MXO 3 SERIES OSCILLOSCOPE
versus Tektronix 3 Series MDO

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 variation, including subtle changes ▶ Stays responsive to what you do, as you do it; 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 even slightest spikes, bumps, dips and any other important changes ▶ Retain fast sample rates when capturing nanoseconds or milliseconds of time ▶ Replace speculation with certainty and persistent doubts with assurance
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

Parameter	MXO 3 series	Tektronix 3 Series MDO
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 (on all models)	5 Gsample/s (on 1 GHz model), 2.5 Gsample/s (on other models)
User-controlled sampling rate	automatically or manually	no
Maximum standard memory depth per channel	125 Mpoints; 500 Mpoints (optionally)	10 Mpoints
Maximum memory limit by default	10 Mpoints	10 kpoints
ADC bits in hardware (with filtering)	12 bit/18 bit (with HD mode)	8 bit/11 bit (with high resolution)
Real time capture ▶ At 20 ns/div ▶ At 1 µs/div	 86 % 99 %	 1.4 % 29 %
Maximum update rate ▶ Feature associated imitations	4 500 000 waveforms/s –	280 000 waveforms/s with FastAcq 1 kpoint limit, no math, measurement, spectrum
Maximum offset at 1 mV/div	±3 V	±1.0 V
Waveform math ▶ Number ▶ Speed (C1 + C2)	 8 700 000 operations/s at 20 ns/div	 1 10 operations/s at 20 ns/div
History/segmented memory	yes	no
Spectrum ▶ Max. FFTs/s ▶ Bandwidth	4 50 000/s instrument bandwidth up to 1 GHz	1 125/s 1 GHz (standard, 3 GHz for-pay option)
Triggering ▶ Zone trigger ▶ Trigger on math available? ▶ Trigger on spectrum available?	digital yes yes yes	analog no no no
User interface	R&S®SmartGrid (customizable: overlay, stack, side-by-side)	limited (waveforms always overlayed)
Channel-to-channel isolation (< 100 MHz)	1:1000	1:100
Display	11.6" Full HD	11.6" Full HD
Rackmount height	5 U	6 U

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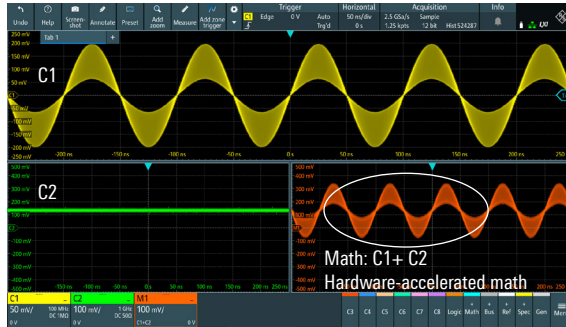www.rohde-schwarz.com/product/MXO3

UNMATCHED USER EXPERIENCE

Higher productivity in both time and frequency domain exclusively on 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

Math: C1+ C2
Hardware-accelerated math

▶ Quick custom grid layout. Stacked and side-by-side

▶ Signal grid for full ADC resolution

▶ See vertical and horizontal grid notes for all sources

Swept 50 MHz to 70 MHz sine wave

Simultaneous time domain

50 MHz to 70 MHz sine wave

Third harmonic
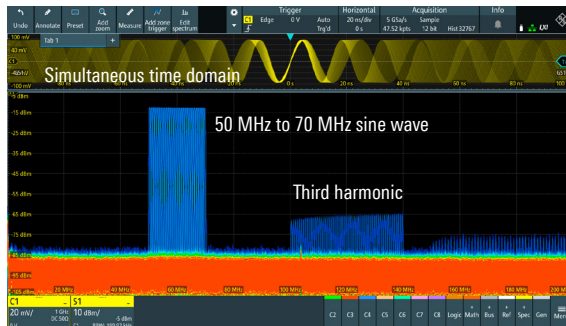
MXO 3 spectrum: Time and frequency simultaneously. See all the details instantly with fast update.

Tektronix MDO3 (user interface limitations)

Math: C1+ C2
Does not look like C1
due to slow math
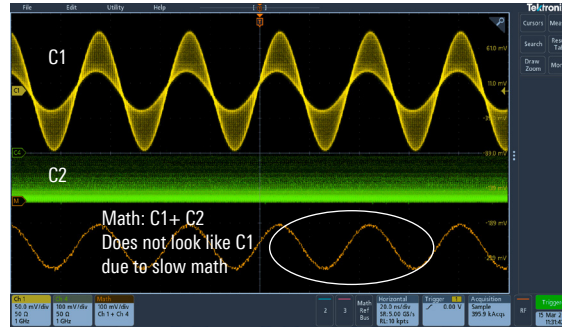
▶ All waveforms are placed in a single grid. No customization

▶ Non-full screen scaling limits ADC bit utilization

▶ User can only see grid annotation for a single source at a time

See only a single tone
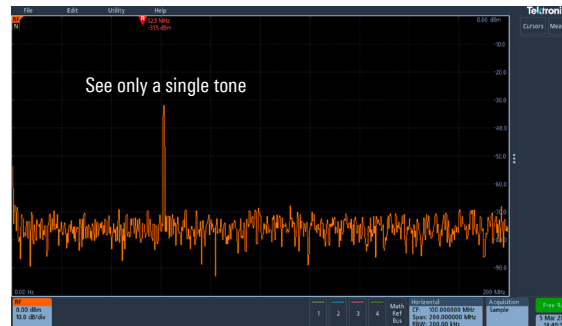
Tektronix MDO3 spectrum: Time not visible simultaneously. Slow update misses significant signal details.

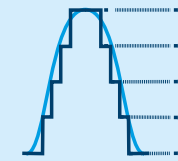## Advantages of the MXO 3 over the Tektronix MDO3

Channels
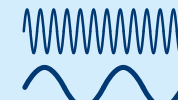
2 ×
Maximum channels
(8 versus 4 channels)

Memory

20 ×
More memory
(125 Mpoints versus 10 Mpoints)
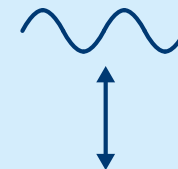

ADC

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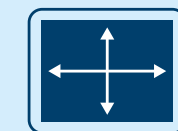(12 bit vs. 8 bit)

More waveforms

64 ×
Faster capture rate
(4 500 000 waveforms/s vs. 70 000 waveforms/s)

> 3 ×
Offset

Display area

∞ ×
More grid arrangement