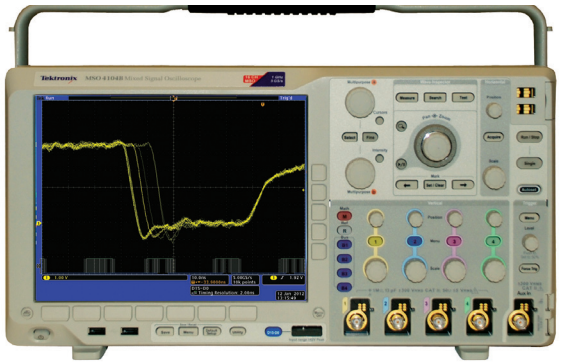
Keysight Technologies
Competitive Comparison:
Keysight X-Series versus Danaher-Tektronix DPO/MSO/MDO4000B

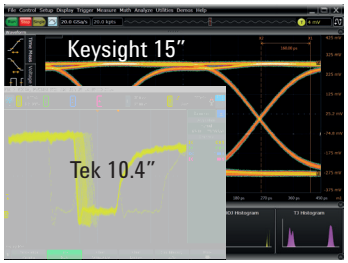
Keysight S-Series

The Keysight Technologies, Inc. S-Series oscilloscopes provide bandwidths up to 8 GHz with class-leading signal integrity and analysis. Custom ASICs, including the industry's first 40 GSa/s, 10-bit ADC, allow you to see your real signal. Class-leading deep memory and a large suite of analysis tools complement a designed-for-touch user interface and the industry's first 15" multi-touch capacitive display.

	Tektronix DPO/MSO/ MDO4000		Keysight S-Series	
Bandwidth	Up to 1 GHz	x	Up to 8 GHz	√
Upgradable bandwidth	No	x	Yes – license key	√
Max sample rate	5 GSa/s	x	20 GSa/s	√
Standard memory depth	20 Mpts	x	50 Mpts	√
Max memory depth	20 Mpts	x	800 Mpts	√
ADC bits	8 bits	x	10 bits	√
Noise at 5 mV/div 1 GHz – 50 Ohms	375 uV RMS	x	94 uV RMS	√
Bandwidth filters	Up to 2 analog	x	Analog and DSP	√
Waveform update rate	Up to 55,000 wfms/s	√	Up to 2,000 wfms/s	x
Display	10.4" no touch	x	15" capacitive multi-touch	√
Upgradable MSO	No	x	Yes	√
Offline analysis software	No	x	Yes	√
Standard passive probe	500 MHz or 1 GHz	√	500 MHz	x
Spectral viewer with up to 8 gated FFTs	No	x	Yes	√

Danaher-Tektronix DPO/MSO/MDO4000B Series

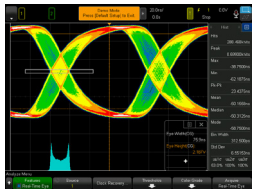




A 15" multi-touch capacitive touch-screen display offers 2x more viewing area and much greater sensitivity to user inputs.

KEYSIGHT TECHNOLOGIES

Competitive Comparison:
Keysight 6000 X-Series versus Danaher-Tektronix DPO/MSO/MDO4000B



Jitter/RTE

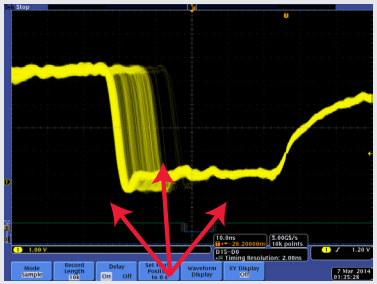
FFT

Protocol analysis

Built-in AWG

Keysight's 6000 X-Series oscilloscopes offer bandwidths up to 6 GHz with the key benefits of our InfiniiVision line: affordability, excellent visualization, 6-in-1 integration and investment protection. Speed your debugging with its uncompromised fast update rate, combined with the industry's only hardware zone trigger. Operation is simplified with a localized GUI that is designed for touch and the industry's first 12.1" multi-touch capacitive display. Voice control makes doing oscilloscope inputs easy while your hands are holding probes.

Infrequent glitches and signal jitter captured after one second on the 6000 X-Series with uncompromised normal update rate.



Tektronix 4000 after 60 seconds – it never sees the glitches and shows limited signal jitter due to its slow, compromised update rate.

A fast update rate allows you to see an infrequent glitch, but then you want to isolate it. With the 6000 X-Series' hardware zone trigger, you just draw a box to isolate the signal of interest. If you can see it, you can trigger on it.

	Tektronix DPO/MSO/ MDO4000		Keysight 6000 X-Series	
Bandwidth	Up to 1 GHz	x	Up to 6 GHz	√
Upgradable bandwidth	No	x	Yes – license key	√
Max sample rate	5 GSa/s	x	20 GSa/s	√
Standard memory depth	Up to 20 M	√	Up to 4 M	x
Segmented smart memory	Not available	x	Standard	√
Noise at 5 mV/div 1 GHz – 50 Ohms	375 uV RMS	x	183 uV RMS	√
Max waveform update rate	Up to 55,000 wfms/s	x	Up to 450,000 wfms/s	√
Max update rate with digital channels on	~100 wfms/s	x	Up to 450,000 wfms/s	√
Zone trigger	Not available	x	Yes – hardware-based > 100 K triggers/s	√
Display	10.4" no touch	x	12.1" capacitive multi-touch	√
Mouse/keyboard	Keyboard only	x	Mouse/keyboard	√
Upgradable MSO	No	x	Yes	√
Other integration	Spectrum analyzer (MDO only)	√	2 channel FG, 10-digit counter/totalizer	√
Advanced analysis	Not available	x	Jitter, RTE, color grading	√
Standard passive probe	500 MHz or 1 GHz	√	700 MHz	x
Measurements	29, 8 simultaneously, cursor gating	x	56, 10 simultaneously, cursor gating	√
Math functions	Displays one math function	x	Displays four math functions	√
Hardware-based serial decode and mask testing	No, software post processing	x	Yes	√
Standard calibration interval	1 year	x	2 years	√
Voice control	Not available	x	Yes – localized	√

KEYSIGHT TECHNOLOGIES

Published in USA, August 4, 2014
5991-4222EN
www.keysight.com