mV/div	±3 V	±2 V
Triggering ▶ Zone trigger ▶ Trigger on math available? ▶ Trigger on spectrum available?	digital yes (up to 32 areas; polygon shapes) yes yes	analog yes (up to 2 areas; limited to rectangular areas) no no
Waveform math ▶ Quantity ▶ Equation editor available? ▶ Speed (C1 + C2)	 8 yes fast (700 000 operations/s at 20 ns/div)	 2 no slow (100 operations/s at 20 ns/div)
History	yes	no
Spectrum ▶ Quantity ▶ Maximum FFTs/s	 4 50 000/s	 1 125/s
User interface	R&S®SmartGrid (customizable: overlay, stack, side-by-side)	limited; waveforms always overlay
Channel-to-channel isolation (< 100 MHz)	1:1000	1:100
Display	11.6" Full HD (1920 × 1080 pixel)	8.5" SVGA (800 × 400 pixel)
Rackmount height	5 U	5 U

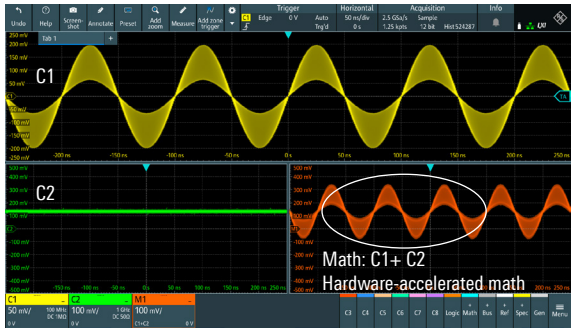
UNMATCHED USER EXPERIENCE

Higher productivity in both the time and frequency domains with the MXO 3 oscilloscope:

- Quick customized layouts with R&S®SmartGrid user interface
- Configurable toolbar for quick access to functions

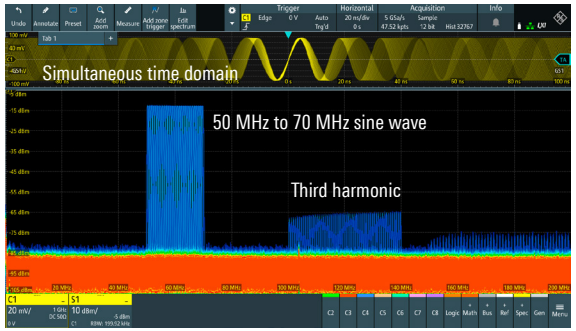
MXO 3 with R&S®SmartGrid

Multiple waveform viewing



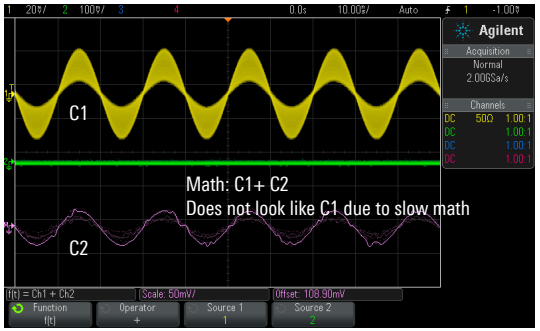
- Quick custom grid layout stacked and side-by-side
- Per signal grid for full ADC resolution
- See vertical and horizontal grid annotations for all sources

Swept 50 MHz to 70 MHz sine wave

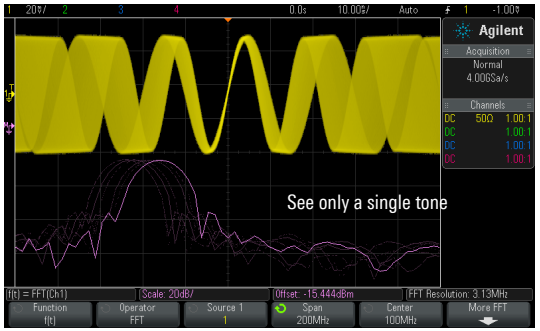


MXO 3 spectrum displays time and frequency simultaneously. See all details instantly with fast updates.

Keysight 3000X (user interface limitations)



- All waveforms are placed in a single grid. No customization
- Non-full screen scaling limits ADC bit utilization
- No grid annotation



Keysight 3000X FFT: Limited memory results in poor resolution. Slow update misses significant signal details.

Advantages of the MXO 3 over the Keysight 3000X

Channels

2 ×
Maximum channels
(8 versus 4 channels)

Memory

30 ×
More memory
(125 Mpoints versus 4 Mpoints)

ADC

16 ×
More vertical resolution
(12 bit vs. 8 bit)

More waveforms

4 ×
Faster capture rate
(4 500 000 waveforms/s vs. 1 000 000 waveforms/s at 20 ns/div)

> 1.5 ×
Offset

Display area

∞ ×
More grid arrangement

Rohde & Schwarz GmbH & Co. KG
www.rohde-schwarz.com | www.rohde-schwarz.com/support | www.training.rohde-schwarz.com

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Data without tolerance limits is not binding | Subject to change