

Tektronix 5 Series MSO vs. Keysight X6000 Series

COMPETITIVE FACT SHEET

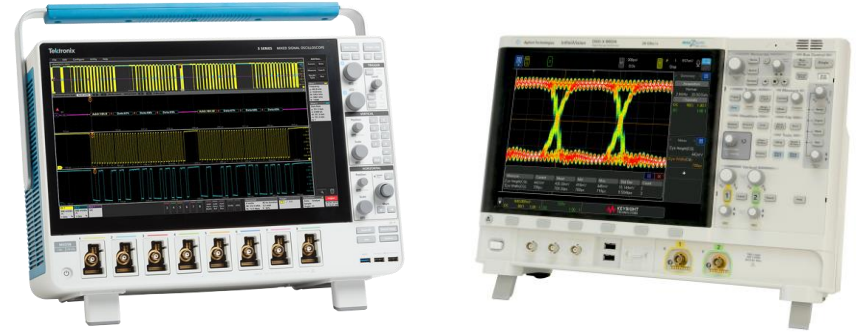
Oscilloscope Design

Tektronix 5 Series MSO

- ✓ **Industry First** FlexChannels (up to 8) (each input is 1 analog or 8 digital)
- ✓ **Industry First** 4, 6, 8 channel models
- ✓ **Industry First** HD 1920 x 1080 15.6" Multi-touch capacitive display
- ✓ **Industry First** Std. embedded OS or Opt. Windows 10 OS
- ✓ 12 bit Analog to Digital Converter
- ✓ >500,000 wfm/s update rate

Keysight X6000 Series

- ✗ Fixed configuration: 2 or 4 analog; 16 digital
- ✗ 2 or 4 channel models only
- ✗ 12.1" 800 x 600 Multi-touch screen
- ✗ Embedded OS only
- ✗ 8 bit Analog to Digital Converter
- ✗ 450,000 wfm/s update rate



Analog to Digital Converter (ADC)

Tektronix 5 Series MSO

- ✓ 12 bit ADC
- ✓ Up to 16 bits in **New** High Res mode
- ✓ 7.6 bits ENOB @ 1GHz

Keysight X6000 Series

- ✗ 8 bit ADC
- ✗ Up to 12 bits in HiRes mode
- ✗ Not Specified

Included Probing

Tektronix 5 Series MSO

- ✓ 1 GHz passive probes (≥ 1 GHz models)
- ✓ 3.9pF Capacitive loading
- ✓ Automated compensation
- ✓ Stores compensation data in memory
- ✓ Hardware Dynamic Range 5mV to 100V

Keysight X6000 Series

- ✗ 700 MHz passive probes (≥ 1 GHz models)
- ✗ 9.5pF Capacitive loading
- ✗ Manual compensation
- ✗ Can't store compensation data
- ✗ Hardware Dynamic Range 16mV to 40V

Measurement Quality & Jitter Analysis

Tektronix 5 Series MSO

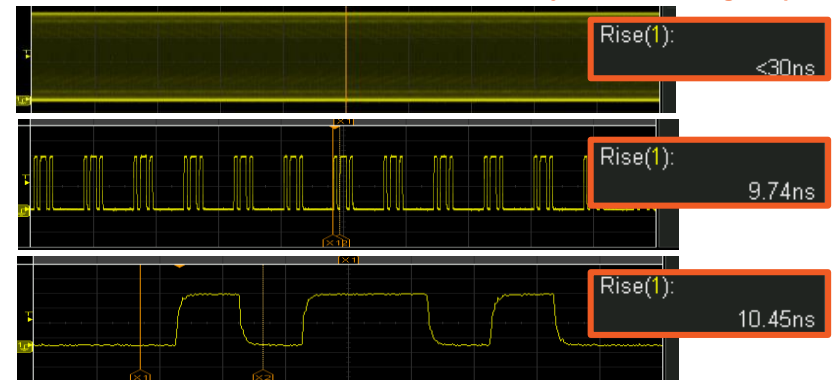
- ✓ All measurements performed on waveform data (HIGH accuracy)
- ✓ Up to 33 Advance jitter measurements
- ✓ Displays min/max measurement in acquisition
- ✓ Unlimited number of measurements at a time
- ✓ Customize / resize all application views, plots, waveform areas and results tables

Keysight X6000 Series

- ✗ All measurements performed on screen pixels (LOW accuracy – [see below](#))
- ✗ Up to 9 simple jitter measurements
- ✗ Can't display min / max measurements
- ✗ 10 measurements viewable at a time
- ✗ Not customizable – Result table , plots cover waveform area, not sizable

The X6000 performs measurements on low-resolution display data.

Note how rise time measurement varies as zoom is adjusted from a single capture



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Key Specifications Comparison

	Tektronix 5 Series MSO		Keysight X6000	
Max Bandwidth (all channels)	✗	Up to 2.0 GHz	✓	Up to 4.0 GHz
Upgradable Bandwidth	✓	Yes	✓	Yes
Number of Analog Channels	✓	4, 6, or 8 with FlexChannels	✗	2 or 4
Number of Digital Channels	✓	Up to 32, 48, or 64 with FlexChannels	✗	Requires MSO model - max 16 channels
Number of Math / Bus channels / Measurements	✓	As many as you want!	✗	4 math / 2 buses / 10 measurements
Max Analog Channel Sample Rate (on all channels)	✗	6.25 GS/s	✓	10 GS/s
Max Digital Channel Sample Rate (on all channels)	✓	6.25 GS/s	✗	1 GS/s
Optional Arbitrary Function Generator (AFG)	✓	Yes – 50 MHz	✗	Yes – 20 MHz
Optional DVM/ Trigger Freq. Counter	✓	Yes – Free with Registration	✗	Yes – available for purchase
Optional Advanced Jitter Analysis	✓	33 Jitter related measurements	✗	9 Jitter related measurements
Standard Analog Probes (≥1GHz models)	✓	1 GHz at 3.9pF	✗	700MHz at 9.5pF
Standard Record Length (all channels)	✓	62.5 Mpts	✗	2 Mpts
Max optional Record Length (all channels)	✓	125 Mpts	✗	None
Max Waveform Capture Rate	✓	>500,000 wfms/sec	✗	450,000 wfms/sec
ADC Resolution	✓	12 bits	✗	8 bits
Max Vertical Resolution (with filtering)	✓	Up to 16 bits with New High Resolution mode	✗	Up to 12 bits with HiRes
ENOB* (at 1 GHz)	✓	7.6 bits	✗	Not Available
Lowest Hardware Vertical Setting	✓	500uV/div = 5 mV Full Scale	✗	2mV/div = 16 mV Full Scale
DC Gain Accuracy - Warranted	✓	1.0%	✗	2.5%
Screen Size & Resolution	✓	15.6" High Definition 1920 x 1080	✗	12.1" 800 x 600
Operating System	✓	Std. Embedded OS or optional Windows 10 OS	✗	Embedded OS only

* ENOB by Tektronix, at 500mV Full Scale at 1GHz and 6.25GS/s