

# MXO 3 SERIES OSCILLOSCOPE

## versus Keysight HD3 Series



### MXO 3: Fast. Precise. Compact.

Benefit	MXO 3 features
<b>Fast</b>	<ul style="list-style-type: none"> <li>▶ Instantly see all signal activity to better understand your system</li> <li>▶ Catch rare signal anomalies</li> <li>▶ See all signal variation, including subtle changes</li> <li>▶ Stays responsive to what you do, as you do it; the most information in the shortest amount of time</li> </ul>
<b>Precise</b>	<ul style="list-style-type: none"> <li>▶ Get a sharper and more accurate system overview</li> <li>▶ See the smallest details even for larger signals</li> <li>▶ Isolate even slightest spikes, bumps, dips and any other important changes</li> <li>▶ Retain fast sample rates when capturing nanoseconds or milliseconds of time</li> <li>▶ Replace speculation with certainty and persistent doubts with assurance</li> </ul>
<b>Compact</b>	<ul style="list-style-type: none"> <li>▶ Compact enough to work anywhere</li> <li>▶ Unmatched four-channel and eight-channel performance up to 1 GHz in a surprisingly small package</li> <li>▶ Integrated ARB, MSO, DMM and protocol analysis</li> <li>▶ Rackmount with just 5 U</li> </ul>



For options, prices and more information, visit  
[www.rohde-schwarz.com/product/MXO3](http://www.rohde-schwarz.com/product/MXO3)

Parameter	MXO 3 series	Keysight HD3
Channels	4, 8	2, 4
Bandwidth	100/200/350/500 MHz, 1 GHz	200/350/500 MHz, 1 GHz
Maximum sampling rate	5.0 Gsample/s	3.2 Gsample/s
User-controlled sampling rate	automatically or manually	no
Maximum standard memory depth per channel	125 Mpoints; 500 Mpoints (optionally)	20 Mpoints; 100 Mpoints (optionally)
ADC bits in hardware (with filtering)	12 bit/18 bit (with HD mode)	14 bit/16 bit (with high resolution)
Real time capture		
▶ At 20 ns/div	80%	16%
▶ At 1 µs/div	99%	48%
Maximum update rate	4 500 000 waveforms/s	1 300 000 waveforms/s
Maximum offset at 1 mV/div	±3 V	±1.5 V
Triggering	digital	digital
▶ Zone trigger	yes (more zones/shapes/faster speed)	yes (simple rectangles)
▶ Trigger on math available?	yes	no
▶ Trigger on spectrum available?	yes	no
Waveform math		
▶ Equation editor available?	yes	no
▶ Directly on all samples?	yes	no (forced accuracy and update restrictions)
▶ Speed (C1 + C2)	fast (700 000 operations/s at 20 ns/div)	slow (5 operations/s at 20 ns/div)
Spectrum		
▶ Max. FFTs/s	50 000/s	125/s
▶ Accuracy	made using all samples	forced accuracy and update restrictions
User interface	R&S®SmartGrid (customizable)	limited fixed grid layouts
Channel-to-channel isolation (< 100 MHz)	1:1000	1:100
Display	11.6" Full HD (1920 × 1080 pixel)	10.1" SVGA (1080 × 800 pixel)
Rackmount height	5 U	6 U

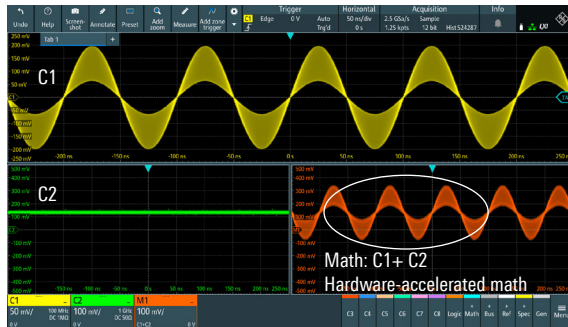
# UNMATCHED USER EXPERIENCE

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

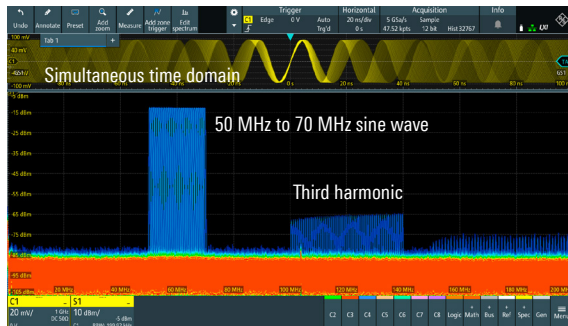
## MXO 3 with R&S®SmartGrid

### Multiple waveform viewing



- Quick custom grid layout. Stacked and side-by-side
- Hardware-accelerated math shows all details instantly
- Accurate math, measurements and spectrum using all acquired samples

### Swept 50 MHz to 70 MHz sine wave



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

Rohde & Schwarz GmbH & Co. KG

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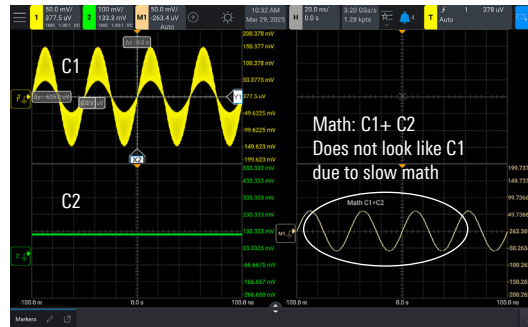
MXO 3 Series Oscilloscope

PD 3610.0114.32 | Version 01.02 | September 2025 (sk)

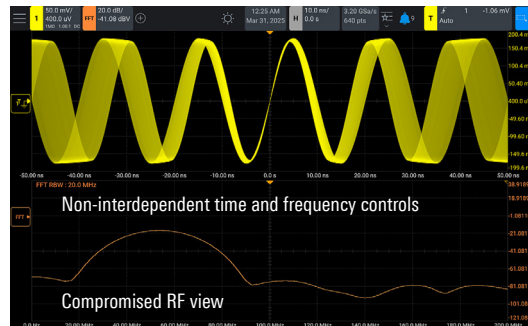
Data without tolerance limits is not binding | Subject to change

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## Keysight HD3 (user interface limitations)



- A few fixed grid layout choices. No customization.
- Slow math. Measurements, math and FFTs based on a reduced set of data; trade off accuracy for update rates



Keysight HD3 spectrum: Time not visible simultaneously. Slow update misses significant signal details.

## Advantages of the MXO 3 over the Keysight HD3



### Channels

2 ×

Maximum channels  
(8 versus 4 channels)



### Memory

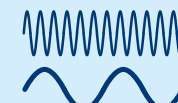
6.25 ×

More memory  
(125 Mpoints versus 20 Mpoints)



Lower price

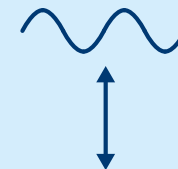
MXO3 priced lower vs. HD3



### More waveforms

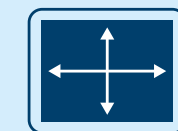
4 ×

Faster capture rate  
(4500000 waveforms/s vs.  
810 waveforms/s at 20 ns/div)



> 2 ×

Offset



### Display area

∞ ×

More grid arrangement