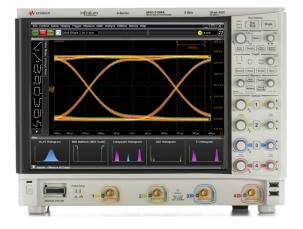# Keysight Technologies

Keysight S-Series versus Danaher-Tektronix DPO7000C

Competitive Comparison

The Keysight Technologies, Inc. S-Series oscilloscope provides 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 touch-screen display.

	Danaher-Tektronix DPO7000C		Keysight S-Series	
Bandwidth	Up to 3.5 GHz	X	Up to 8 GHz	√
Upgradable bandwidth	No	X	Yes – license key	√
Standard full channel sampling rate	10 GSa/s on 2.5/3.5 GHz	√	10 GSa/s on all models	√
	5 GSa/s on 500 MHz/1 GHz	X		√
Standard memory depth	25 Mpts	X	100 Mpts	√
Max memory depth (2 ch)	250 Mpts	X	800 Mpts	√
ADC bits	8 bits	X	10 bits	√
Waveform update rate (normal mode)	Up to 40 wfms/s	X	Up to 2,000 wfms/s	√
Waveform update rate (special mode)	Up to 250,000 wfms/s	√	Not available	X
Display	12.1" resistive touch	X	15" capacitive multi-touch	√
MSO	No	X	Optional – 16 ch	√
Math functions	4	X	16	√
Internal drive	SSD	√	SSD	√
Offline analysis software	No	X	Yes	√

Keysight S-Series

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.
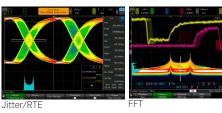
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Keysight 6000 X-Series versus Danaher-Tektronix DPO7000C

Competitive Comparison

Keysight's 6000 X-Series oscilloscopes offer bandwidths up to 6 GHz with the key benefits of the 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.

Jitter/RTE

FFT

Protocol

Built-in AWG

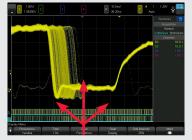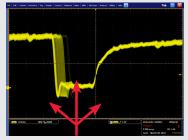|	Danaher-Tektronix DPO7000C		Keysight 6000 X-Series	
Bandwidth	Up to 3.5 GHz	X	Up to 6 GHz	√
Upgradable bandwidth	No	X	Yes – license key	√
Standard full channel sampling rate	10 GSa/s on 2.5/3.5 GHz	√	10 GSa/s on all models	√
	5 GSa/s on 500 MHz/1GHz	X		
Standard memory depth (2 ch)	Up to 50 M	√	Up to 4 M	√
Noise at 10 mV/div 3.5 GHz bandwidth	625 uV RMS	X	355 uV RMS with 4 GHz bandwidth	√
Waveform update rate (normal mode)	Up to 40 wfms/s	X	Up to 140,000 wfms/s	√
Waveform update rate (special mode)	Up to 250,000 wfms/s	X	Up to 450,000 wfms/s	√
Zone trigger	Yes – software based 40 triggers/s	X	Yes – hardware based > 100 K triggers/s	√
Display	12.1" resistive touch	√	12.1" capacitive multi-touch	√
MSO	No	X	Optional – 16 ch	√
Other integration	Not available	X	2 ch AWG, counter, DVM	√
Operating system	Windows 7, 64 bits	X	Embedded	√
Localized GUI	No	X	Yes – 10 languages	√
Voice control	No	X	Yes – localized	√
Size	10.4" deep, 32 lbs	X	6.1" deep, 15 lbs.	√
Standard calibration interval	1 year	X	2 years	√
BenchVue support	Not available	X	Yes	√

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

DPO7000 after 60 seconds.
It never sees the glitches and shows limited signal jitter due to its slow 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 can draw a box to isolate the signal of interest. If you can see it, you can trigger on it.

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