

Keysight Technologies

InfiniiVision 3000 X-Series vs Tektronix MDO4000 Series Oscilloscopes Industry Comparison Guide

The Keysight Technologies, Inc. 3000 X-Series oscilloscopes use breakthrough technology to deliver value, functionality and flexibility at prices that fit into existing budgets. Using an Keysight-designed MegaZoom IV Custom ASIC technology, the 3000 X-Series provides unprecedented signal visibility with over 1,000,000 waveforms per second. The 3000 X-Series is the industry's first 5-in-1 product with a full-featured scope, logic analyzer, protocol analyzer, function/arbitrary waveform generator and digital voltmeter (DVM) all integrated into one design.

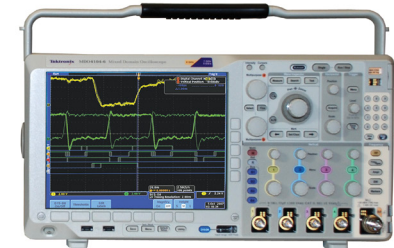
InfiniiVision 3000 X-Series

- 1,000,000 wfms/s
- 5 instruments in 1
- Fully upgradable

Tektronix MDO	Keysight scope	Keysight spectrum analyzer
MDO4054-3	MSOX3054A	N9340B
MDO4054-6	MSOX3054A	N9342C
MDO4104-3	MSOX3104A	N9340B
MDP4104-6	MSOX3104A	N9342C

The Tektronix MDO4000 is a similar price to a Keysight InfiniiVision 3000 X-Series AND a Keysight Handheld Spectrum Analyzer combined.

Keysight-designed *MegaZoom IV* custom ASIC technology powers the fastest waveform update rates, responsive deep memory, integrated MSO, integrated industry exclusive WaveGen, and integrated protocol analyzer.

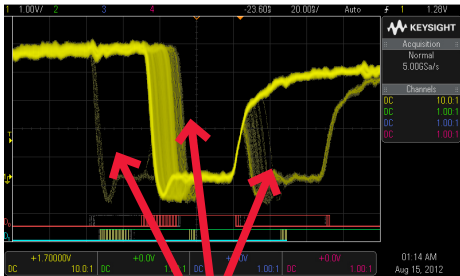


	Keysight 3000 X-Series		Tektronix MDO4000 Series	
Bandwidth	100/200/350/500 MHz, 1 GHz	■	500 MHz, 1 GHz	-
Channels	2, 4 + 16 digital	■	4 + 16 digital	■
1 GHz all four channels	Yes	■	No	-
Upgradable bandwidth	Yes	■	No	-
Maximum sampling rate	4 GSa/s (100 to 500 MHz), 5 GSa/s (1 GHz)	■	2.5 GSa/s (500 MHz), 5 GSa/s (1 GHz)	-
Maximum memory depth	4 Mpts	-	Up to 20 Mpts	■
Segmented memory option	Yes	■	No	-
Max update rate - Analog Ch only	1,000,000 wfms/s	■	62,000 wfms/s	-
Max update rate - Analog and MSO	1,000,000 wfms/s	■	90 wfms/s	-
Max update rate - Analog and MSO and Serial	1,000,000 wfms/s	■	30 wfms/s	-
Max update rate - Analog, MSO, RF and Serial	N/A	-	1 update every 9 seconds	-
Display	8.5" WVGA	-	10.4" XGA LCD	■
Integrated function generator/AWG	Yes	■	No	-
Integrated digital voltmeter (DVM)	Yes	■	No	-
Integrated spectrum analyzer	No	-	Yes	■
Hardware based serial decode	Yes	■	No, software based	-
Standard calibration time period	2 years	■	1 year	-
Price				
Scope	Lower	■	Higher	-
Scope + HSA	Same	■	Same	■

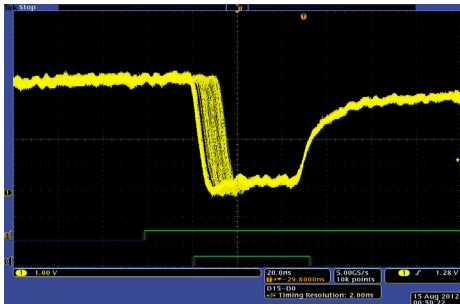
See more

Of your signal, more of the time:

- > 1,000,000 waveforms per second update rate allows you to see infrequent events and subtle signal detail that the DPO4000B will miss



Infrequent glitches and signal jitter captured after 1 second on 3000 X-Series, D0 and D1 turned on with > 1,000,000 wfms/s.



MDO4000 with D0 and D1 after 5 seconds, it never sees the glitches and shows limited signal jitter due to its slower update rate.



Do more

With the power of 5 instruments in 1:

- Best-in-class oscilloscope Industry's only upgradable scope from 100 MHz through 1 GHz
- Protocol analyzer Hardware-based serial decode
- Logic timing analyzer (MSO) Integrated, upgradable MSO
- WaveGen 20 MHz built-in function/ arbitrary waveform generator Industry-exclusive
- Integrated 3-digit voltmeter Industry-exclusive

Get more

Investment protection and productivity:

- Upgradable bandwidth through 1 GHz
- Upgradable MSO
- Upgradable memory
- Upgradable WaveGen 20 MHz built-in function/arbitrary waveform generator
- Upgradable Digital Voltmeter
- Upgradable measurement applications

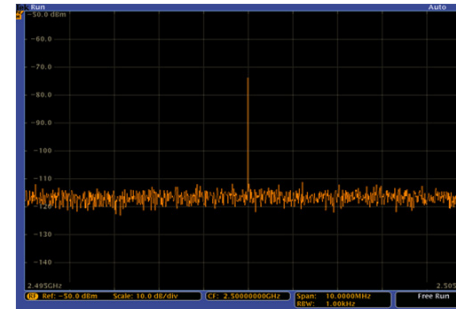
Buy a Keysight InfiniiVision 3000 X-Series AND a Keysight Handheld Spectrum Analyzer for a similar price as the Tektronix MDO4000.

Tek MDO4000 = compromised scope and built-in spectrum analyzer

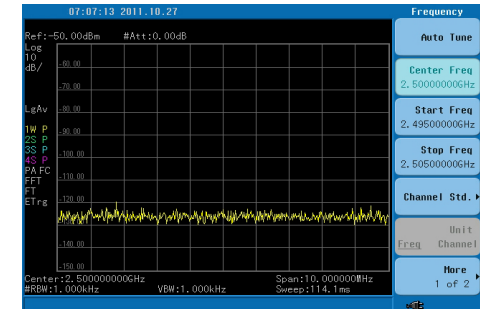
Keysight 3000X Scope + Keysight HSA = superior products in each domain for the same price

Keysight HSAs offers

- Better performance and insight on the signals of interest
- > 10 dB better DANL performance
- Better residual response performance which makes you confident with the measurement
- No coupling of analog channels into RF channel, significant in the MDO4000
- Richer spectrum and signal analysis features needed when doing RF domain work



A typical residual response of MDO4000 which may impact measurement accuracy.



HSA has a clean spectrum with the same settings and > 10 dB better DANL.

Features	HSA	MDO4000
Task planner ¹	Yes	No
Channel scanner ¹	Yes	No
Tracking generator	Yes	No
Cable and antenna test ²	Yes	No
AM/FM demodulation metrics	Yes	No
ASK/FSK demodulation metrics	Yes	No
Spectrum emission mask	Yes	No
Limit lines, corrections	Yes	No
USB power meter	Yes	No
Remote control software	Yes	No

1. Not available on N9340B HSA.
2. Only available on N9342C HSA.

www.keysight.com/find/3000X-Series